
No. 20-2042

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

SIERRA CLUB, CENTER FOR BIOLOGICAL DIVERSITY, WILD VIRGINIA,
APPALACHIAN VOICES, and CHESAPEAKE CLIMATE ACTION
NETWORK,
Petitioners

v.

UNITED STATES ARMY CORPS OF ENGINEERS; RYAN D. MCARTHY, in
his official capacity as Secretary of the U.S. Army; LIEUTENANT GENERAL
SCOTT A. SPELLMON, in his official capacity as U.S. Army Chief of Engineers
and Commanding General of the U.S. Army Corps of Engineers; COLONEL
PATRICK V. KINSMAN, in his official capacity as District Commander of the
U.S. Army Corps of Engineers, Norfolk District, and WILLIAM T. WALKER, in
his official capacity as Chief, Regulatory Branch, U.S. Army Corps of Engineers,
Norfolk District
Respondents

PETITIONERS' MOTION FOR STAY PENDING REVIEW

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INTRODUCTION

In 2018, this Court told Respondent United States Army Corps of Engineers (the “Corps”) “an individual [Section 404] permit will likely be necessary” for the Mountain Valley Pipeline (hereinafter, the “Pipeline”). *Sierra Club v. U.S.A.C.O.E.*, 909 F.3d 635, 655 (4th Cir. 2018). Following that decision, the Corps’ Norfolk District suspended its January 2018 verification that Mountain Valley Pipeline, LLC (“MVP”), is authorized to use the streamlined permit known as Nationwide Permit (“NWP”) 12 in Virginia. Ex. 1 at 1. On September 25, 2020, the Norfolk District reinstated MVP’s NWP 12 verification (hereinafter, the “Reinstatement”), after the Corps’ Huntington District once more unlawfully issued an NWP 12 verification to MVP. *Id.* This petition seeks judicial review of the Norfolk District’s Reinstatement.¹

As explained below, the Reinstatement is unlawful because (1) the Corps failed to comply with the Endangered Species Act (“ESA”) when it issued NWP 12 in 2017, and (2) MVP is ineligible to use NWP 12 in Virginia because MVP still cannot satisfy an unaltered West Virginia-specific NWP 12 condition.

¹ A petition for judicial review of the Norfolk District’s January 2018 verification remains on this Court’s docket, but is being held in abeyance. Status Report Request, No. 18-1713, Docket No. 77. One or more parties in that proceeding may seek to consolidate these proceedings.

Per an agreement between MVP and the Petitioners, MVP will not undertake activities in Virginia under the Reinstatement until October 9, 2020.² Ex. 2. But, after that date, MVP intends to trench through “critical” streams “as quickly as possible before anything is challenged.”³ MVP’s haste necessitates this stay motion. The Corps and MVP oppose the motion.⁴

BACKGROUND

The Corps permits fill material discharges under CWA Section 404 in two ways: through individual permits tailored to specific projects, or through general, nationwide permits. 33 U.S.C. §1344(a), (e)(1). Many NWP permits require would-be-permittees to submit certain projects for “verification” using a pre-construction notification (“PCN”).” 82 Fed. Reg. 1860, 1985 (Jan. 6, 2017).

An NWP’s term cannot exceed five years. 33 U.S.C. §1344(e)(2). In January 2017, the Corps reissued its suite of NWPs. *See generally* 82 Fed. Reg. 1860. One of those permits, NWP 12, authorizes discharges related to utility lines, including

2 For clarity, there is no such agreement regarding West Virginia activities.

3 Equitrans Midstream Corp. (ETRN) Q2 2020 Earnings Call Transcript (Aug. 4, 2020) (statement of Diana Charletta, President and C.O.O., Equitrans Midstream Corp.), *available at* <https://www.fool.com/earnings/call-transcripts/2020/08/04/equitrans-midstream-corp-etrn-q2-2020-earnings-cal.aspx>.

4 On September 25, 2020, Petitioners asked the Corps to stay the Reinstatement pending review. Ex. 3. The Corps refused. Ex. 4.

natural gas pipelines. *Id.* at 1985. For projects like the Pipeline that require approval under the Rivers and Harbors Act, NWP 12 requires PCNs. *Id.* at 1986.

NWP 12's 2017 reissuance triggered ESA Section 7. The Corps erroneously maintains NWP 12's reissuance complied with that provision because, in its view, the "reissuance of an NWP ... results in 'no effect' to listed species or critical habitat[.]" Ex. 5 at 63-64.

NWP 12's reissuance also triggered CWA Section 401, which prohibits federal authorizations resulting in waterbody discharges without "certification" by the affected state that the discharges will comply with water quality standards. States can impose conditions through certifications, which become conditions of the federal permit. 33 U.S.C. §1341(d). The West Virginia Department of Environmental Protection ("WVDEP") certified NWP 12's reissuance under Section 401 in April 2017, subject to conditions to protect water quality. Those conditions became conditions of NWP 12 itself under 33 U.S.C. §1341(d). *Sierra Club*, 909 F.3d at 650.

In 2017 and 2018, the Corps issued verifications to MVP, concluding the Pipeline complied with NWP 12's terms and conditions. *Id.* at 641. On October 2, 2018, this Court vacated the Huntington District verifications, *Sierra Club v. U.S.A.C.O.E.*, 905 F.3d 285 (4th Cir. 2018), holding that the conditions of West Virginia's Section 401 certification became conditions of NWP 12 by operation of

law, that MVP could not satisfy two of those conditions, and that the Corps' efforts to excuse that noncompliance were unlawful. *Sierra Club*, 909 F.3d at 645, 650-51, 654-55. The conditions MVP could not satisfy are Special Condition A, which requires certain pipelines to possess an individual Section 401 water quality certification, and Special Condition C, which requires stream crossings to be completed within 72 hours. *Id.* at 640-41.⁵

After this Court vacated MVP's Huntington District verifications, the Norfolk District suspended MVP's NWP 12 verification for Virginia. Ex. 1 at 1. Thereafter, WVDEP proposed to relax Special Condition A of its 2017 water quality certification so that MVP might satisfy it. Ex. 6.⁶ WVDEP's proposed revision to Special Condition A would expand NWP 12's applicability to include pipelines in West Virginia equal to or greater than 36 inches in diameter or that cross a Section

5 The four stream crossings that implicated Special Condition C were the Gauley, Greenbrier, Elk, and Meadow Rivers crossings. *Sierra Club*, 909 F.3d at 642. As Petitioners currently understand the September 25, 2020 Huntington District verification, it does not authorize open-trench crossings of those rivers because MVP now intends to bore under three of those rivers and has already tunneled under the fourth. Ex. 7 at 5, 7. As a result, Special Condition C will not be discussed further in this motion.

6 Although WVDEP had proposed modifying its water quality certification's conditions at the time this Court decided *Sierra Club*, it subsequently issued a revised proposal in January 2019. 909 F.3d at 648 n.2; Ex. 6.

10 river, even if those pipelines lack individual water quality certifications.⁷ On April 24, 2019, WVDEP asked the Corps to “incorporate this modification into its NWP for West Virginia, in accordance with 40 C.F.R. §121.2(b)[.]” Ex. 8 at 1.

In two sets of comments submitted on June 27 and July 26, 2019, Petitioners informed the Corps—including its Norfolk District—that approving WVDEP’s purported modification would be unlawful. Exs. 10 & 11. Nonetheless, on January 15, 2020, the Division Engineer for the Corps’ Great Lakes and Ohio River Division purported to grant WVDEP’s modification request. Ex. 12 at 1. Thereafter, on September 25, 2020, the Corps’ Huntington District issued a verification relying on the Division Engineer’s unlawful modification of NWP 12’s conditions. Ex. 7 at 26. Nearly simultaneously, the Norfolk District issued the Reinstatement that is the subject of this petition for judicial review. Ex. 1.

7 Revised Special Condition A provides, in relevant part:

The Secretary of the West Virginia Department of Environmental Protection, in the Secretary’s sole discretion, reserves the right to require an individual water quality certification for any of the following facilities or impacts:

- i. Pipelines equal to or greater than 36 inches in diameter; [or]
- ii. Pipelines crossing a Section 10 river ... [.]

Ex. 8 at 10-11. In contrast, Special Condition A as originally incorporated into NWP 12 provides, in relevant part, that “Individual Water Quality Certification *is required* for ... [p]ipelines equal to or greater than 36 inches in diameter ... [and] [p]ipelines crossing a Section 10 river” Ex. 9 at 4 (emphasis added).

STANDARD OF REVIEW

Four factors govern a stay pending review:

(1) whether the stay applicant has made a strong showing that he is likely to succeed on the merits; (2) whether the applicant will be irreparably injured absent a stay; (3) whether issuance of the stay will substantially injure the other parties interested in the proceeding; and (4) where the public interest lies.

Hilton v. Braunskill, 481 U.S. 770, 776 (1987). In Natural Gas Act proceedings, this Court applies the Administrative Procedure Act. *Sierra Club*, 909 F.3d at 643. Under that statute, 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. Petitioners Are Likely To Succeed On The Merits.

Petitioners are likely to succeed on the merits for two reasons. First, the Reinstatement is unlawful because the Corps violated the ESA with its 2017 NWP 12 reissuance. *N. Plains Res. Council v. U.S.A.C.O.E.* (“*N.P.R.C.*”), ___ F.Supp.3d ___, 2020 WL 1875455 (D. Mont. 2020); *appeal filed*, No. 20-35412 (9th Cir.).⁸

⁸ If Petitioners’ ESA arguments were to require a 60-day notice of intent (“NOI”) under 16 U.S.C. §1540(g)(2)(A)(i), Petitioners would satisfy that requirement by reliance on the July 1, 2019 NOI sent to the Corps by Petitioners Sierra Club and Center for Biological Diversity. Ex. 13. That all of the Petitioners were not signatories to the July 1, 2019 NOI is of no import because the notice requirement is satisfied so long as one petitioner gives notice. *Citizens for a Better Env’t-Calif. v. Union Oil Co. of Calif.*, 861 F.Supp. 889, 913 (N.D. Cal. 1994); *E.D.F.*

Second, the Reinstatement is unlawful because MVP is ineligible for NWP 12 in Virginia because of the legally defective attempt to modify NWP 12's conditions in West Virginia.

A. The Corps Violated the ESA With Its 2017 NWP 12 Reissuance.

In 2017, the Corps reissued NWP 12 without engaging in formal programmatic consultation with the federal wildlife services (hereinafter, the "Services")—on the NWP program generally or NWP 12 specifically—to consider the cumulative impacts of NWP-authorized activities on protected species or their critical habitat. That failure—which stands in contrast to the Corps' 2007 and 2012 reissuances wherein it *did* conduct programmatic consultation with one of the Services—violates the ESA, as the federal district court in Montana recently held. *N.P.R.C.*, 2020 WL 1875455. Indeed, because of that legal defect, the Montana federal district court has declared NWP 12 unlawful and remanded it "to the Corps for compliance with the ESA." *Id.* at *8.⁹ Accordingly, the Reinstatement is

v. Tidwell, 837 F.Supp. 1344, 1352-53 (E.D.N.C. 1992); *S.C. Wildlife Fed'n v. Alexander*, 457 F.Supp. 118, 123-24 (D.S.C. 1978).

9 The Montana district court initially remanded NWP 12 to the Corps, vacated the permit, and enjoined the Corps from authorizing any activities under it until consultation was complete. *N.P.R.C.*, 2020 WL 1875455, at *8. The Court subsequently narrowed the scope of the vacatur and the injunction to oil and gas pipelines, but left its remand order untouched. *Northern Plains Res. Council v. U.S.A.C.O.E.*, Civ. No. 19-44-GF-BMM, 2020 WL 3638125, at *14 (D. Mont. May 11, 2020). The Ninth Circuit denied emergency motions for a partial stay of the district court's orders on May 28, 2020, holding that the Corps had not

arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law. *See, e.g., L.E.A.F. v. E.P.A.*, 118 F.3d 1467, 1473 (11th Cir. 1997) (reviewing substance of prior agency action in later as-applied challenge).

Under ESA Section 7(a)(2), the Corps has a duty to ensure any action it authorizes is not likely to jeopardize the continued existence of threatened or endangered species, or result in the destruction or adverse modification of critical habitat. 16 U.S.C. §1536(a)(2). The ESA’s implementing regulations define the types of “action[s]” subject to this requirement to include “all activities *or programs* of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies.” 50 C.F.R. §402.02 (emphasis added). Importantly, the Services have concluded the Corps’ NWP program is a federal program subject to the programmatic consultation requirement. 80 Fed. Reg. 26,832, 26,835 (May 11, 2015).

Federal agencies cannot take actions that “may affect” listed species without first consulting with the Services under ESA Section 7(a)(2). 50 C.F.R. §402.14(a). For broad federal programs—like the Corps’ nationwide permit program—action

“demonstrated a sufficient likelihood of success on the merits and probability of irreparable harm to warrant a stay pending appeal.” Order, *N. Plains Res. Council v. U.S.A.C.O.E.*, No. 20-35412, Doc. 58 (9th Cir. May 28, 2020). The Supreme Court ultimately narrowed the scope of the district court’s order to the Keystone XL pipeline. Order in Pending Case, *A.C.O.E. v. N. Plains Res. Council*, No. 19A1053 (U.S. July 6, 2020). The district court’s declaratory judgment and remand order were unaffected by the appellate orders.

agencies and the Services must engage in “programmatic consultation” to consider the program’s cumulative impacts and to guide implementation by establishing criteria to avoid, minimize, or offset the program’s adverse effects on listed species and critical habitat. *See id.* §§402.02, 402.14(i)(6); *see also* 80 Fed. Reg. at 26,837.

This is where the Corps violated the ESA in issuing NWP 12. *N.P.R.C.*, 2020 WL 1875455, at *7-8. NWP 12’s reissuance was an action that “may affect” listed species, and thus was subject to the programmatic consultation requirements. *Id.*; *see also* 16 U.S.C. §1536(a)(2); 50 C.F.R. §§402.02 & 402.14(a); *N.P.R.C.*, 2020 WL 1875455, at *4; *N.W.F. v. Brownlee*, 402 F.Supp.2d 1, 9-11 (D.D.C. 2005).

The NWP 12 decision document establishes conclusively that NWP 12 “may affect” listed species and habitat. *N.P.R.C.*, 2020 WL 1875455, at *4-5. In that document, the Corps acknowledged

[s]essile or slow-moving animals in the path of discharges, equipment, and building materials will be destroyed. Some aquatic animals may be smothered by the placement of fill material Activities that alter the riparian zone, especially floodplains, *may adversely affect populations of fish and other aquatic animals*, by altering stream flow, flooding patterns, and surface and groundwater hydrology.

Activities authorized by this NWP *will result in adverse effects to other wildlife associated with aquatic ecosystems*, such as resident and transient mammals, birds, reptiles, and amphibians, through the

destruction of aquatic habitat, including breeding and nesting areas, escape cover, travel corridors, and preferred food sources.

Ex. 5 at 76 (emphasis added).

“The ESA provides a low threshold for Section 7(a)(2) consultation[.]” *N.P.R.C.*, 2020 WL 1875455, at *5. Based on the foregoing, the Corps *knew* NWP 12 activities would certainly affect species of aquatic life and wildlife that depend on the waters of the United States, including any of the 1,666 species listed as endangered or threatened in the United States among them.¹⁰ *N.P.R.C.*, 2020 WL 1875455, at *7. Indeed, the Corps has acknowledged that it conducts thousands of project-specific Section 7 consultations each year on NWP-authorized activities. 82 Fed. Reg. at 1873-74. Accordingly, the record for NWP 12 *by itself* establishes the permit “may affect” listed species and their critical habitat.

Despite its recognition of the devastating effects of NWP 12 activities on aquatic species, the Corps nonetheless concluded NWP 12 would have “no effect” on listed species and their habitat. Ex. 5 at 63-64. NOAA Fisheries—one of the expert agencies charged by Congress with implementing the ESA—disagreed with the Corps’ proposed 2017 “no effect” determination and recommended the Corps initiate formal consultation on the 2017 NWPs. Ex. 14 at 4-5. NOAA Fisheries

¹⁰ U.S. Fish & Wildlife Serv., Listed Species Summary (Boxscore), *available at* <https://ecos.fws.gov/ecp0/reports/box-score-report>.

concluded, “[w]ithout a large-scale examination of the aggregate effects of the activities authorized by NWP’s and the procedures established under the NWP’s to address potential effects to listed species and critical habitat, we do not believe that the [Corps] can arrive at the conclusion that there is “no effect” from these NWP’s on ESA-listed species or designated habitat.” *Id.*

Against that backdrop, the Corps’ final “no effect” conclusion and its refusal to engage in programmatic consultation is remarkable. Ex. 5 at 63-64. The Corps relied on the NWP’s General Condition 18 to justify its determination, which requires would-be-permittees to determine whether their activities might affect listed species and, if so, submit a PCN. *Id.* Based on that information, the Corps would initiate project-specific consultation “as appropriate.” *Id.* at 64.

At least two federal courts have told the Corps its reliance on project-specific consultation under the general condition is inadequate to fulfill the agency’s ESA duties and programmatic consultation is required. *N.P.R.C.*, 2020 WL 1875455, at *6; *Brownlee*, 402 F.Supp.2d at 9-11 (“[O]verall consultation for the NWP’s is necessary to avoid piece-meal destruction of [species] habitat through failure to make a cumulative analysis for the program as a whole.”). Project-specific consultation cannot cure the failure to conduct programmatic consultation. 50 C.F.R. §402.14(c)(4); *see also Lane Cty. Audubon Soc’y v. Jamison*, 958 F.2d 290, 294 (9th Cir. 1992); *Conner v. Burford*, 848 F.2d 1441, 1453-58 (9th Cir. 1988). That is

particularly true with respect to the Corps' NWP's because NOAA Fisheries determined the NWP program *was* jeopardizing listed species in 2012. Ex. 15. Project-specific consultation, therefore, cannot relieve the Corps of its duty to consult on the NWP's issuance at the programmatic level, and cannot justify a "no effects" determination for NWP 12.

The problem with relying on project-specific consultation is it ignores the *cumulative* effects on listed species and critical habitat from the thousands of NWP projects conducted each year. *N.P.R.C.*, 2020 WL 1875455, at *7 ("Project level review, by itself, cannot ensure that the discharges authorized by NWP 12 will not jeopardize listed species or adversely modify critical habitat."). Programmatic consultation is the only way to ensure the piecemeal destruction of habitat from the thousands of activities authorized by NWP's each year will not cumulatively jeopardize listed species. For those reasons, NOAA Fisheries told the Corps in response to its proposed 2017 "no effects" determination that "individual activity-specific consultations ... cannot substitute for a broad-scale consultation on the NWP's overall." Ex. 14 at 33. The Corps' "no effect" determination did not address NOAA Fisheries' comments. Ex. 5 at 63-64. Instead, the Corps chose to refuse

programmatic consultation until it was ordered to do so by the federal courts. Ex. 16.

If the Corps' position were correct, there would never be any programmatic consultations despite the Services' regulations, since all programmatic consultations also require project-specific review. The ESA regulations contemplate that programmatic consultation will assess how the program will track impacts to prevent jeopardy to listed species and their habitat, and that subsequent project-specific consultation will authorize incidental take. 80 Fed. Reg. at 26,835-36. By skipping programmatic consultation, the Corps short-circuits the regulatory program and leaves the cumulative effect of thousands of NWP-authorized activities unassessed in violation of 50 C.F.R. §402.14(c)(4), which provides that consultation on individual actions "does not relieve the Federal agency of the requirements for considering the effects of the action or actions as a whole."

The Corps' reliance on General Condition 18 also unlawfully delegates the Corps' ESA duties to permittees. *N.P.R.C.*, 2020 WL 1875455, at *7. The ESA requires the Corps to determine "at the earliest possible time" whether its actions "may affect listed species or critical habitat." 50 C.F.R. §402.14(a). By relying on project applicants to determine whether an activity might affect species or habitat, "General Condition 18 turns the ESA's initial effect determination over to non-federal permittees, even though the Corps must make that initial determination."

N.P.R.C., 202 WL 1875455, at *7. Such delegation is impermissible under the ESA.
Id.

In short, the Corps' 2017 NWP 12 reissuance violated the ESA, and that defect fatally infects the Reinstatement. Accordingly, Petitioners is likely to succeed on the merits.

B. The Norfolk District Reinstatement Is Invalid Because the Huntington District Verification Is Invalid.

When it comes to NWP 12, one bad apple spoils the bunch. That is, if even *one* stream crossing by a pipeline is ineligible for NWP 12, then so too is *every* stream crossing. Note 2 to NWP 12 provides, in part, that “[u]tility line activities must comply with 33 C.F.R. 330.6(d).” Ex. 9 at 3. In turn, 33 C.F.R. 330.6(d) provides that no portion of a project may proceed under an NWP if any other part of the project is ineligible for an NWP, unless the project portion has independent utility. As explained below, the defects in the Huntington District’s verification knock the Norfolk District Reinstatement out of compliance with 33 C.F.R. §330.6(d) and make it impossible for the Pipeline to satisfy NWP 12’s Note 2. Consequently, the Reinstatement is arbitrary, capricious, and otherwise not in accordance with law.

1. Special Condition A Still Precludes MVP's Use of NWP 12 in West Virginia.

To bypass *Sierra Club*, the Corps attempted to change the rules of the game by purporting to modify NWP 12's Special Condition A, which requires projects like the Pipeline to have an individual Section 401 water quality certification. That modification was unlawful for at least two reasons. First, the Division Engineer lacks the authority to modify NWP 12. Second, the Division Engineer abused whatever discretion he may have when he purported to modify NWP 12. Because the purported modification was *ultra vires*, it was ineffective to change NWP 12's conditions. *U.S. v. Cortez*, 930 F.3d 350, 357 (4th Cir. 2019) (“[B]ecause the power of administrative agencies ... is prescribed entirely by statute, *any* ‘improper’ agency action is ‘ultra vires[.]’” (Emphasis original.)); *U.S. v. Smithfield Foods, Inc.*, 191 F.3d 516, 526 (4th Cir. 1999) (holding ineffective a purported permit modification that was legally defective).

a. The Division Engineer Lacks the Authority to Modify NWP 12's Conditions.

The Division Engineer does not have the authority to incorporate the purported modification to Special Condition A into the Corps' 2017 NWPs. The

chain of command is crucial within the Corps, and the purported modification violates that chain of command.

The CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue NWPs. 33 U.S.C. §§1344(d)-(e). The Chief Engineer has delegated some—*but not all*—of his NWP authority to Division and District Engineers. 33 C.F.R. §§330.1(d), 330.2(g), 330.4(e), 330.5.

The Division Engineer’s discretionary authority regarding NWPs is expressly limited by §330.5(c) to modifying, suspending, or revoking “NWP authorizations.” 33 C.F.R. §330.5(c); *see also id.* §330.1(d); §330.2(g); §330.4(e). *Authorizations* are distinct from the nationwide permits themselves. *Sierra Club*, 909 F.3d at 651. In briefing before this Court in *Sierra Club*, the Corps conceded the discretionary authority discussed in 33 C.F.R. §330.5 “applies to the ‘authorization,’ not to the broader Nationwide Permit.”¹¹ In other words, the Chief Engineer has delegated to the Division Engineer the authority to modify authorizations *only*; the Division Engineer cannot modify the broader NWP’s terms and conditions. *Sierra Club*, 909 F.3d at 650 (recognizing the discretionary authority described in 33 C.F.R. §330.5(c) and (d) “specifically refer[s] to the Corps’ ability to modify ‘authorizations under an NWP’ (Section 330.1(d)) and ‘NWP authorizations’ (Section 330.4(e))”).

11 Br. for the Federal Respondents at 23, *Sierra Club v. U.S.A.C.O.E.*, No. 18-1173(L) (4th Cir.), *cited in Sierra Club*, 909 F.3d at 651.

That distinction is crucial because, here, by operation of CWA Section 401(d), Special Condition A in WVDEP's 2017 Certification became a condition of the broader NWP 12, not a condition on *authorizations*. See 33 U.S.C. §1341(d) (providing state water quality certification conditions "shall become a condition on any Federal license or *permit*" (emphasis added)). This Court expressly held in *Sierra Club* that "state conditions *must* be conditions of the NWP." 909 F.3d at 645 (emphasis original).

Thus, only the Chief Engineer may modify the conditions of an existing NWP, as opposed to an authorization, and only in compliance with the procedures in 33 C.F.R. §330.5(b). And, as this Court held in *Sierra Club*, Special Condition A is a condition of the existing NWP 12. Accordingly, if the Corps wanted to grant WVDEP's request to modify Special Condition A, only the Chief Engineer could do so and only by reissuing NWP 12 anew by invoking and implementing the procedures set out in 33 C.F.R. §330.5(b).

Petitioners told all this to the Division Engineer. Ex. 11 at 4-7. But the Division Engineer purported to launder Special Condition A's requirement of an individual water quality certification from NWP 12 anyway. That action was unlawful because it was taken "without observance of procedure required by law" and without statutory or regulatory authority. 5 U.S.C. §706(2); *Cortez*, 930 F.3d at 357.

b. The Division Engineer Cannot Relax Conditions.

Even if the Division Engineer had discretion to modify NWP 12's Special Condition A, his action here would abuse that discretion. That is because the Corps' regulations—as interpreted by this Court in *Sierra Club*—unambiguously prohibit the Division Engineer from replacing Special Condition A with WVDEP's relaxed condition.

In *Sierra Club*, this Court construed the discretionary authority delegated to Division and District Engineers to be a one-way ratchet, authorizing only modifications that make an NWP more restrictive and prohibiting modifications that would expand its applicability. 909 F.3d at 650-51. This Court expressly stated that the regulations limit the Division and District Engineers “to providing *additional* conditions, above and beyond those found in the NWP,” such that “revised” conditions can only be more stringent than the original condition. *Id.* at 650-51 (emphasis original).

As explained above, the purported modification to Special Condition A would expand NWP 12's applicability in West Virginia and make NWP 12 less restrictive. As a result, the purported modification is not the type the Division Engineer is authorized to make under 33 C.F.R. §330.5(c) because it would not “further condition or restrict” NWP 12, as required by 33 C.F.R. §330.1(d) and as held by this Court in *Sierra Club*, 909 F.3d at 650-51. Accordingly, the Division Engineer

unlawfully accepted the modified Special Condition, and that unlawful act was void *ab initio*.

2. Because MVP Is Ineligible for NWP 12 in West Virginia, It is Also Ineligible in Virginia.

Section 330.6(d) of the Corps' regulations provides that NWPs are not available to portions of a project without independent utility when other portions of the same project are ineligible for the NWPs. 33 C.F.R. §330.6(d). When the Corps promulgated that regulation, it stated, "In cases where the NWP activity cannot function independently or meet its purpose without the total project, the NWPs **do not apply** and *all* portions of the project must be evaluated as an individual permit." 56 Fed. Reg. 14598, 14599 (Apr. 10, 1991) (emphasis added). Moreover, the Corps' 2017 rationale for NWP 12's Note 2 makes clear that "[i]f one or more crossings of waters of the United States for a proposed utility line do not qualify for authorization by NWP then the utility line would require an individual permit because of 33 CFR 330.6(d)." 82 Fed. Reg. at 1888.

Those authorities all point unmistakably to one conclusion: **if even one crossing for a natural gas pipeline is ineligible for NWP 12, then that pipeline's proponent may not lawfully use NWP 12 for any of its crossings**. Here, as established above, the Corps' effort to modify NWP 12's condition requiring individual water quality certification in West Virginia for the Pipeline was ineffective, leaving MVP ineligible to use NWP 12 in West Virginia. That

ineligibility is contagious, and, consequently, all of MVP's Virginia stream crossings are ineligible for NWP 12.

II. Petitioners Will Suffer Irreparable Harm.

Absent a stay, MVP will complete its unlawful stream crossings before resolution of this petition. MVP's operator announced in early August 2020 that MVP intends to trench through "critical" streams "as quickly as possible before anything is challenged."¹² And MVP predicts it will be fully in service in early 2021. Ex. 17.

The Supreme Court holds environmental harms "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). The "dredging and filling of [waterbodies] 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). And the Pipeline construction's lethal effect on aquatic life "is, by definition, irreparable." *Humane Soc'y v. Gutierrez*, 523 F.3d 990, 991 (9th Cir. 2008).

12 Equitrans Midstream Corp. (ETRN) Q2 2020 Earnings Call Transcript (Aug. 4, 2020) (statement of Diana Charletta, President and C.O.O., Equitrans Midstream Corp.), *available at* <https://www.fool.com/earnings/call-transcripts/2020/08/04/equitrans-midstream-corp-etrn-q2-2020-earnings-cal.aspx>.

The Final Environmental Impact Statement for the Pipeline (“FEIS”) identifies scores of stream-crossings in areas of shallow bedrock. Ex. 18 at AR006323-437. Expert geologist Pamela Dodds predicts blasting is likely in all areas “less than 10 feet to bedrock,” (Ex. 19 at AR021905-06), which would include those stream crossings in shallow bedrock. Such blasting will cause irreparable harm to the streams and the life within them because of its lethal effects on aquatic organisms. Ex. 18 at AR005236.

Petitioners’ members have interests in streams throughout Virginia that are threatened with irreparable harm from MVP’s plans to trench and/or blast through those streams. For example, David Sligh has a long history with Bradshaw Creek, a stream with shallow bedrock that MVP will have to blast through to lay the Pipeline. Ex. 20, ¶¶25-29; Ex. 18 at AR006411; Ex. 19 at AR021905-06. Mr. Sligh values the fish populations in Bradshaw Creek, including the Roanoke logperch—an endangered species. Ex. 20, ¶¶27-29. The Fish and Wildlife Service acknowledges the Pipeline will adversely affect the Roanoke logperch at the Bradshaw Creek crossing. Ex. 21 at 70.

Roberta Johnson will also be irreparably harmed by the Pipeline’s stream crossings near her home on Bent Mountain in Virginia. Ex. 22, ¶¶7-21. Ms. Johnson has worked for nearly a decade to protect Bottom Creek—a Tier III stream that

borders her property. *Id.*, ¶7-9. Blasting through the Bottom Creek watershed will irreparably alter the high-quality streams that Ms. Johnson values. *Id.*, ¶13.

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

Equitable relief would pose only minimal injury to the Corps. Although the Corps has interests in defending its permits, “the effect of an injunction on these interests seems rather inconsequential.” *O.V.E.C. v. U.S.A.C.O.E.*, 528 F.Supp.2d 625, 632 (S.D.W.Va. 2007).

Moreover, MVP cannot object that a stay would cause it harm because, in the equitable analysis, harms caused by parties’ failures to “avail[] themselves of opportunities to avoid the injuries” are not cognizable. *Di Biase v. SPX Corp.*, 872 F.3d 224, 235 (4th Cir. 2017). In *Sierra Club*, this Court informed MVP “an individual permit will likely be necessary” for the Pipeline. 909 F.3d at 655. Nevertheless, MVP did not seek an individual permit. Rather, it persisted in pursuing NWP 12 authorization, notwithstanding the legal infirmities in the “fix” devised by the Corps and WVDEP. Having decided to risk continuing on the NWP 12 path, MVP cannot now claim the Court should protect it from the consequences of that choice.

Moreover, losing the Reinstatement will not cause substantial harm to MVP because its operator has publicly stated that, “[i]f for some reason there is another challenge ... with the Nationwide 12, then we can fall back to the options that we

talked about, I believe last time, which are some different crossing methods and individual permit options.”¹³

IV. The Public Interest Favors Preliminary Relief.

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). Ensuring Congressional mandates are carried out is always in the public interest. *See, e.g., Johnson v. U.S.D.A.*, 734 F.2d 774, 788 (11th Cir. 1984). Finally, this Court necessarily concluded the public interest lies in a stay of the Pipeline’s invalid NWP 12 authorization when it issued a stay the last time this controversy was before it. Order, *Sierra Club*, No. 18-1173(L), Docket No. 58.

CONCLUSION

For the foregoing reasons, this Court should stay the Reinstatement pending review.

¹³ Equitrans Midstream Corp. (ETRN) Q2 2020 Earnings Call Transcript (Aug. 4, 2020) (statement of Diana Charletta, President and C.O.O., Equitrans Midstream Corp.), *available at* <https://www.fool.com/earnings/call-transcripts/2020/08/04/equitrans-midstream-corp-etn-q2-2020-earnings-cal.aspx>.

Dated: October 5, 2020

Respectfully submitted,

/s/ Derek O. Teaney

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Counsel for Petitioners

CERTIFICATE OF COMPLIANCE WITH TYPE VOLUME LIMIT

This motion complies with the type-volume limits because, excluding the parts of the document exempted by Federal Rule of Appellate Procedure 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 contains 5,191 words. This brief has been prepared in a proportionally spaced typeface using Microsoft Word for Mac 2019 in Times New Roman, 14 point.

/s/ Derek O. Teaney

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CERTIFICATE OF SERVICE

I hereby certify that, on October 5, 2020, 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

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PETITIONERS' EXHIBIT LIST

EXHIBIT NO.	DESCRIPTION
1	September 25, 2020 Norfolk District Reinstatement of NWP 12 Verification
2	Email from George P. Sibley, III, Counsel for Mountain Valley Pipeline, LLC, to Derek Teaney, Counsel for Petitioners, Regarding Mountain Valley Pipeline's Notice Regarding Intent to Rely on Norfolk District NWP 12 Verification (Sept. 25, 2020)
3	Letter from Derek Teaney, Counsel for Petitioners, to David Gunter and Jennifer Neumann, Counsel for Respondents, Regarding Request for Administrative Stay of U.S. Army Corps of Engineers' Verifications to Mountain Valley Pipeline, LLC Under Nationwide Permit 12 (Sept. 25, 2020)
4	Letter from William T. Walker, Chief, Regulatory Branch, U.S. Army Corps of Eng'rs Norfolk Dist., to Derek O. Teaney, Counsel for Petitioners, Re: Request for Administrative Stay of U.S. Army Corps of Engineers' Verifications to Mountain Valley Pipeline, LLC Under Nationwide Permit 12 (Oct. 5, 2020)
5	Decision Document: Nationwide Permit 12 (2017)
6	W. Va. Dep't of Env'tl. Protection, Public Notice (Jan. 2019)
7	Memorandum for Record for the Sept. 25, 2020 Huntington District Verification
8	Letter from Harold Ward, Acting Director, Division of Water and Waste Management, W. Va. Dep't of Env'tl. Protection, to Michael Hatten, Chief, Regulatory Branch, U.S. Army Corps of Eng'rs Huntington Dist., Re: Nationwide Permit 401 Water Quality Certification Modification, State of West Virginia, Public Notice No. LRH-2016-00006-WV (Apr. 24, 2019)
9	2017 Nationwide Permits for the State of West Virginia
10	Letter from Derek Teaney, Counsel for Petitioners, to U.S. Army Corps of Eng'rs Re: W. Va. Dep't of Env'tl. Protection's Request to Modify its Section 401 Water Quality Certification for Nationwide Permits (June 27, 2019)

11	Letter from Derek Teaney, Counsel for Petitioners, to Suzanne Chubb, Regulatory Program Manager, Great Lakes and Ohio River Division of the U.S. Army Corps of Eng'rs, Re: State of West Virginia Proposal to Modify Its Clean Water Act Section 401 Water Quality Certification for Nationwide Permits (Public Notice No. 2019-01-LRD) (July 26, 2019)
12	U.S. Army Corps of Eng'rs, Huntington District, Public Notice: Notification of 2017 Nationwide Permits with Reissued West Virginia Dep't of Env'tl. Protection (WVDEP) 401 Water Quality Certification (Jan. 15, 2020)
13	Letter from Center for Biological Diversity, Sierra Club, et al. to the U.S. Army Corps of Engineers Re: 60-Day Notice of Intent to Sue: Violations of the Endangered Species Act Regarding Nationwide Permit 12 and the Keystone XL Pipeline (July 1, 2019)
14	NOAA Fisheries Comments on the Department of the Army, USACE Nationwide Permits Draft Rule (Jan. 14, 2016)
15	Excerpts from Nat'l Marine Fisheries Serv., 2012 Biological Opinion on the Nationwide Permits (Feb. 17, 2012)
16	Email from David B. Olson, U.S. Army Corps of Eng'rs, to Margaret Gaffney-Smith, U.S. Army Corps of Eng'rs Re: NWP's (Unclassified) (Jan. 17, 2014)
17	Mountain Valley Pipeline, LLC, Press Release, MVP Prepares for Construction Completion: Full In-Service Targeted Early 2021 (June 11, 2020)
18	Excerpts From Federal Energy Regulatory Commission, "Mountain Valley Pipeline and Equitrans Expansion Project: Final Environmental Impact Statement" (June 2017)
19	Pamela C. Dodds, Ph.D., "Hydrogeological Assessment of Impacts Caused by Constructing the Mountain Valley Gas Pipeline Across the Greenbrier River at Pence Springs, Summers County, West Virginia (Dec. 2016)
20	Declaration of David Sligh
21	Excerpts from U.S. Fish & Wildlife Serv., Revised Biological Opinion on the Mountain Valley Pipeline (Sept. 4, 2020)
22	Declaration of Roberta Carpenter Johnson



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



September 25, 2020

Regulatory Branch

NAO-2017-0898 / VMRC#'s 2016-0305 and 2017-1609

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

Dear Mr. Cooper:

Please reference the January 23, 2018 Department of the Army permit verification letter, project number NAO-2015-08998 (VMRC #'s 2016-0305 and 2017-1609) issued to you authorizing under Nationwide Permit (NWP) #12, impacts to waters of the US (streams and wetlands) at 383 separate stream crossings and 142 separate wetland crossings within the Commonwealth of Virginia. These impacts facilitate the installation of a 302-mile 42-inch natural gas pipeline known as the Mountain Valley Pipeline (MVP).

On October 2, 2018, the United States Court of Appeals for the Fourth Circuit vacated the Corps' verification of MVP's compliance with the NWP 12 in West Virginia (order enclosed). Because of that order, it was uncertain whether NWP 12 would ultimately be available to authorize work for MVP in West Virginia. Therefore, in accordance with 33 CFR 330.5(d), on October 5, 2018 the Norfolk District found it appropriate to suspend your authorization to await clarity on the issue.

On September 8, 2020, the Federal Energy Regulatory Commission, via email, informed the Corps that the Biological Opinion from the U.S. Fish and Wildlife Service had been accepted. On September 25, 2020, the Huntington and Pittsburgh District offices of the Corps of Engineers affirmed NWP 12 to allow you to continue the MVP project within West Virginia. Therefore, in light of these events the Norfolk District finds it appropriate to reinstate your authorization.

Exercising our authority under 33 CFR §330.5(d)(2), we hereby reinstate the January 23, 2018, authorization to conduct work under NWP 12. Effective immediately, you may resume all activities being done in reliance upon the authorization under the NWP. All special conditions remain in effect. In the event court action is taken that may impact the verifications, the Corps will consider whether or not to suspend the NWP verifications pending resolution of those issues pursuant to 33 CFR 330.5.

If you have any questions and/or concerns about this permit verification reinstatement, please contact me via telephone at (757)-201-7657 or via email at william.t.walker@usace.army.mil.

Sincerely

William T. Walker

William T. Walker
Chief, Regulatory Branch

Cc:

Randy Owen, Virginia Marine Resources Commission
Steven Hardwick, Department of Environmental Quality
Cory Chalmers, Mountain Valley Pipeline, LLC

Tuesday, September 29, 2020 at 12:01:00 PM Eastern Daylight Time

Subject: Mountain Valley Pipeline | Notice Regarding Intent to Rely on Norfolk District NWP 12 Verification
Date: Friday, September 25, 2020 at 3:57:44 PM Eastern Daylight Time
From: Sibley, Trey
To: Derek Teaney
CC: Gunter, David (ENRD)



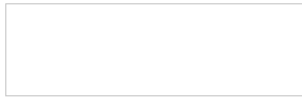
Derek:

Earlier today (September 25, 2020), the Corps' Huntington and Pittsburgh Districts issued new verifications authorizing Mountain Valley Pipeline to rely on Nationwide Permit (NWP) 12 for the portions of the MVP Project in West Virginia, and the Norfolk District lifted the administrative suspension of its NWP 12 verification for the portion of the MVP Project in Virginia.

Pursuant to the agreement reflected in my email to you of October 5, 2018, Mountain Valley will not recommence activities in Virginia authorized by the reinstated verification from the Norfolk District before October 9, 2020, fourteen (14) calendar days from the date of this notice.

I understand that Dave intends to file a status report with the Court notifying it that the Norfolk District's administrative suspension has been lifted.

Trey



George P. Sibley, III

Partner

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September 25, 2020

SENT VIA ELECTRONIC MAIL

David Gunter
Jennefer Neumann
United States Department of Justice
Environmental and Natural Resources Division
Appellate Section
David.Gunter2@usdoj.gov
Jennifer.Neumann@usdoj.gov



RE: Request for Administrative Stay of U.S. Army Corps of Engineers' Verificaitons to Mountain Valley Pipeline, LLC Under Nationwide Permit 12

Dear Mr. Gunter and Ms. Neumann –

I write to you, in your capacity as counsel for the U.S. Army Corps of Engineers, to request an administrative stay, pursuant to 33 CFR section 330.5, of the actions by the Huntington, Pittsburgh, and Norfolk Districts issuing, reissuing, and/or reinstating verifications under Nationwide Permit (“NWP”) 12 to Mountain Valley Pipeline, LLC, for its natural gas pipeline. My clients—Sierra Club, the Center for Biological Diversity, the West Virginia Highlands Conservancy, the West Virginia Rivers Coalition, Wild Virginia, Indian Creek Watershed Association, the Chesapeake Climate Action Network, and Appalachian Voices (hereinafter, the “Environmental Groups”)—intend to file petitions for judicial review of the actions by the Huntington and Norfolk Districts no later than Monday September 28, 2020, and to seek stays pending judicial review. In accordance with FRAP 15, we ask that the Corps administratively stay MVP’s verifications pending judicial review for the reasons described below. Because there may soon be no restriction on MVP’s activities in waters in West Virginia, we request an answer from the Corps as soon as possible. Unfortunately, we may have to

seek judicial relief prior to receiving an answer from the Corps because of the circumstances.

The Corps should administratively stay the reinstated verifications for two reasons. First, all the verifications are unlawful because the Corps violated the ESA with its 2017 NWP 12 reissuance. *N. Plains Res. Council v. U.S.A.C.O.E.* (“*N.P.R.C.*”), ___ F.Supp.3d ___, 2020 WL 1875455 (D. Mont. 2020); *appeal filed*, No. 20-35412 (9th Cir.). Second, the reinstated Huntington and Pittsburgh District verifications are unlawful because they rely on a legally-defective attempt to modify NWP 12’s conditions.

A. The Corps Violated the ESA With Its 2017 NWP 12 Reissuance.

In 2017, despite its estimate that NWP 12 will be used 69,700 times and impact 8,900 acres of waters,¹ the Corps reissued NWP 12 without engaging in formal programmatic consultation with the federal wildlife services (hereinafter, the “Services”)—on the NWP program generally or NWP 12 specifically—to consider the cumulative impacts of NWP-authorized activities on protected species or their critical habitat. That failure, which stands in contrast to the Corps’ 2007 and 2012 reissuances wherein it *did* conduct programmatic consultation, violates the ESA, as the federal district court in Montana recently held. *N.P.R.C.*, 2020 WL 1875455. Indeed, because of that legal defect, NWP 12 has been remanded “to the Corps for compliance with the ESA.” *Id.* at *8.² Accordingly, the reinstated verification is arbitrary,

-
- 1 When the Corps purported to modify Special Conditions A and C, it recognized that it had previously substantially underestimated the number of NWP 12 activities and their impacts in West Virginia.
 - 2 The Montana district court initially remanded NWP 12 to the Corps, vacated the permit, and enjoined the Corps from authorizing any activities under it until consultation was complete. *N.P.R.C.*, 2020 WL 1875455, at *8. The Court subsequently narrowed the scope of the vacatur and the injunction to oil and gas pipelines, but left its remand order untouched. *Northern Plains Res. Council v. U.S.A.C.O.E.*, Civ. No. 19-44-GF-BMM, 2020 WL 3638125, at *14 (D. Mont. May 11, 2020). The Ninth Circuit denied emergency motions for a partial stay of the district court’s orders on May 28, 2020, holding that the Corps had not “demonstrated a sufficient likelihood of success on the merits and probability of irreparable harm to warrant a stay pending appeal.” Order, *N. Plains Res. Council v.*

capricious, an abuse of discretion, and otherwise not in accordance with law. *See, e.g., L.E.A.F. v. E.P.A.*, 118 F.3d 1467, 1473 (11th Cir. 1997) (allowing review of substance of prior agency action in later as-applied challenge); *see also Pub. Citizen v. N.R.C.*, 901 F.2d 147, 152-53 (D.C. Cir. 1990) (holding “agencies have an ever present duty to insure that their actions are lawful”).

Under ESA Section 7(a)(2), the Corps has a duty to ensure any action it authorizes is not likely to jeopardize the continued existence of threatened or endangered species, or result in the destruction or adverse modification of critical habitat. 16 U.S.C. §1536(a)(2). The ESA’s implementing regulations define the types of “action[s]” subject to this requirement to include “all activities *or programs* of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies.” 50 C.F.R. §402.02 (emphasis added). Importantly, the Services have concluded the Corps’ NWP program is a federal program subject to 50 C.F.R. §402.02. 80 Fed. Reg. 26,832, 26,835 (May 11, 2015).

Federal agencies cannot take an action subject to ESA Section 7(a)(2) without first consulting with the Services if that action “may affect” threatened or endangered species. 50 C.F.R. §402.14(a). For broad federal programs—like the Corps’ nationwide permit program—action agencies and the Services must engage in “programmatic consultation” to consider the cumulative impacts of the program and to guide implementation by establishing criteria to avoid, minimize, or offset adverse effects on listed species and critical habitat. *See id.* §§402.02, 402.14(i)(6); *see also* 80 Fed. Reg. at 26,837.

This is where the Corps violated the ESA in issuing NWP 12. *N.P.R.C.*, 2020 WL 1875455, at *7-8. The Corps’ reissuance was an action that “may affect” listed species, and thus was subject to the programmatic consultation requirements. *Id.*; *see also* 16 U.S.C. §1536(a)(2); 50 C.F.R. §§402.02 &

U.S.A.C.O.E., No. 20-35412, Doc. 58 (9th Cir. May 28, 2020). The Supreme Court ultimately narrowed the scope of the district court’s order to the Keystone XL pipeline. Order in Pending Case, *A.C.O.E. v. N. Plains Res. Council*, No. 19A1053 (U.S. July 6, 2020). The district court’s remand order was unaffected by the appellate orders.

402.14(a); *N.P.R.C.*, 2020 WL 1875455, at *4; *N.W.F. v. Brownlee*, 402 F.Supp.2d 1, 9-11 (D.D.C. 2005).

The NWP 12 decision document establishes conclusively that NWP 12 “may affect” listed species and habitat. *N.P.R.C.*, 2020 WL 1875455, at *4-5. In that document, the Corps predicted activities authorized by NWP 12 would “change the chemical and physical characteristics of the waterbody,” which in turn “*can affect* the species and quantities of organisms inhabiting the aquatic area.” Decision Document at 75 (emphasis added). The Corps also acknowledged

[s]essile or slow-moving animals in the path of discharges, equipment, and building materials will be destroyed. Some aquatic animals may be smothered by the placement of fill material Activities that alter the riparian zone, especially floodplains, *may adversely affect populations of fish and other aquatic animals*, by altering stream flow, flooding patterns, and surface and groundwater hydrology.

Activities authorized by this NWP *will result in adverse effects to other wildlife associated with aquatic ecosystems*, such as resident and transient mammals, birds, reptiles, and amphibians, through the destruction of aquatic habitat, including breeding and nesting areas, escape cover, travel corridors, and preferred food sources.

Id. at 76 (emphasis added).

“The ESA provides a low threshold for Section 7(a)(2) consultation[.]” *N.P.R.C.*, 2020 WL 1875455, at *5. Based on the foregoing, the Corps knew NWP 12 would certainly affect species of aquatic life and wildlife that depend on the waters of the United States, including any of the 1,666 species listed as endangered or threatened in the United States among them.³ *N.P.R.C.*, 2020

3 U.S. Fish & Wildlife Serv., Listed Species Summary (Boxscore), *available at* <https://ecos.fws.gov/ecp0/reports/box-score-report>.

WL 1875455, at *7. Accordingly, the record for NWP 12 *by itself* establishes the permit “may affect” listed species and their critical habitat.

Despite its recognition of the devastating effects of NWP 12 activities on aquatic species, the Corps nonetheless concluded NWP 12 would have “no effect” on listed species and their habitat. Decision Document at 63-64. NOAA Fisheries—one of the expert agencies charged by Congress with implementing the ESA—disagreed with the Corps’ proposed 2017 “no effect” determination and recommended the Corps initiate formal consultation on the 2017 NWPs. NWP031962–63.⁴ NOAA Fisheries concluded, “[w]ithout a large-scale examination of the aggregate effects of the activities authorized by NWPs and the procedures established under the NWPs to address potential effects to listed species and critical habitat, we do not believe that the [Corps] can arrive at the conclusion that there is “no effect” from these NWPs on ESA-listed species or designated habitat.” *Id.*

Against that backdrop, the Corps’ final “no effect” conclusion and its refusal to engage in programmatic consultation is remarkable. Decision Document at 63-64. The Corps relied on the NWPs’ General Condition 18 to justify its determination, which requires would-be-permittees to determine whether their activities might affect listed species and, if so, submit a PCN. *Id.* Based on that information, the Corps would initiate project-specific consultation “as appropriate.” *Id.* at 64.

At least two federal courts have told the Corps its reliance on project-specific consultation under the general condition is unlawful under the ESA, and programmatic consultation is required. *N.P.R.C.*, 2020 WL 1875455, at *6; *Brownlee*, 402 F.Supp.2d at 9-11 (“[O]verall consultation for the NWPs is necessary to avoid piece-meal destruction of [species] habitat through failure to make a cumulative analysis for the program as a whole.”). Project-specific consultation does not cure the failure to conduct programmatic consultation. 50 C.F.R. §402.14(c)(4); *see also Lane Cty. Audubon Soc’y v. Jamison*, 958 F.2d 290, 294 (9th Cir. 1992); *Conner v. Burford*, 848 F.2d 1441, 1453-58 (9th Cir. 1988). Project-specific consultation, therefore, cannot relieve the Corps of its duty to consult on the NWPs’ issuance at the

4 References styled “NWP_____” are to the Administrative Record for NWP 12, provided to the petitioners in *Sierra Club v. U.S.A.C.O.E.*, No. 18-1173(L) (4th Cir.).

programmatic level, and cannot justify a “no effects” determination for NWP 12.

The problem with relying on project-specific consultation is it ignores the *cumulative* effects on listed species and critical habitat from the thousands of NWP 12 projects conducted each year. *N.P.R.C.*, 2020 WL 1875455, at *7 (“Project level review, by itself, cannot ensure that the discharges authorized by NWP 12 will not jeopardize listed species or adversely modify critical habitat.”). Programmatic consultation is the only way to ensure the piecemeal destruction of habitat from the thousands of activities authorized by NWP 12 each year will not cumulatively jeopardize listed species. For those reasons, NOAA Fisheries told the Corps in response to its proposed 2017 “no effects” determination that “individual activity-specific consultations ... cannot substitute for a broad-scale consultation on the NWPs overall.” NWP031991. The Corps’ “no effect” determination did not address NOAA Fisheries’ comments. Decision Document at 63-64. Instead, the Corps chose to refuse programmatic consultation until it was ordered to do so by the federal courts. NWP036481-82.

The Corps’ reliance on General Condition 18 also unlawfully delegates the Corps’ ESA duties to permittees. *N.P.R.C.*, 2020 WL 1875455, at *7. The ESA requires the Corps to determine “at the earliest possible time” whether its actions “may affect listed species or critical habitat.” 50 C.F.R. §402.14(a). By allowing project applicants to determine in the first instance whether an activity might affect species or habitat, “General Condition 18 turns the ESA’s initial effect determination over to non-federal permittees, even though the Corps must make that initial determination.” *N.P.R.C.*, 202 WL 1875455, at *7. Such delegation is impermissible under the ESA. *Id.*

In short, the Corps’ 2017 NWP 12 reissuance violated the ESA, and that defect fatally infects all of MVP’s verifications.

B. The Reinstated Verification Impermissibly Relies on Unlawful Modifications.

To avoid the result in *Sierra Club*, the Corps attempted to change the rules of the game by purporting to modify NWP 12’s Special Conditions A and C. Those modifications were unlawful for at least two reasons. First, the Division Engineer lacks the authority to modify NWP 12. Second, the Division Engineer abused whatever discretion he may have when he

purported to modify NWP 12. Because the purported modifications were *ultra vires*, they were ineffective to change NWP 12's conditions. *U.S. v. Cortez*, 930 F.3d 350, 357 (4th Cir. 2019) (“[B]ecause the power of administrative agencies ... is prescribed entirely by statute, *any* ‘improper’ agency action is ‘ultra vires[.]’” (Emphasis original.)); *U.S. v. Smithfield Foods, Inc.*, 191 F.3d 516, 526 (4th Cir. 1999) (holding ineffective a purported permit modification that was legally defective); *see also* *Dixon v. U.S.*, 381 U.S. 68, 74 (1965) (unlawful agency actions are nullities); *L.E.A.F.*, 118 F.3d at 1473 (holding an unlawful agency action is “void *ab initio*” and cannot serve as basis for later agency action). As a result, the Pipeline remains ineligible for NWP, and the Huntington and Pittsburgh District verifications are unlawful.

1. The Division Engineer Lacks the Authority to Modify NWP 12's Conditions.

The Division Engineer does not have the authority to incorporate the purported modifications to Special Conditions A and C into the Corps' 2017 NWPs. The chain of command is crucial within the Corps, and the purported modifications violate that chain of command.

The CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue NWPs. 33 U.S.C. §§1344(d)-(e). The Chief Engineer has delegated some—but *not all*—of his NWP authority to Division and District Engineers. 33 C.F.R. §§330.1(d), 330.2(g), 330.4(e), 330.5.

The Division Engineer's discretionary authority regarding NWPs is expressly limited by §330.5(c) to modifying, suspending, or revoking “NWP authorizations.” 33 C.F.R. §330.5(c); *see also id.* §330.1(d); §330.2(g); §330.4(e). *Authorizations* are distinct from the nationwide permits themselves. *Sierra Club*, 909 F.3d at 651. The Corps' regulations at 33 C.F.R. §330.2(c) provide, “*Authorization* means that specific activities that qualify for an NWP may proceed, provided that the terms and conditions of the NWP are met.” In briefing before the Fourth Circuit in *Sierra Club*, the Corps conceded the discretionary authority discussed in 33 C.F.R. §330.5 “applies to the ‘authorization,’ not to the broader Nationwide Permit.”⁵ In other words, the Chief Engineer has delegated to the Division Engineer the authority to modify authorizations *only*; the Division Engineer cannot modify the broader

⁵ Br. for the Federal Respondents at 23, *Sierra Club v. U.S.A.C.O.E.*, No. 18-1173(L) (4th Cir.), *cited in* *Sierra Club*, 909 F.3d at 651.

NWP's terms and conditions. *Sierra Club*, 909 F.3d at 650 (recognizing the discretionary authority described in 33 C.F.R. §330.5(c) and (d) “specifically refer[s] to the Corps’ ability to modify ‘authorizations under an NWP’ (Section 330.1(d)) and ‘NWP authorizations’ (Section 330.4(e))”).

That distinction is crucial because, here, by operation of CWA Section 401(d), Special Conditions A and C in WVDEP's 2017 Certification became conditions of the broader NWP 12, not conditions on *authorizations*. See 33 U.S.C. §1341(d) (providing state water quality certification conditions “shall become a condition on any Federal license or *permit*” (emphasis added)). The Fourth Circuit expressly held in *Sierra Club* that “state conditions *must* be conditions of the NWP.” 909 F.3d at 645 (emphasis original).

Thus, only the Chief Engineer may modify the conditions of an existing NWP, as opposed to an authorization, and only in compliance with the procedures in 33 C.F.R. §330.5(b). And, as the Fourth Circuit held in *Sierra Club*, Special Conditions A and C are conditions of the existing NWP 12. Accordingly, if the Corps wanted to grant WVDEP's request to modify Special Conditions A and C, only the Chief Engineer could do so and only by reissuing NWP 12 anew by invoking and implementing the procedures set out in 33 C.F.R. §330.5(b) that require, *inter alia*, compliance with the National Environmental Policy Act and the CWA Section 404(b)(1) guidelines. 33 C.F.R. §330.5(b)(2)-(3).

The Environmental Groups told all this to the Division Engineer in their comments on the proposed modification. But the Division Engineer purported to launder Special Conditions A and C from NWP 12 anyway. That action was unlawful because it was taken “without observance of procedure required by law” and without statutory or regulatory authority. 5 U.S.C. §706(2); *Cortez*, 930 F.3d at 357; *see also Dixon*, 381 U.S. at 74. That unlawful action in turn infects the Huntington and Pittsburgh District's verifications. See *L.E.A.F.*, 118 F.3d at 1473.

2. The Division Engineer Cannot Relax Conditions.

Even if the Division Engineer had discretion to modify NWP 12's Special Conditions A and C, his action here would abuse that discretion. That is because the Corps' regulations—as interpreted by the Fourth Circuit in *Sierra Club*—unambiguously prohibit the Division Engineer from replacing Special Conditions A and C with WVDEP's relaxed conditions.

In *Sierra Club*, the Fourth Circuit construed the discretionary authority delegated to Division and District Engineers to be a one-way ratchet, authorizing only modifications that make an NWP more restrictive and prohibiting modifications that would expand the applicability of an NWP. 909 F.3d at 650-51. The Fourth Circuit expressly stated that the regulations limit the Division and District Engineers “to providing *additional* conditions, above and beyond those found in the NWP,” such that “revised” conditions can only be more stringent than the original condition. *Id.* at 650-51 (emphasis original).

The express limits on the Corps’ discretionary authority imposed by 33 C.F.R. §330.1(d)—limiting modifications to those that “further condition or restrict”—conclusively demonstrate that “revised” conditions under 33 C.F.R. §330.4(e) can only be more stringent than the original condition, never less so. *Sierra Club*, 909 F.3d at 651. And the Corps itself has explained that the Division Engineer’s discretionary action “can not expand a nationwide permit.” 56 Fed. Reg. at 59,110.

As explained above, the purported modifications to Special Conditions A and C would expand NWP 12’s applicability in West Virginia and make NWP 12 less restrictive. As a result, the purported modifications are not the type the Division Engineer is authorized to make under 33 C.F.R. §330.5(c) because they would not “further condition or restrict” NWP 12 in West Virginia, as required by 33 C.F.R. §330.1(d) and as held by the Fourth Circuit in *Sierra Club*, 909 F.3d at 650-51. Accordingly, the Division Engineer unlawfully accepted the modified Special Conditions, and that unlawful act was void *ab initio*. As a result, Special Conditions A and C remain part of NWP 12, and the Huntington and Pittsburgh District Engineers unlawfully verified that the Mountain Valley Pipeline complies with all the terms and conditions of NWP 12.

CONCLUSION

For the foregoing reasons, the Environmental Groups respectfully request that the U.S. Army Corps of Engineers administratively stay the verifications issued to Mountain Valley Pipeline, LLC, under NWP 12 until judicial review of the Corps’ actions is complete. Again, because time is of the essence, the Environmental Groups ask that the Corps respond to this request as soon as possible. Because of the emergent circumstances, the Environmental Groups reserve the right to seek judicial relief before the Corps

responds in order to protect the streams at issue from activities by Mountain Valley Pipeline, LLC.

Respectfully,

/s/ Derek O. Teaney

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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
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October 5, 2020

Regulatory Branch

Derek O. Teaney
Appalachian Mountain Advocates
Post Office Box 507
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Subject: Request for Administrative Stay of U.S. Army Corps of Engineers' Verifications to Mountain Valley Pipeline, LLC Under Nationwide Permit 12

Dear Mr. Teaney:

I write in response to your letter dated September 25, 2020, requesting an administrative stay of the verifications recently issued to Mountain Valley Pipeline, LLC under Nationwide Permit 12 (NWP 12). After careful consideration, the Norfolk District has concluded that your letter does not present any basis for suspending the subject verifications. Accordingly, we decline to exercise our discretionary authority under 33 C.F.R. §330.5(d) to grant your request.

Sincerely,

William T. Walker

William T. Walker
Chief, Regulatory Branch

**DECISION DOCUMENT
NATIONWIDE PERMIT 12**

This document discusses the factors considered by the Corps of Engineers (Corps) during the issuance process for this Nationwide Permit (NWP). This document contains: (1) the public interest review required by Corps regulations at 33 CFR 320.4(a)(1) and (2); (2) a discussion of the environmental considerations necessary to comply with the National Environmental Policy Act; and (3) the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230). This evaluation of the NWP includes a discussion of compliance with applicable laws, consideration of public comments, an alternatives analysis, and a general assessment of individual and cumulative effects, including the general potential effects on each of the public interest factors specified at 33 CFR 320.4(a).

1.0 Text of the Nationwide Permit

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).

1.1 Requirements

General conditions of the NWPs are in the Federal Register notice announcing the issuance of this NWP. Pre-construction notification requirements, additional conditions, limitations, and restrictions are in 33 CFR part 330.

1.2 Statutory Authorities

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 404 of the Clean Water Act (33 U.S.C. 1344)

1.3 Compliance with Related Laws (33 CFR 320.3)

1.3.1 General

NWPs are a type of general permit designed to authorize certain activities that have no more than minimal individual and cumulative adverse environmental effects and generally comply with the related laws cited in 33 CFR 320.3. Activities that result in more than minimal individual and cumulative adverse environmental effects cannot be authorized by NWPs. Individual review of each activity authorized by an NWP will not normally be performed, except when pre-construction notification to the Corps is required or when an applicant requests verification that an activity complies with an NWP. Potential adverse impacts and compliance with the laws cited in 33 CFR 320.3 are controlled by the terms and conditions of each NWP, regional and case-specific conditions, and the review process that is undertaken prior to the issuance of NWPs.

The evaluation of this NWP, and related documentation, considers compliance with each of the following laws, where applicable: Sections 401, 402, and 404 of the Clean Water Act; Section 307(c) of the Coastal Zone Management Act of 1972, as amended; Section 302 of

the Marine Protection, Research and Sanctuaries Act of 1972, as amended; the National Environmental Policy Act of 1969; the Fish and Wildlife Act of 1956; the Migratory Marine Game-Fish Act; the Fish and Wildlife Coordination Act, the Federal Power Act of 1920, as amended; the National Historic Preservation Act of 1966; the Interstate Land Sales Full Disclosure Act; the Endangered Species Act; the Deepwater Port Act of 1974; the Marine Mammal Protection Act of 1972; Section 7(a) of the Wild and Scenic Rivers Act; the Ocean Thermal Energy Act of 1980; the National Fishing Enhancement Act of 1984; the Magnuson-Stevens Fishery and Conservation and Management Act, the Bald and Golden Eagle Protection Act; and the Migratory Bird Treaty Act. In addition, compliance of the NWP with other Federal requirements, such as Executive Orders and Federal regulations addressing issues such as floodplains, essential fish habitat, and critical resource waters is considered.

1.3.2 Terms and Conditions

Many NWPs have pre-construction notification requirements that trigger case-by-case review of certain activities. Two NWP general conditions require case-by-case review of all activities that may adversely affect Federally-listed endangered or threatened species or historic properties (i.e., general conditions 18 and 20, respectively). General condition 16 restricts the use of NWPs for activities that are located in Federally-designated wild and scenic rivers. None of the NWPs authorize the construction of artificial reefs. General condition 28 prohibits the use of an NWP with other NWPs, except when the acreage loss of waters of the United States does not exceed the highest specified acreage limit of the NWPs used to authorize the single and complete project.

In some cases, activities authorized by an NWP may require other federal, state, or local authorizations. Examples of such cases include, but are not limited to: activities that are in marine sanctuaries or affect marine sanctuaries or marine mammals; the ownership, construction, location, and operation of ocean thermal conversion facilities or deep water ports beyond the territorial seas; activities that result in discharges of dredged or fill material into waters of the United States and require Clean Water Act Section 401 water quality certification; or activities in a state operating under a coastal zone management program approved by the Secretary of Commerce under the Coastal Zone Management Act. In such cases, a provision of the NWPs states that an NWP does not obviate the need to obtain other authorizations required by law. [33 CFR 330.4(b)(2)]

Additional safeguards include provisions that allow the Chief of Engineers, division engineers, and/or district engineers to: assert discretionary authority and require an individual permit for a specific activity; modify NWPs for specific activities by adding special conditions on a case-by-case basis; add conditions on a regional or nationwide basis to certain NWPs; or take action to suspend or revoke an NWP or NWP authorization for activities within a region or state. Regional conditions are imposed to protect important regional concerns and resources. [33 CFR 330.4(e) and 330.5]

1.3.3 Review Process

The analyses in this document and the coordination that was undertaken prior to the issuance of the NWP fulfill the requirements of the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act, and other acts promulgated to protect the quality of the environment.

All NWPs that authorize activities that may result in discharges into waters of the United States require water quality certification. NWPs that authorize activities within, or affecting land or water uses within a state that has a Federally-approved coastal zone management program, must also be certified as consistent with the state's program. The procedures to ensure that the NWPs comply with these laws are described in 33 CFR 330.4(c) and (d), respectively.

1.4 Public Comment and Response

For a summary of the public comments received in response to the June 1, 2016, Federal Register notice, refer to the preamble in the Federal Register notice announcing the reissuance of this NWP. The substantive comments received in response to the June 1, 2016, Federal Register notice were used to improve the NWP by changing NWP terms and limits, pre-construction notification requirements, and/or NWP general conditions, as necessary.

We proposed to clarify that this NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters of the United States for crossings of those waters associated with the construction, maintenance, repair, and removal of utility lines. In addition, we proposed to modify the definition of "utility line" to make it clear that utility lines can also include optic cables and other lines that communicate through the internet. We also proposed to add a paragraph to this NWP to authorize, to the extent that DA authorization is required, discharges of dredged or fill material into waters subject to section 404 of the Clean Water Act and structures and work in waters subject to section 10 of the Rivers and Harbors Act of 1899, necessary to remediate inadvertent returns of drilling fluids that can occur during horizontal directional drilling operations to install utility lines under jurisdictional waters and wetlands. Other proposed changes to NWP 12 are discussed in more detail in the preamble to the June 1, 2016, proposal (see 81 FR 35198 – 35199).

Several commenters expressed their support for the proposed modifications to NWP 12. Some of these commenters agreed with the clarification that, for utility lines authorized by NWP 12, the Corps is only authorizing regulated activities to cross waters of the United States, including navigable waters. Several commenters said that utility lines crossing multiple waterbodies should require individual permits, instead of authorizing each separate and distant crossing by NWP. In contrast, several commenters said they support the use of NWP 12 to authorize separate and distant crossings of waters of the United States. One commenter suggested clarifying that "crossing" only refers to regulated activities, and to not activities such as horizontal directional drilling and aerial crossings of jurisdictional waters. Several commenters said this NWP does not authorize activities that are similar in nature. A

couple of these commenters asserted that this NWP does not authorize activities that are similar in nature because pipelines can carry a variety of types of fluids, some of which are harmful and some of which are benign. Other commenters made the “not similar in nature” objection, stating that pipelines that carry fluids such as oil are different than pipelines that carry water or sewage, which are different than utility lines that carry electricity.

We are retaining the long-standing practice articulated in the NWP regulations at 33 CFR 330.2(i), in which each separate and distant crossings of waters of the United States is authorized by NWP. The utility line activities authorized by NWP 12 are similar in nature because they involve linear pipes, cables, or wires to transport physical substances or electromagnetic energy from a point of origin to a terminal point. For the purposes of this NWP, the term “crossing” refers to regulated activities. However, it should be noted that installing utility lines under a navigable water of the United States subject to section 10 of the Rivers and Harbors Act of 1899 via horizontal directional drilling, as well as aerial crossings of those navigable waters, require authorization under section 10 of the Rivers and Harbors Act of 1899. The substations, tower foundations, roads, and temporary fills that are also authorized by NWP 12 (when those activities require Department of the Army (DA) authorization) are integral to the fulfilling the purpose of utility lines, and thus fall within the “categories of activities that are similar in nature” requirement for general permits stated in section 404(e) of the Clean Water Act.

Many commenters objected to the reissuance of NWP 12, stating that it authorizes oil and gas pipelines that should be subject to the individual permit process instead. Many commenters said that these activities should be subject to a public review process. Many of these commenters cited the risk of oil spills as a reason why oil pipelines should be evaluated under the Corps’ individual permit process. Many commenters based their concerns on their views that the Corps is the only federal agency that regulates oil pipelines.

The Corps does not regulate oil and gas pipelines, or other types of pipelines, per se. For utility lines, including oil and gas pipelines, our legal authority is limited to regulating discharges of dredged or fill material into waters of the United States and structures or work in navigable waters of the United States, under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act of 1899, respectively. We do not have the authority to regulate the operation of oil and gas pipelines, and we do not have the authority to address spills or leaks from oil and gas pipelines. General condition 14, proper maintenance, requires that NWP activities, including NWP 12 activities, be properly maintained to ensure public safety. The proper maintenance required by general condition 14 also ensures compliance with the other NWP general conditions, many of which are designed to protect the environment, as well as any regional conditions imposed by the division engineer and activity-specific conditions imposed by the district engineer. In addition, we do not have the legal authority to regulate the construction, maintenance, or repair of upland segments of pipelines or other types of utility lines. For example, for a recent oil pipeline (e.g., the Flanagan South pipeline), the segments of the oil pipeline that were subject to the Corps’ jurisdiction (i.e., the crossings of waters of the United States, including navigable waters of the United States, that were authorized by the 2012 NWP 12) was only 2.3% of the total length of the pipeline; the remaining 97.7% of the oil pipeline was constructed in upland areas outside of the Corps’ jurisdiction. Interstate natural gas

pipelines are regulated by the Federal Energy Regulatory Commission. The Federal Energy Regulatory Commission also regulates some electric transmission projects.

There are other federal laws that address the operation of pipelines and spills and leaks of substances from pipelines. Those laws are administered by other federal agencies. Under the Natural Gas Pipeline Safety Act of 1968, the Department of Transportation (DOT) regulates pipeline transportation of natural gas and other gases. The DOT also regulates the transportation and storage of liquefied natural gas. Under the Hazardous Liquid Pipeline Safety Act, the DOT regulates pipeline transportation of hazardous liquids including crude oil, petroleum products, anhydrous ammonia, and carbon dioxide. The DOT administers its pipeline regulations through the Office of Pipeline Safety (OPS), which is in its Pipelines and Hazardous Materials Safety Administration (PHMSA). Specific to oil pipelines, the PHMSA is responsible for reviewing oil spill response plans for onshore oil pipelines.

Oil spills are also addressed through the Oil Pollution Act of 1990, which is administered by the U.S. Environmental Protection Agency and the U.S. Coast Guard. Under the Oil Pollution Act of 1990, EPA is responsible for addressing oil spills occurring in inland waters and the U.S. Coast Guard is responsible for addressing oil spills in coastal waters and deepwater ports. The U.S. EPA has issued regulations governing its oil spill prevention program, and requires oil spill prevention, control, and countermeasures, and facility response plans (see 40 CFR part 300 and 40 CFR part 112). Oil spill prevention, control, and countermeasures are intended to ensure that oil facilities prevent discharges of oil into navigable waters or adjoining shorelines. Their facility response plan regulations require certain facilities to submit response plans to address worst case oil discharges or threats of a discharge. The U.S. Coast Guard has the authority to ensure the effective cleanup of oil spills in coastal waters and require actions that prevent further discharges of oil from the source of the oil spill. Activities regulated under section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act that are determined by the U.S. EPA or U.S. Coast Guard to be necessary to respond to discharges or releases of oil or hazardous substances may be authorized by NWP 20.

Many commenters based their objections to the reissuance of NWP 12 on the inability for public involvement to occur during the Corps' NWP verification process for specific pipelines. Many commenters said the Corps' authorization process should be modified to prevent the segmentation of pipelines and that the Corps should fully evaluate the environmental impacts of individual fossil fuel pipelines, including the burning of those fossil fuels. Many commenters cited climate change as a reason why oil and gas pipelines should be evaluated under the individual permit process instead of the Corps using NWP to authorize crossings of waters of the United States.

The purpose of the NWPs, as well as regional general permits, is to provide a streamlined authorization process for activities that result in no more than minimal individual and cumulative adverse environmental effects. When section 404(e) of the Clean Water Act became law in 1977, lawmakers endorsed the general permit concept that was developed by the Corps in its 1975 and 1977 regulations (see 40 FR 31335 and 42 FR 37140, 37145 respectively). For the issuance or reissuance of NWPs and other general permits, the public involvement process occurs during the development of the general permit. If public notices

were required to authorize specific activities after the NWP or other general permit was issued, it would not provide the streamlined process intended by Congress. Individual pipelines may be able to operate independently to transport substances from a point of origin to a terminal point, even though they may be part of a larger network of pipelines. The Corps may authorize these independent pipelines, if all crossings of waters of the United States involving regulated activities qualify for NWP authorization.

The Corps does not have the legal authority to regulate the burning of fossil fuels that are transported by pipelines where the Corps authorized crossings of waters of the United States by NWP 12, other general permits, or individual permits. Therefore, in its environmental documentation the Corps is not required to fully evaluate the burning of fossil fuels, except to respond to specific comments submitted in response to a proposed rule (in the case of these NWPs) or comments submitted in response to a public notice for an individual permit application.

Activities authorized by NWP 12 are currently playing, and will continue to play, an important role in helping the nation achieve goals regarding the increased reliance on clean energy projects to meet the energy needs of its populace, to help reduce emissions of greenhouse gases that contribute to climate change. Clean energy projects include the construction, operation, and maintenance of more efficient and cleaner fossil-fuel energy generation facilities, nuclear power plants, and renewable energy generation projects that use solar and wind energy. Natural gas and electricity transmission and distribution systems will also need to be constructed or upgraded to bring clean energy to consumers.

The utility line activities authorized by NWP 12 will continue to be needed by society, including the goods and services transported by those utility lines. In areas of increasing temperatures, there will be increased demand for air conditioning and the energy needed to run air conditioners. Some areas of the country will receive less precipitation, and their water needs may need to be fulfilled through the construction and operation of utility lines that carry water to those areas that need additional water.

One commenter said that for any oil pipeline that affects aboriginal, historic treaty or reservation lands of an Indian tribe, the terms of NWP 12 should require consultation with all affected tribes and that any permit decision protect the full range of tribal rights under federal law. Two commenters stated that all NWP 12 activities should require pre-construction notification to ensure that consultation occurs with tribes on any utility line that may affect protected tribal resources, tribal rights, or Indian lands. One of these commenters said that general condition 17 in effect delegates the Corps' tribal trust responsibility to project proponents, and that the vast majority of impacts to waters of the United States can occur without notification to the Corps.

Activities authorized by NWP 12 must comply with general condition 17, tribal rights, and general condition 20, historic properties. We have modified general condition 17 to more effectively address the Corps' responsibilities regarding tribal rights (including treaty rights), protected tribal resources, and tribal lands. For the 2017 NWPs, district engineers have been consulting with tribes to identify regional conditions that will facilitate compliance with general conditions 17 and 20. As a result of this consultation, district

engineers can establish coordination procedures to identify utility line activities that require government-to-government consultation to protect tribal trust resources and tribal treaty rights. These consultations will be done in accordance with the Corps' tribal policy principles. Further information on the Corps' tribal policy principles is available at: <http://www.usace.army.mil/Missions/Civil-Works/Tribal-Nations/>. In fulfilling its trust responsibilities to tribes, the Corps follows the Department of Defense American Indian and Alaska Native Policy. The Corps' tribal trust responsibilities apply to the activities regulated by the Corps, and do not extend to associated activities that the Corps does not have the authority to regulate, such as activities in upland areas outside of the Corps' legal control and responsibility.

The consultation between Corps districts and tribes that has been conducted for these NWP can result in additional procedures or regional conditions to protect tribal trust resources. District engineers will work to establish procedures with interested tribes to coordinate on specific NWP 12 activities to assist the Corps in executing its tribal trust responsibilities, or add mitigation requirements that the district engineer determines are necessary to ensure that the verified NWP activity results in no more than minimal individual and cumulative adverse environmental effects. Division engineers will, as necessary, impose regional conditions on this NWP, including requiring more activities to require pre-construction notification, to ensure that these activities do not cause more than minimal adverse effects on tribal rights, protected tribal resources, or tribal lands. When a Corps district receives a pre-construction notification that triggers a need to consult with one or more tribes, that consultation will be completed before the district engineer makes his or her decision on whether to issue the NWP verification. Regional conditions and coordination procedures can help ensure compliance with general condition 17. The Corps does not, and cannot, delegate its tribal trust responsibilities to permit applicants.

One commenter said that NWP 12 should prohibit construction in waters of the United States until all other federal and state permits are issued for pipelines. One commenter suggested adding language that allows temporary impacts for repair of a utility line parallel a bank, which is not a "crossing." Several commenters stated that this NWP should not authorize activities in regions in Appalachia because it is not possible to mitigate impacts in those mountainous areas. Two commenters said this NWP should require the use of best management practices to control release of sediments during construction.

Paragraph 2 of Section E, "Further Information," states that the NWPs do not remove the need to obtain other required federal, state, or local authorizations as required by law. The NWPs have a 45-day review period (with some exceptions), so district engineers cannot wait for all other federal, state, or local authorizations to be issued. Otherwise, the proposed NWP activity would be authorized after the 45-day period passed with no response from the Corps. The default NWP authorization would not have any activity-specific conditions, such as mitigation requirements, to ensure that the adverse environmental effects are no more than minimal. This NWP authorizes temporary fills to construct a utility line. Concerns about the use of this NWP in Appalachia are more appropriately addressed by the appropriate division engineer, who has the authority to modify, suspend, or revoke the NWP in a specific region. General condition 12 requires the use of soil and erosion controls to ensure that sediments associated with an NWP activity are not released downstream.

Several commenters suggested changing the acreage limit from 1/2-acre to 1 acre. Some commenters said the 1/2-acre limit is too high, and some commenters stated that the 1/2-acre limit is appropriate. A number of commenters recommended imposing an acreage limit that would place a cap on losses of waters of the United States for the entire utility line. A few commenters recommended reducing the 1/2-acre limit to 1/4-acre. One commenter said the 1/2-acre limit should apply to the entire utility line, not to each separate and distant crossing. One commenter recommended establishing an acreage limit based on a county or state. Another commenter suggested applying the acreage limit to a waterbody. One commenter stated that this NWP should not authorize waivers of the 1/2-acre limit. Two commenters said that stream impacts should be limited to 300 linear feet, especially in headwater streams.

We are retaining the 1/2-acre limit for this NWP because we believe it is an appropriate limit for authorizing most utility line activities that have no more than minimal individual and cumulative adverse environmental effects. Division engineers can modify this NWP on a regional level to reduce the acreage limit if necessary to ensure that no more than minimal adverse environmental effects occur in that region. We do not agree that the acreage limit should apply to the entire utility line because the separate and distant crossings of waters of the United States are usually at separate waterbodies scattered along the length of the utility line, and are often in different watersheds especially for utility lines that run through multiple counties, states, or Corps districts. For utility lines that cross the same waterbody (e.g., a river or stream) at separate and distant locations, the distance between those crossings will usually dissipate the direct and indirect adverse environmental effects so that the cumulative adverse environmental effects are no more than minimal. If the district engineer determines after reviewing the PCN that the cumulative adverse environmental effects are more than minimal, after considering a mitigation proposal provided by the project proponent, he or she will exercise discretionary authority and require an individual permit.

The 1/2-acre limit cannot be waived. We do not believe it is necessary to impose a 300 linear foot limit for the loss of stream bed because most utility line crossings are constructed perpendicular, or nearly perpendicular, to the stream. In addition, most utility line crossings consist of temporary impacts. This NWP requires PCNs for proposed utility lines constructed parallel to, or along, a stream bed, and the district engineer will evaluate the adverse environmental effects and determine whether NWP authorization is appropriate.

Several commenters said this NWP does not authorize oil pipelines. One commenter said that the requirement that utility lines result in “no change in pre-construction contours” will not prevent changes in habitats or physical features in some streams, and utility lines may become exposed over time. One commenter objected to the requirement that there must be no change in pre-construction contours, because it is a new requirement and would require the permittee to complete a pre- and post- construction survey. One commenter said this NWP should not authorize mechanized landclearing in forested wetlands or scrub-shrub wetlands. Two commenters supported the addition of “internet” to the list of examples of utility lines. One commenter recommended removal of the reference to “telegraph lines” from the list of types of utility lines covered by this NWP.

This NWP authorizes crossings of waters of the United States that are part of utility lines used to transport any “gaseous, liquid, liquescent, or slurry substance” which includes oil. We acknowledge that the construction and maintenance of utility lines in jurisdictional waters and wetlands will result in some changes to the structure of waters and wetlands and to the ecological functions and services provided by those waters and wetlands. There is often conversion of wetland types within utility line rights-of-way and those conversions often need to be permanently maintained while the utility line is operational. Periodic maintenance may be necessary to respond to erosion exposing utility lines that were buried when they were constructed. The requirement to ensure that there are no changes in pre-construction contours of waters of the United States does not mandate pre- and post-construction surveys. Compliance with this requirement can usually be accomplished by examining the nearby landscape to determine if there has been a change in pre-construction contours. The NWP requires PCNs for mechanized landclearing in the utility line right-of-way so that district engineers can evaluate those proposed activities and determine whether they qualify for NWP authorization and whether compensatory mitigation is necessary to ensure no more than minimal adverse environmental effects in accordance with general condition 23, mitigation. We have retained the internet as a form of communication that may be transmitted by utility lines. We do not see the need to remove “telegraph messages” from the type of communications that may be conveyed by utility lines because there may be some use of telegraph messages by historic societies or other entities. Some of the existing utility lines that previously conveyed telegraph messages may now carry other forms of communication.

One commenter recommended modifying NWP 12 to authorize activities associated with wireless communication facilities, because these facilities could be considered substations. Two commenters said that NWP 12 should not authorize the construction or expansion of utility line substations because these facilities should not be located in waters of the United States. Several commenters said that utility line substations and access roads should not be limited to non-tidal waters of the United States to allow them to be constructed in all waters of the United States.

The substations authorized by this NWP must be associated with utility lines. With wireless telecommunication facilities, there are no utility lines connecting the various facilities because they transmit their information via electromagnetic waves traveling through the atmosphere. The construction of wireless communication facilities that involves discharges of dredged or fill material into waters of the United States may be authorized by NWP 39 or other NWPs. For some utility lines, it may not be practicable or feasible to locate a substation outside of waters of the United States. As long as the construction or expansion of the proposed utility line substation results in no more than minimal adverse environmental effects, it can be authorized by this NWP. We believe that it is necessary to limit the construction of utility line substations and access roads to non-tidal wetlands (except for non-tidal wetlands adjacent to tidal waters) to ensure that NWP 12 only authorizes activities that result in no more than minimal adverse environmental effects. Conducting those activities in tidal waters and wetlands, and in non-tidal wetlands adjacent to tidal waters is more likely to result in more than minimal adverse environmental effects.

One commenter expressed opposition to moving the provisions authorizing access roads to

NWPs 14 and 33. One commenter said that this NWP should not authorize access roads, because those roads can cause fragmentation of the landscape.

We did not propose to move the provisions authorizing the construction of utility line access roads to NWPs 14 and 33. We have retained the access road provision in this NWP. The Corps only regulates those portions of access roads that require DA authorization because they involve regulated activities in jurisdictional waters and wetlands. The Corps does not regulate access roads constructed in upland areas that, in many areas of the country, are more likely to result in substantial habitat fragmentation. In those areas of the country where much of the landscape is comprised of wetlands, utility line access roads are more likely to exceed the 1/2-acre limit and thus require individual permits. District engineers will review PCNs with proposed access roads and determine whether the proposed activities will have more than minimal adverse environmental effects on wetland functions, including habitat connectivity.

In the June 1, 2016, proposed rule, we proposed to add a paragraph to NWP 12 to authorize, to the extent that DA authorization is required, discharges of dredged or fill material into waters of the United States, and structures and work in navigable waters, necessary to remediate inadvertent returns of drilling fluids that can occur during horizontal directional drilling operations to install utility lines below jurisdictional waters and wetlands. An inadvertent return occurs when drilling fluids are released through fractures in the bedrock and flow to the surface, and possibly into a river, stream, wetland, or other type of waterbody. For NWP 12 activities where there is the possibility of such inadvertent returns, district engineers may add conditions to the NWP 12 verification requiring activity-specific remediation plans to address these situations, should they occur during the installation or maintenance of the utility line.

The fluids used for directional drilling operations consist of a water-bentonite slurry and is not a material that can be considered “fill material” under 33 CFR 323.2(e). This water-bentonite mixture is not a toxic or hazardous substance, but it can adversely affect aquatic organisms if released into bodies of water. Because these drilling fluids are not fill material, inadvertent returns of these drilling fluids are not regulated under section 404 of the Clean Water Act. However, activities necessary to contain and clean up these drilling fluids may require DA authorization (e.g., temporary fills in waters of the United States, or fills to repair a fracture in a stream bed).

Several commenters expressed support for adding the paragraph on remediation of inadvertent returns of drilling fluids from directional drilling activities. A few commenters said that the term “frac-out” should not be used when referring to inadvertent returns of drilling fluids during horizontal directional drilling operations. A commenter recommended replacing the term “sub-soil” with “subsurface.” One commenter objected to the proposed addition, stating that these inadvertent returns of drilling fluids occur too frequently. One commenter asked for a definition of “inadvertent return” and said the NWP should explain that inadvertent returns of drilling fluids during horizontal directional drilling activities may require a Clean Water Act section 402 permit. One commenter requested clarification that activities which remediate inadvertent returns of drilling fluids minimize environmental impacts. One commenter agreed that inadvertent returns of drilling fluids that occur during

horizontal directional drilling activities are not discharges of dredged or fill material into waters of the United States. One commenter said that for horizontal directional drilling activities, the NWP should require entry and exit 50 feet from the stream bank, and sufficient depths prevent inadvertent returns of drilling fluids. One commenter said that the NWP should require upland containment of drilling fluids. One commenter requested that this paragraph distinguish between horizontal directional drilling for the purposes of utility line installation or replacement, and directional drilling for oil and gas extraction.

Horizontal directional drilling for utility line installation and replacement is an important technique for avoiding and minimizing adverse effects to jurisdictional waters and wetlands during the construction of utility lines. We believe that modifying NWP 12 to authorize remediation activities that involve discharges of dredged or fill material into waters of the United States and/or structures or work in navigable waters of the United States and are necessary to address these inadvertent returns to protect the aquatic environment is a prudent course of action. We have removed the term “frac-out” from the text of this NWP, and replaced the term “mud” with “fluid.” We have also replaced the term “sub-soil” with “subsurface” because horizontal directional drilling activities usually occur well below the soil. District engineers may add conditions to NWP verifications to require activity-specific remediation plans to address potential inadvertent returns that might occur during the construction of the utility line.

If the horizontal directional drilling activities require DA authorization, the district engineer may add conditions to the NWP authorization to specify entry and exit points for the drilling equipment. If the drilling fluids return to the surface and are not considered to be discharges of dredged or fill material regulated under section 404 of the Clean Water Act, then the Corps cannot require those drilling fluids to be contained in an upland area. The text of this paragraph of NWP 12 specifically refers to horizontal directional drilling for utility line installation or replacement, but we have revised the text of this paragraph to specify that these activities are being “conducted for the purpose of installing or replacing utility lines.”

Several commenters said that for utility lines involving horizontal directional drilling, the PCN should require drilling plans and site-specific spill detection and remediation measures. One commenter stated that mitigation should be required for the remediation of inadvertent returns of drilling fluids. Two commenters recommended adding a requirement that remediation of inadvertent returns of drilling fluids must be based on contingency plans submitted in advance of conducting horizontal directional drilling. One commenter said that PCNs should be required for these remediation activities and agency coordination should be conducted. Another commenter said that water quality certification agencies should be involved in the review and approval of these remediation plans.

If the horizontal directional drilling involves activities that require authorization under section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, the PCN should describe those activities and their environmental effects. The PCN should also describe mitigation measures that will be used to ensure compliance with the terms and conditions of the NWP. We believe that remediating the inadvertent returns of drilling fluids and restoring, to the maximum extent practicable, the affected jurisdictional waters and wetlands is sufficient mitigation. District engineers can add conditions to the NWP

authorization to require contingency plans for utility line activities that require DA authorization. We do not agree that it is necessary to require PCNs for inadvertent returns of drilling fluids or to conduct agency coordination. Through this provision of NWP 12, we are trying to encourage timely remediation of these inadvertent returns of drilling fluids to protect the aquatic environment. States can determine whether water quality certification is required for activities conducted to remediate inadvertent returns of drilling fluids. States can require water quality certification for any discharge into jurisdictional waters and wetlands, not just discharges of dredged or fill material.

Several commenters said they support the addition of temporary mats to minimize impacts of utility line activities. Two commenters requested clarification that not all uses of temporary mats in jurisdictional waters and wetlands results in a regulated activity. One commenter recommended adding language to this paragraph to include other measures that distribute the weight of construction equipment to minimize soil disturbance. Another commenter stated that this paragraph should require best management practices, such as low pressure equipment, wide tires, and varying travel paths, to minimize the adverse environmental effects of NWP 12 activities. One commenter suggested inserting the word “promptly” between the words “be removed” to require the prompt removal of all temporary fills.

District engineers will determine on a case-by-case basis whether the use of timber mats in jurisdictional waters and wetlands requires DA authorization. We believe that the proposed language in this paragraph allows for a variety of temporary structures, fills, and work necessary to construct, maintain, or repair a utility line, substation, foundation for overhead utility lines, or access road. We do not believe it is necessary to provide, for NWP 12 activities, a comprehensive list of techniques to minimize soil disturbance and minimize the impacts of construction equipment. We also do not agree with the proposed addition of “promptly” because it may be more protective of the environment to keep temporary fills in place until post-construction restoration activities or permanent fills have had time to stabilize.

One commenter stated that the PCN thresholds for NWP 12 should not be changed. One commenter said that PCNs should be required for all NWP 12 activities. Several commenters suggested increasing the 1/10-acre PCN threshold (item 5 in the “Notification” paragraph) to 1/2-acre. One commenter asked the Corps to remove the PCN requirement for the maintenance of aerial crossings of section 10 waters that do not include installation of new structures. One commenter opposed replacing the current PCN thresholds with a single 1/10-acre PCN threshold. One commenter requested clarification of the PCN threshold for proposed NWP 12 activities that run parallel to a stream bed (item 4 in the “Notification” paragraph). One commenter said that PCNs should be required for utility line crossings of streams inhabited by species listed under the Endangered Species Act.

We have not made any changes to the PCN thresholds for this NWP. We do not agree that PCNs should be required for all activities authorized by this NWP because the current PCN thresholds have been effective in identifying proposed NWP 12 activities that should be reviewed by district engineers on a case-by-case basis to ensure that they result in only minimal individual and cumulative adverse environmental effects. In addition, paragraph

(b)(4) of general condition 32 requires that NWP 12 PCNs (and PCNs for other NWPs) also include information on other crossings of waters of the United States for the linear project that will use NWP 12 authorizations but do not require PCNs. This requirement is also explained in Note 8 of NWP 12.

All NWP 12 activities that require authorization under section 10 of the Rivers and Harbors Act of 1899 require PCNs to ensure that these utility lines will have no more than minimal adverse effects on navigation. This includes the maintenance of aerial crossings of navigable waters. We agree that the current PCN thresholds should be maintained instead of simplifying the PCN thresholds to a single PCN threshold for the loss of greater than 1/10-acre of waters of the United States. Item 4 of the “Notification” paragraph requires pre-construction notification for utility lines placed in jurisdictional waters and wetlands if the proposed utility line runs parallel to, or along, a stream bed. These activities require PCNs to allow district engineers to evaluate potential impacts to the stream. General condition 18, endangered species, requires PCNs for all NWP activities to be conducted by non-federal permittees that might affect listed species or critical habitat (see paragraph (c) of general condition 18).

Several commenters expressed agreement with adding the proposed Note 2, and some of those commenters requested clarification of the use of the term “independent utility” in the proposed note. Several commenters objected to the proposed Note 2, stating that only the crossings of waters of the United States that do not qualify for NWP authorization should be evaluated through the individual permit process, allowing the remaining crossings to be authorized by NWP 12. Several commenters said that the second sentence of Note 2 should be removed. Several commenters requested clarification that the phrase “independent utility” in 33 CFR 330.6(d) does not affect the current practice for linear projects found in 33 CFR 330.2(i) and in the NWP definition of “single and complete linear project” in which separate and distant crossings of waters of the United States can qualify for separate NWP authorization. Several commenters asked for thresholds for determining when utility line crossings are “separate and distant.”

Note 2 is based on the NWP regulations that were published in the Federal Register on November 22, 1991 (56 FR 59110), and represent long-standing practices in the NWP program. Those regulations include the definition of “single and complete project” at 33 CFR 330.2(i) and the provision on combining NWPs with individual permits at 33 CFR 330.6(d). We have removed the phrase “with independent utility” from the second sentence of Note 2. We believe that the second sentence, with this modification, needs to be retained to remind users of NWP 12 of the requirements in the regulations at 33 CFR 330.6(d). This will help ensure that the project proponent submits the appropriate request for authorization, specifically an individual permit application or NWP PCN.

If one or more crossings of waters of the United States for a proposed utility line do not qualify for authorization by NWP, then the utility line would require an individual permit because of 33 CFR 330.6(d). An exception would be if a regional general permit is available to authorize the crossing or crossings that do not qualify for NWP authorization. In these circumstances, the project proponent also has the option of relocating or redesigning the crossings of waters of the United States that does not qualify for NWP authorization so

that all of the utility line crossings could qualify for NWP authorization.

There is no conflict between 33 CFR 330.6(d) and 33 CFR 330.2(i). In addition, these regulations do not conflict with the NWP definition of “single and complete linear project” in Section F of these NWPs. It should be noted that both 33 CFR 330.2(i) and the NWP definition of “single and complete linear project” do not discuss the concept of “independent utility.” We cannot establish national thresholds for determining when crossings of waters of the United States are “separate and distant” because a variety of factors should be considered by district engineers when making those decisions, such as topography, geology, hydrology, soils, and the characteristics of wetlands, streams, and other aquatic resources. Corps districts may establish local guidelines for identifying “separate and distant” crossings.

One commenter said that Note 2 uses the phrase “utility lines with independent utility” and observes that the definition of “independent utility” in the “Definitions” section of the NWPs states that independent utility is a test for “a single and complete non-linear project.” This commenter said that this inconsistent wording causes confusion. One commenter stated that the difference between “stand-alone” activities and “segments” is unclear. One commenter recommended removing the second sentence of Note 2. One commenter requested a definition of “stand-alone linear project.”

As stated above, we have removed the phrase “with independent utility” from the second sentence of Note 2. District engineers will apply the concept of independent utility in 33 CFR 330.6(d) to determine when NWP authorizations can be combined with individual permit authorizations, or whether an individual permit is required for the regulated activities. Therefore, there is no need to further explain the concept of “stand-alone” activities or “stand-alone linear project.” Note 2 covers linear projects, not single and complete non-linear projects, so Note 2 should not be applied to non-linear projects. There are separate definitions of “single and complete linear project” and “single and complete non-linear project” in the Definitions section of these NWPs because these are different concepts for the NWP program.

Several commenters opposed Note 2, stating that it would allow utility line proponents to break up large utility lines into separate projects and prevent them from being evaluated under the individual permit process. One commenter requested clarification whether the permittee can identify to the district engineer the origin and terminal point for each utility line that has independent utility (i.e., each stand-alone utility line).

The purpose of Note 2 is to prevent the situations the commenters opposing the proposed note are concerned about, to ensure that utility lines with one or more crossings that do not qualify for NWP authorization are evaluated under the individual permit process. To assist district engineers in applying 33 CFR 330.6(d), in an individual permit application or a PCN, the project proponent can identify the point of origin and terminal point of the utility line that could function independently of a larger overall utility line project.

The objective of Note 2 is to improve consistency in implementation of the NWP program, especially the application of 33 CFR 330.6(d). Project proponents usually design their

utility lines to reduce their impacts to waters of the United States to qualify for NWP authorization. That avoidance and minimization is a benefit of the NWP program. In addition, most of the crossings of waters of the United States for utility lines result in temporary impacts to those jurisdictional waters and wetlands. The use of the term “separate and distant” in Note 2 is the same as its use in 33 CFR 330.2(i) and the definition of “single and complete linear project” in the “Definitions” section of the NWPs (Section F).

A few commenters asserted that proposed Note 2 does not comply with NEPA or the National Historic Preservation Act (NHPA) because the Corps should view an entire oil pipeline as a single and complete project. These commenters objected to the Corps’ practice of authorizing each separate and distant crossing by NWP.

The Advisory Council on Historic Preservation’s regulations for implementing NHPA section 106 define the term “undertaking” as: “a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval.” (See 36 CFR 800.16(y).) It should be noted that the Advisory Council’s definition of “undertaking” refers not only to projects, but also to activities. Their definition of “undertaking” recognizes that federal agencies may not regulate or permit entire projects, and that a federal agency might only have the authority to authorize an activity or a number of activities that is a component or are components of a larger overall project.

For oil pipelines and other utility lines, the activities that are subject to the Corps’ regulatory authorities and require DA authorization are crossings of jurisdictional waters and wetlands, as well as utility line substations, foundations for overhead utility lines, and access roads, that involve discharges of dredged or fill material into waters of the United States or structures or work in navigable waters of the United States. Segments of an oil pipeline or other utility line in upland areas outside of the Corps’ jurisdiction, or attendant features constructed in upland areas, do not require DA authorization and therefore are not, for the purposes of the Corps’ compliance with section 106 of the NHPA, “undertakings.” The Corps does not have direct or indirect jurisdiction over pipeline segments in upland areas. The Corps does not regulate oil pipelines, or other utility lines per se; we only regulate those components of oil pipelines or other utility lines, that involve activities regulated under our authorities (i.e., section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act of 1899).

The activities regulated by the Corps, as well as the Corps’ analysis of direct and indirect effects caused by those regulated activities, are the same regardless of whether the Corps processes an individual permit application or uses NWPs or other general permits to authorize the regulated activities. Likewise, for the consideration of cumulative effects, the incremental contribution of regulated activities to cumulative effects is the same regardless of the type of DA authorization. That incremental contribution consists of the direct and indirect effects of the activities that require DA authorization.

One commenter supported the addition of Note 3. One commenter requested that this Note clarify that the term “navigable waters of the United States” refers to the waters defined at

33 CFR part 329. We have added a reference to 33 CFR part 329 to Note 3.

One commenter agreed with the proposed addition of Note 6. Several commenters said the word “that” should be added before the phrase “do not qualify.” One commenter stated that the phrase “or another applicable 404(f) exemption” should be added to Note 6 because a project proponent may use other Clean Water Act section 404(f) exemptions, such as the exemptions for ditch maintenance and the construction of temporary sedimentation basins. One commenter requested confirmation that the Clean Water Act section 404(f) exemptions that are applicable to currently serviceable structures used for transportation have not been changed. Another commenter requested examples of activities that do not qualify for the Clean Water Act section 404(f) exemptions, such as mechanized landclearing outside previously authorized right-of-ways.

We have added the word “that” after “activities” to correct the error in the proposed Note 6. Note 6 does not preclude project proponents from utilizing other Clean Water Act section 404(f) exemptions that are applicable to activities that may be related to utility lines. Note 6 refers to the maintenance exemption because NWP 12 explicitly refers to maintenance activities, which may require Clean Water Act section 404 authorization if the maintenance activity does not qualify for the section 404(f) maintenance exemption. Note 6 does not affect the application of the maintenance exemption to fill structures used for transportation. It is beyond the scope of Note 6 to discuss activities related to utility lines that do not qualify for any of the Clean Water Act section 404(f) exemptions.

One commenter pointed out that Note 8 was not discussed in the preamble of the June 1, 2016, proposed rule. One commenter asked the Corps to explain why it proposed to add Note 8. Another commenter requested clarification of whether Note 8 would affect utility lines that have stormwater outfalls.

The lack of discussion of Note 8 in the preamble to the proposed rule was an error. As stated on page 35197 of the proposed rule, we solicited comments on all of the NWPs, general conditions, definitions, and all NWP application procedures presented in the proposed rule. The purpose of Note 8 is to remind users of the NWPs that if a utility line includes crossings of waters of the United States that are authorized by NWP but do not require PCNs, and one or more crossings of waters of the United States requires pre-construction notification, then the PCN must include those non-PCN crossings, in accordance with the requirements of paragraph (b)(4) of general condition 32. The requirements in Note 8 may apply to outfalls for utility lines and outfalls for stormwater management facilities, depending on the case-specific characteristics of the utility line, outfall, and stormwater management facility.

Several commenters said that Corps districts should be prohibited from suspending or revoking NWP 12 and using RGPs for utility lines that cross state or district boundaries. One commenter recommended that NWP 12 include prescriptive national standard best management practices (BMPs) and provide notifications to stakeholders when pipelines, cables, and utility lines are proposed to be constructed in marine transportation routes. These notifications would also be provided to the U.S. Coast Guard and the National Marine Fisheries Service. A few commenters said that the mitigation process for NWP 12 is not in

compliance with the National Environmental Policy Act (NEPA) because the public is not provided with an opportunity to comment on requests for NWP verifications. A few commenters also stated that reliance on a district engineer's compensatory mitigation requirement for an NWP 12 verification is inadequate to support a finding of no significant impact under an environmental assessment prepared to satisfy NEPA requirements.

For utility lines that cross Corps district boundaries, each Corps district may process the NWP 12 PCNs for crossings located in its district, or the Corps districts may designate a lead district to provide a single response to the NWP 12 PCNs. If a Corps district has had NWP 12 suspended or revoked by the division engineer to use a regional general permit or state programmatic general permit instead of NWP 12, it can use that regional or programmatic general permit to authorize utility line activities. We believe that it would be more appropriate to have district engineers determine which BMPs should be applied to the construction, maintenance, or repair of utility lines in their geographic areas of responsibility, as those BMPs may vary by region and utility sector. If the U.S. Coast Guard has a role in regulating utility lines in marine transportation routes, the U.S. Coast Guard can take its own actions under its authorities to ensure compliance with its requirements. We will continue to provide NWP verifications to the National Ocean Service for the charting of utility lines in navigable waters of the United States.

The decision document for this NWP includes an environmental assessment with a mitigated finding of no significant impact. Mitigation measures are discussed throughout the combined decision document, which includes the environmental assessment, public interest review, and 404(b)(1) Guidelines analysis. Other mitigation measures may be required by district engineers through conditions added to activity-specific NWP verifications. The mitigation measures discussed in the national decision documents include the NWP general conditions, which help ensure that NWP activities result in no more than minimal adverse environmental effects.

The draft decision document for NWP 12 was made available for public review and comment concurrent with the proposed rule that was published in the Federal Register on June 1, 2016. The decision document describes, in general terms, mitigation that helps ensure that NWP 12 activities result in no more than minimal adverse environmental effects. Mitigation requirements, including compensatory mitigation requirements, will be determined by district engineers for activity-specific NWP verifications. Compliance with NEPA is accomplished when the NWP is issued by Corps Headquarters, with its decision document. Individual NWP 12 verifications do not require NEPA documentation, nor do they require an opportunity for public comment. The public comment process occurs during the rulemaking procedures to issue or reissue an NWP. A public notice and comment process for NWP verifications would not be consistent with the Congressional intent of section 404(e) of the Clean Water Act, which envisions a streamlined authorization process for activities that result in no more than minimal individual and cumulative adverse environmental effects.

One commenter said that utility lines constructed parallel to the stream gradient should have the minimum number of crossings, and those crossings should intersect the stream as close to 90 degrees to the stream centerline as possible. That commenter also stated that trench

plugs should be no more than 200 feet apart, and plugs must be used on either side of the stream crossing. One commenter recommended adding a permit condition to prevent utility lines from creating new drainage paths away from a waterbody.

Paragraph (a) of general condition 23, mitigation, requires permittees to avoid and minimize adverse effects to waters of the United States to the maximum extent practicable on the project site. For the purposes of NWP 12, this means that the project proponent should design the utility line to minimize the number of crossings of waters of the United States. The use of trench plugs will be determined on a case-by-case basis by district engineers when processing NWP 12 PCNs or voluntary requests for NWP verification. District engineers may also impose activity-specific conditions on NWP 12 authorizations to minimize draining of waters of the United States.

One commenter said that compensatory mitigation should be required for the permanent conversion of forested wetlands to scrub-shrub wetlands for utility line rights-of-way. Two commenters stated that this NWP should not authorize sidecasting of excavated material into waters of the United States because the sidecast material will be dispersed by currents or rainfall. One commenter requested clarification of a statement made in the preamble to the proposed rule that some excavation activities do not require Clean Water Act section 404 authorization. Two commenters said that if Corps districts consider separate and distant crossings of waters of the United States to qualify for separate NWP authorization, how are cumulative impacts considered in accordance with Section D, District Engineer's Decision?

District engineers have the discretion to require compensatory mitigation for the permanent conversion of forested wetlands to scrub-shrub wetlands, if that permanent conversion is conducted as a result of activities that require DA authorization (see paragraph (i) of general condition 23, mitigation). General condition 12, soil erosion and sediment controls, requires permittees to stabilize exposed soils and fills at the earliest practicable date, to minimize dispersion by currents, rainfall, or other erosive forces. Excavation activities require Clean Water Act section 404 authorization if they result in regulated discharges of dredged or fill material into waters of the United States (see the definitions at 33 CFR 323.2).

Paragraph 1 of Section D, District Engineer's Decision, requires district engineers to consider the cumulative effects of all crossings of waters of the United States for a single and complete linear project that is authorized by NWP, including those crossings that require DA authorization but do not otherwise require pre-construction notification. A complete PCN requires the project proponent to identify, in addition to the NWP 12 activities that require PCNs, the NWP 12 activities that do not require PCNs (see paragraph (b)(4) of general condition 32 and Note 8). The information regarding the cumulative effects of all of the utility line activities authorized by NWP 12 will be considered by the district engineer in his or her decision-making process for an NWP 12 verification.

A number of commenters asserted that the issuance of NWP 12 requires an environmental impact statement. A few commenters stated that the cumulative effects analysis for NWP 12 in the draft decision document was insufficient. A few commenters said that the cumulative effects analysis for NWP 12 in the draft decision document was properly done. One

commenter indicated that the Corps improperly deferred the requirement to do a NEPA cumulative effects analysis to the district engineer's NWP verification decision. One commenter opined that the Corps defers its NEPA review for later stages in the permitting process and that NWP 12 provides no guarantee that the Corps district will conduct a NEPA analysis for the NWP verification. One commenter said that Corps districts should prepare supplemental environmental impact statements for NWP 12 verifications. One commenter stated that the decision document should discuss NWP 12 activities and their effects on climate change. Many commenters remarked that the Corps should not issue permits for pipelines because the burning of fossil fuels contributes greenhouse gases that cause climate change.

For the issuance or reissuance of an NWP, including NWP 12, the Corps complies with NEPA when Corps Headquarters issues or reissues the NWP with its decision document. The decision document issued by Corps Headquarters includes an environmental assessment and a finding of no significant impact, which concludes the NEPA process. The finding of no significant impact is reached because of the terms and conditions of the NWP and the mitigation measures (e.g., general conditions and other mitigation measures) for NWP 12 activities that are discussed throughout the decision document. Therefore, an environmental impact statement is not required for the issuance or reissuance of NWP 12. When a district engineer issues an NWP 12 verification, he or she is confirming that the proposed NWP 12 activity complies with the terms and conditions of the NWP, including any regional and activity-specific conditions, and will result in no more than minimal individual and cumulative adverse environmental effects. If the district engineer requires activity-specific mitigation measures, he or she will require those mitigation measures through conditions added to the NWP authorization.

To issue an NWP verification the district engineer does not need to prepare a NEPA document because the requirements for NEPA were fulfilled when Corps Headquarters issued the national decision document for the NWP. Since NEPA compliance is achieved by Corps Headquarters through the preparation of a combined decision document that includes an environmental assessment and finding of no significant impact, Corps districts do not need to prepare supplemental environmental impact statements for NWP verifications. If a proposed NWP activity will result in more than minimal individual and cumulative adverse environmental effects after considering the mitigation proposal submitted by the prospective permittee, the district engineer will assert discretionary authority and require an individual permit if the adverse environmental effects will be more than minimal. During the individual permit process, the district engineer will prepare the appropriate NEPA documentation.

The NEPA cumulative effects analysis in the NWP 12 decision document was prepared in accordance with the Council of Environmental Quality's definition of "cumulative impact" at 40 CFR 1508.7, and utilizes concepts presented in CEQ's 1997 and 2005 guidance on conducting cumulative impact analyses. The NEPA cumulative effects analysis examines cumulative effects on various resources of concern, including wetlands, rivers and streams, coastal areas, and endangered and threatened species. Our NEPA cumulative effects analysis examines past, present, and reasonably foreseeable future actions that affect those

resources of concern, including federal, non-federal, and private actions. Because the decision document is national in scope it is a general cumulative effects analysis.

We also conducted a cumulative effects analysis in accordance with the 404(b)(1) Guidelines because this NWP authorizes discharges of dredged or fill material into waters of the United States. The Corps does not defer the NEPA cumulative effects analysis to the NWP verification stage of the authorization process. Corps Headquarters conducts the required NEPA analyses when it issues or reissues the NWP. The final national decision document includes a discussion of NWP 12 activities and climate change. Activities authorized by NWP will result in small incremental contributions to greenhouse gas emissions during construction periods, if the equipment used to construct the crossings of waters of the United States, utility line substations, footings for overhead utility lines, or access roads in waters of the United States consumes fossil fuels. The Corps does not have the authority to regulate the burning of fossil fuels that may be transported by utility lines. The Corps does not have the legal authority to regulate emissions of greenhouse gases during the operation and maintenance of the utility line activities, if those operations and maintenance activities do not involve activities that require DA authorization.

A number of commenters said the draft decision document for NWP 12 is inadequate, especially in its evaluation of the risks and impacts of oil spills, gas pipeline leaks, and inadvertent returns of drilling fluids from horizontal directional drilling activities. One commenter stated that with respect to the discussion of Subpart G (Evaluation and Testing) in the draft decision document, that voluntary compliance is rarely as effective as monitored compliance. Another commenter objected to the statement that “this NWP will encourage applicants to design their projects within the scope of the NWP” because the commenter believes that the NWP encourages massive cross-country pipeline projects. One commenter said the decision document must address impacts to forested wetlands caused by NWP 12 activities.

The decision document for NWP 12 treats oil spills and gas pipeline leaks as reasonably foreseeable future actions in the NEPA cumulative impact analysis section. The decision document also discusses the potential for inadvertent returns of drilling fluids to occur during horizontal directional drilling activities used to install or replace utility lines. As discussed above, the Corps does not regulate the operation of oil or gas pipelines, or leaks that might occur. In addition, the Corps does not regulate inadvertent returns of drilling fluids that might occur as a result of subsurface fractures during horizontal directional drilling activities. Oil spills and gas leaks are addressed by other federal agencies under other federal laws.

As discussed in the proposed rule, it is our position that inadvertent returns of drilling fluids from horizontal directional drilling are not discharges regulated under section 404 of the Clean Water Act, under the current definitions of “discharge of dredged material” and “discharge of fill material” at 33 CFR 323.2. We have added provisions to NWP 12 to authorize discharges of dredged or fill material into waters of the United States and/or structure or work in navigable waters of the United States to remediate inadvertent returns of

drilling fluids if they occur, to minimize the adverse environmental effects of those inadvertent returns of drilling fluids.

For those NWP 12 activities that do not require PCNs, voluntary compliance is an appropriate means of compliance. District engineers will take appropriate action if they discover cases of non-compliance with the terms and conditions of NWP 12. For utility lines, this NWP only authorizes crossings of waters of the United States that involve activities regulated under the Corps' authorities. It does not authorize segments of utility lines constructed in uplands because those segments do not require DA authorization. It does not authorize the entire utility line unless the entire utility line is constructed in jurisdictional waters and wetlands and involves activities that require DA authorization. For the crossings of waters of the United States authorized by NWP 12, the terms and conditions of this NWP encourage the project proponent to minimize adverse effects to jurisdictional waters and wetlands to qualify for NWP authorization, instead of having to apply for an individual permit.

For utility lines that cross state and/or Corps district boundaries, district engineers will consider the cumulative impacts of those NWP 12 activities when determining whether to issue NWP 12 verifications. The national decision document for NWP 12 discusses, in general terms, the impacts that NWP 12 activities have on wetlands of all types, including forested wetlands. For some utility lines, forested wetlands may be permanently converted to scrub-shrub or emergent wetlands to construct a right-of-way.

A few commenters said this NWP should not authorize utility lines in drinking water source areas. One commenter stated that this NWP should not authorize pipelines under rivers or near the ocean because those pipelines could leak and threaten water supplies. Many commenters said that the Corps should consider the environmental effects of the entire pipeline, including potential impacts to water supplies, to not just the specific activities authorized by NWP 12 or other DA permits.

General condition 7, water supply intakes, prohibits NWP activities in proximity of public water supply intakes except under specific circumstances. General condition 14, proper maintenance, requires NWP activities to be maintained to ensure public safety. For NWP 12 activities, this includes maintaining the utility line so that it does not leak. The Corps does not regulate the operation and maintenance of pipelines, if those activities do not include activities that require DA authorization. As discussed above, there are other federal agencies that have legal responsibility for addressing the operation of pipelines and responding to leaks or spills that may occur. Concerns regarding pipeline leaks or spills should be brought to the attention of those federal agencies.

One commenter expressed concern regarding the effects of dispersants on public health and the environment. One commenter said that in the draft decision document the projected amount of compensatory mitigation required for NWP 12 activities is far less than the projected authorized impacts, and that difference results in inadequate mitigation. One commenter said that the draft NWP 12 decision document fails to acknowledge that water quality standards will be violated in some cases.

The Corps does not have the legal authority to regulate the use of dispersants. Other federal or state agencies may have that responsibility. Many of the activities authorized by NWP 12 result in temporary impacts to jurisdictional waters and wetlands, and often district engineers do not require compensatory mitigation to offset those temporary impacts because those waters and wetlands continue to provide ecological functions and services. The estimated impacts in the draft decision document include both permanent and temporary impacts to jurisdictional waters and wetlands. For discharges into waters of the United States, general condition 25 requires certification that an NWP activity complies with applicable water quality standards unless a waiver of the Clean Water Act section 401 water quality certification requirement occurs. The district engineer has discretion to take action to ensure compliance with the water quality certification issued by the state, tribe, or U.S. EPA. The section 401 certifying authority also has the authority to enforce the terms and conditions of its water quality certification.

2.0 Alternatives

This evaluation includes an analysis of alternatives based on the requirements of NEPA, which requires a more expansive review than the Clean Water Act Section 404(b)(1) Guidelines. The alternatives discussed below are based on an analysis of the potential environmental impacts and impacts to the Corps, Federal, Tribal, and state resource agencies, general public, and prospective permittees. Since the consideration of off-site alternatives under the 404(b)(1) Guidelines does not apply to specific projects authorized by general permits, the alternatives analysis discussed below consists of a general NEPA alternatives analysis for the NWP.

2.1 No Action Alternative (No Nationwide Permit)

The no action alternative would not achieve one of the goals of the Corps Nationwide Permit Program, which is to reduce the regulatory burden on applicants for activities that result in no more than minimal individual and cumulative adverse environmental effects. The no action alternative would also reduce the Corps ability to pursue the current level of review for other activities that have greater adverse environmental effects, including activities that require individual permits as a result of the Corps exercising its discretionary authority under the NWP program. The no action alternative would also reduce the Corps ability to conduct compliance actions.

If this NWP is not available, substantial additional resources would be required for the Corps to evaluate these minor activities through the individual permit process, and for the public and Federal, Tribal, and state resource agencies to review and comment on the large number of public notices for these activities. In a considerable majority of cases, when the Corps publishes public notices for proposed activities that result in only minimal individual and cumulative adverse environmental effects, the Corps typically does not receive responses to these public notices from either the public or Federal, Tribal, and state resource

agencies. Another important benefit of the NWP program that would not be achieved through the no action alternative is the incentive for project proponents to design their projects so that those activities meet the terms and conditions of an NWP. The Corps believes the NWPs have significantly reduced adverse effects to the aquatic environment because most applicants modify their projects to comply with the NWPs and avoid the delays and costs typically associated with the individual permit process.

In the absence of this NWP, Department of the Army (DA) authorization in the form of another general permit (i.e., regional or programmatic general permits, where available) or individual permits would be required. Corps district offices may develop regional general permits if an NWP is not available, but this is an impractical and inefficient method for activities with no more than minimal individual and cumulative adverse environmental effects that are conducted across the Nation. Not all districts would develop these regional general permits for a variety of reasons. The regulated public, especially those companies that conduct activities in more than one Corps district, would be adversely affected by the widespread use of regional general permits because of the greater potential for lack of consistency and predictability in the authorization of similar activities with no more than minimal individual and cumulative adverse environmental effects. These companies would incur greater costs in their efforts to comply with different regional general permit requirements between Corps districts. Nevertheless, in some states Corps districts have issued programmatic general permits to take the place of this and other NWPs. However, this approach only works in states with regulatory programs comparable to the Corps Regulatory Program.

2.2 National Modification Alternatives

Since the Corps Nationwide Permit program began in 1977, the Corps has continuously strived to develop NWPs that only authorize activities that result in no more than minimal individual and cumulative adverse environmental effects. Every five years the Corps reevaluates the NWPs during the reissuance process, and may modify an NWP to address concerns for the aquatic environment. Utilizing collected data and institutional knowledge concerning activities authorized by the Corps regulatory program, the Corps reevaluates the potential impacts of activities authorized by NWPs. The Corps also uses substantive public comments on proposed NWPs to assess the expected impacts. This NWP was developed to authorize the construction, maintenance, repair, and removal of utility lines and associated facilities, provided those activities and facilities have no more than minimal individual and cumulative adverse environmental effects. The Corps has considered suggested changes to the terms and conditions of this NWP, as well as modifying or adding NWP general conditions, as discussed in the preamble of the Federal Register notice announcing the reissuance of this NWP.

In the June 1, 2016, Federal Register notice, the Corps requested comments on the proposed reissuance of this NWP. As discussed above, The Corps proposed to modify this NWP to clarify that the NWP authorizes regulated activities for utility line crossings of waters of the United States, and that the Corps does not regulate entire utility lines. The Corps also

proposed to modify the definition of “utility line” to make it clear that it includes optic cables. In addition, the Corps proposed to add a paragraph authorizing regulated activities necessary to remediate inadvertent returns of drilling muds that can occur during directional drilling operations to install utility lines below jurisdictional waters and wetlands. The Corps also proposed to add three new notes to this NWP to clarify the use of this NWP.

2.3 Regional Modification Alternatives

An important aspect for the NWPs is the emphasis on regional conditions to address differences in aquatic resource functions, services, and values across the nation. All Corps divisions and districts are expected to add regional conditions to the NWPs to enhance protection of the aquatic environment and address local concerns. Division engineers can also revoke an NWP if the use of that NWP results in more than minimal individual and cumulative adverse environmental effects, especially in high value or rare wetlands and other waters. When an NWP is issued or reissued by the Corps, division engineers issue supplemental decision documents that evaluate potential impacts of the NWP at a regional level, and include regional cumulative effects assessments.

Corps divisions and districts also monitor and analyze the cumulative adverse effects of the NWPs, and if warranted, further restrict or prohibit the use of the NWPs to ensure that the NWPs do not authorize activities that result in more than minimal individual and cumulative adverse environmental effects. To the extent practicable, division and district engineers will use regulatory automated information systems and institutional knowledge about the typical adverse effects of activities authorized by NWPs, as well as substantive public comments, to assess the individual and cumulative adverse environmental effects resulting from regulated activities.

2.4 Case-specific On-site Alternatives

Although the terms and conditions for this NWP have been established at the national level to authorize most activities that have no more than minimal individual and cumulative adverse environmental effects, division and district engineers have the authority to impose case-specific special conditions on an NWP authorization to ensure that the authorized activities will result in only minimal individual and cumulative adverse environmental effects.

General condition 23 requires the permittee to minimize and avoid impacts to waters of the United States to the maximum extent practicable on the project site. Off-site alternatives cannot be considered for activities authorized by NWPs. During the evaluation of a pre-construction notification, the district engineer may determine that additional avoidance and minimization is practicable. The district engineer may also condition the NWP authorization to require compensatory mitigation to offset losses of waters of the United States and ensure that the net adverse effects on the aquatic environment are no more than minimal. As another example, the NWP authorization can be conditioned to prohibit the

permittee from conducting the activity during specific times of the year to protect spawning fish and shellfish. If the proposed activity will result in more than minimal adverse environmental effects, then the district engineer will exercise discretionary authority and require an individual permit. Discretionary authority can be asserted where there are concerns for the aquatic environment, including high value aquatic habitats. The individual permit review process requires a project-specific alternatives analysis, including the consideration of off-site alternatives, and a public interest review.

3.0 Affected Environment

This environmental assessment is national in scope because the NWP may be used across the country, unless the NWP is revoked or suspended by a division or district engineer under the procedures in 33 CFR 330.5(c) and (d), respectively. The affected environment consists of terrestrial and aquatic ecosystems in the United States, as they have been directly and indirectly affected by past and present federal, non-federal, and private activities. The past and present activities include activities authorized by the various NWPs issued from 1977 to 2012, activities authorized by other types of Department of the Army (DA) permits, as well as other federal, tribal, state, and private activities that are not regulated by the Corps. Aquatic ecosystems are also influenced by past and present activities in uplands, because those land use/land cover changes in uplands and other activities in uplands have indirect effects on aquatic ecosystems (e.g., MEA 2005b, Reid 1993). Due to the large geographic scale of the affected environment (i.e., the entire United States), as well as the many past and present human activities that have shaped the affected environment, it is only practical to describe the affected environment in general terms. In addition, it is not possible to describe the environmental conditions for specific sites where the NWPs may be used to authorize eligible activities.

The total land area in the United States is approximately 2,264,000,000 acres, and the total land area in the contiguous United States is approximately 1,894,000,000 acres (Nickerson et al. 2011). Land uses in 48 states of the contiguous United States as of 2007 is provided in Table 3.1 (Nickerson et al. 2011). Of the land area in the entire United States, approximately 60 percent (1,350,000,000 acres) is privately owned (Nickerson et al. 2011). In the contiguous United States, approximately 67 percent of the land is privately owned, 31 percent is held by the United States government, and two percent is owned by state or local governments (Dale et al. 2000). Developed non-federal lands comprise 4.4 percent of the total land area of the contiguous United States (Dale et al. 2000).

Table 3.1. Major land uses in the United States (Nickerson et al. 2011).

Land Use	Acres	Percent of Total
Agriculture	1,161,000,000	51.3
Forest land	544,000,000	24.0
Transportation use	27,000,000	1.2
Recreation and wildlife areas	252,000,000	11.1
National defense areas	23,000,000	1.0
Urban land	61,000,000	2.7
Miscellaneous use	197,000,000	8.7
Total land area	2,264,000,000	100.0

3.1 Quantity of Aquatic Ecosystems in the United States

There are approximately 283.1 million acres of wetlands in the United States; 107.7 million acres are in the conterminous United States and the remaining 175.4 million acres are in Alaska (Mitsch and Hernandez 2013). Wetlands occupy less than 9 percent of the global land area (Zedler and Kercher 2005). According to Dahl (2011), wetlands and deepwater habitats cover approximately 8 percent of the land area in the conterminous United States. Rivers and streams comprise approximately 0.52 percent of the total land area of the continental United States (Butman and Raymond 2011). Therefore, the wetlands, streams, rivers, and other aquatic habitats that are potentially waters of the United States and subject to regulation by the Corps under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 comprise a minor proportion of the land area of the United States. The remaining land area of the United States (more than 92 percent, depending on the proportion of wetlands, streams, rivers, and other aquatic habitats that are subject to regulation under those two statutes) is outside the Corps regulatory authority.

Dahl (1990) estimated that approximately 53 percent of the wetlands in the conterminous United States were lost in the 200-year period from the 1780s to 1980s, while Alaska lost less than one percent of its wetlands and Hawaii lost approximately 12 percent of its original wetland acreage. In the 1780s, there were approximately 221 million acres of wetlands in the conterminous United States (Dahl 1990). California lost the largest percentage of its wetlands (91 percent), whereas Florida lost the largest acreage (9.3 million acres) (Dahl 1990). During that 200-year period, 22 states lost more than 50 percent of their wetland acreage, and 10 states have lost more than 70 percent of their original wetland acreage (Dahl 1990).

Fraye et al. (1983) evaluated wetland status and trends in the United States during the period of the mid-1950s to the mid-1970s. During that 20-year period, approximately 7.9 million acres of wetlands (4.2 percent) were lost in the conterminous United States. Much of the loss of estuarine emergent wetlands was due to changes to estuarine subtidal deepwater habitat, and some loss of estuarine emergent wetlands was due to urban development. For palustrine vegetated wetlands, nearly all of the losses of those wetlands were due to

agricultural activities (e.g., conversion to agricultural production).

The U.S. Fish and Wildlife Service also examined the status and trends of wetlands in the United States during the period of the mid-1970s to the 1980s, and found that there was a net loss of more than 2.6 million acres of wetlands (2.5 percent) during that time period (Dahl and Johnson 1991). Freshwater wetlands comprised 98 percent of those wetland losses (Dahl and Johnson 1991). During that time period, losses of estuarine wetlands were estimated to be 71,000 acres, with most of that loss due to changes of emergent estuarine wetlands to open waters caused by shifting sediments (Dahl and Johnson 1991). Conversions of wetlands to agricultural use were responsible for 54 percent of the wetland losses, and conversion to other land uses resulted in the loss of 41 percent of wetlands (Dahl and Johnson 1991). Urban development was responsible for five percent of the wetland loss (Dahl and Johnson 1991). The annual rate of wetland loss has decreased substantially since the 1970s (Dahl 2011), when wetland regulation became more prevalent (Brinson and Malvárez 2002).

Between 2004 and 2009, there was no statistically significant difference in wetland acreage in the conterminous United States (Dahl 2011). According to the 2011 wetland status and trends report, during the period of 2004 to 2009 urban development accounted for 11 percent of wetland losses (61,630 acres), rural development resulted in 12 percent of wetland losses (66,940 acres), silviculture accounted for 56 percent of wetland losses (307,340 acres), and wetland conversion to deepwater habitats caused 21 percent of the loss in wetland area (115,960 acres) (Dahl 2011). Some of the losses occurred to wetlands that are not subject to Clean Water Act jurisdiction and some losses are due to activities not regulated under Section 404 of the Clean Water Act, such as unregulated drainage activities, exempt forestry activities, or water withdrawals. From 2004 to 2009, approximately 100,020 acres of wetlands were gained as a result of wetland restoration and conservation programs on agricultural land (Dahl 2011). Another source of wetland gain is conversion of other uplands to wetlands, resulting in a gain of 389,600 acres during the period of 2004 to 2009 (Dahl 2011). Inventories of wetlands, streams, and other aquatic resources are incomplete because the techniques used for those studies cannot identify some of those resources (e.g., Dahl (2011) for wetlands; Meyer and Wallace (2001) for streams).

Losses of vegetated estuarine wetlands due to the direct effects of human activities have decreased significantly due to the requirements of Section 404 of the Clean Water Act and other laws and regulations (Dahl 2011). During the period of 2004 to 2009, less than one percent of estuarine emergent wetlands were lost as a direct result of human activities, while other factors such as sea level rise, land subsidence, storm events, erosion, and other ocean processes caused substantial losses of estuarine wetlands (Dahl 2011). The indirect effects of other human activities, such as oil and gas development, water extraction, development of the upper portions of watersheds, and levees, have also resulted in coastal wetland losses (Dahl 2011). Eutrophication of coastal waters can also cause losses of emergent estuarine wetlands, through changes in growth patterns of marsh plants and decreases in the stability of the wetland substrate, which changes those marshes to mud flats (Deegan et al. 2012).

The Emergency Wetlands Resources Act of 1986 (Public Law 99-645) requires the USFWS

to submit wetland status and trends reports to Congress (Dahl 2011). The latest status and trends report, which covers the period of 2004 to 2009, is summarized in Table 3.2. The USFWS status and trends report only provides information on acreage of the various aquatic habitat categories and does not assess the quality or condition of those aquatic habitats (Dahl 2011).

Table 3.2. Estimated aquatic resource acreages in the conterminous United States in 2009 (Dahl 2011).

Aquatic Habitat Category	Estimated Area in 2009 (acres)
Marine intertidal	227,800
Estuarine intertidal non-vegetated	1,017,700
Estuarine intertidal vegetated	4,539,700
All intertidal waters and wetlands	5,785,200
Freshwater ponds	6,709,300
Freshwater vegetated	97,565,300
• Freshwater emergent wetlands	27,430,500
• Freshwater shrub wetlands	18,511,500
• Freshwater forested wetlands	51,623,300
All freshwater wetlands	104,274,600
Lacustrine deepwater habitats	16,859,600
Riverine deepwater habitats	7,510,500
Estuarine subtidal habitats	18,776,500
All wetlands and deepwater habitats	153,206,400

The acreage of lacustrine deepwater habitats does not include the open waters of Great Lakes (Dahl 2011).

The Federal Geographic Data Committee has established the Cowardin system developed by the U.S. Fish and Wildlife Service (USFWS) (Cowardin et al. 1979) as the national standard for wetland mapping, monitoring, and data reporting (Dahl 2011) (see Federal Geographic Data Committee (2013)). The Cowardin system is a hierarchical system which describes various wetland and deepwater habitats, using structural characteristics such as vegetation, substrate, and water regime as defining characteristics. Wetlands are defined by plant communities, soils, or inundation or flooding frequency. Deepwater habitats are permanently flooded areas located below the wetland boundary. In rivers and lakes, deepwater habitats are usually more than two meters deep. The Cowardin et al. (1979) definition of “wetland” differs from the definition used by the Corps and U.S. EPA for the purposes of implementing Section 404 of the Clean Water Act. The Corps-U.S. EPA regulations defines wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated

soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” [33 CFR 328.3(c)(4); 40 CFR 230.3(o)(3)(iv)] The Cowardin et al. (1979) requires only one factor (i.e., wetland vegetation, soils, hydrology) to be present for an area to be a wetland, while the Corps-U.S. EPA wetland definition requires all three factors to be present under normal circumstances (Tiner 1997b, Mitsch and Gosselink 2015). The NWI produced by applying the Cowardin et al. (1979) definition is the only national scale wetland inventory available. There is no national inventory of wetland acreage based on the Corps-U.S. EPA wetland definition at 33 CFR 328.3(c)(4).

There are five major systems in the Cowardin classification scheme: marine, estuarine, riverine, lacustrine, and palustrine (Cowardin et al. 1979). The marine system consists of open ocean on the continental shelf and its high energy coastlines. The estuarine system consists of tidal deepwater habitats and adjacent tidal wetlands that are usually partially enclosed by land, but may have open connections to open ocean waters. The riverine system generally consists of all wetland and deepwater habitats located within a river channel. The lacustrine system generally consists of wetland and deepwater habitats located within a topographic depression or dammed river channel, with a total area greater than 20 acres. The palustrine system generally includes all non-tidal wetlands and wetlands located in tidal areas with salinities less than 0.5 parts per thousand; it also includes ponds less than 20 acres in size. Approximately 95 percent of wetlands in the conterminous United States are freshwater wetlands, and the remaining 5 percent are estuarine or marine wetlands (Dahl 2011).

According to Hall et al. (1994), there are more than 204 million acres of wetlands and deepwater habitats in the State of Alaska, including approximately 174.7 million acres of wetlands. Wetlands and deepwater habitats comprise approximately 50.7 percent of the surface area in Alaska (Hall et al. 1994).

The National Resources Inventory (NRI) is a statistical survey conducted by the Natural Resources Conservation Service (NRCS) (USDA 2015) of natural resources on non-federal land in the United States. The NRCS defines non-federal land as privately owned lands, tribal and trust lands, and lands under the control of local and state governments. Acreages of palustrine and estuarine wetlands and the land uses those wetlands are subjected to are summarized in Table 3.3. The 2012 NRI estimates that there are 111,220,800 acres of palustrine and estuarine wetlands on non-Federal land and water areas in the United States (USDA 2015). The 2012 NRI estimates that there are 49,518,700 acres of open waters on non-Federal land in the United States, including lacustrine, riverine, and marine habitats, as well as estuarine deepwater habitats.

Table 3.3. The 2012 National Resources Inventory acreages for palustrine and estuarine wetlands on non-federal land, by land cover/use category (USDA 2015).

National Resources Inventory Land Cover/Use Category	Area of Palustrine and Estuarine Wetlands (acres)
cropland, pastureland, and Conservation Reserve Program land	17,800,000
forest land	65,800,000
rangeland	8,000,000
other rural land	14,700,000
developed land	1,400,000
water area	3,600,000
Total	111,300,000

The land cover/use categories used by the 2012 NRI are defined below (USDA 2015). Croplands are areas used to produce crops grown for harvest. Pastureland is land managed for livestock grazing, through the production of introduced forage plants. Conservation Reserve Program land is under a Conservation Reserve Program contract. Forest land is comprised of at least 10 percent single stem woody plant species that will be at least 13 feet tall at maturity. Rangeland is land on which plant cover consists mostly of native grasses, herbaceous plants, or shrubs suitable for grazing or browsing, and introduced forage plant species. Other rural land consists of farmsteads and other farm structures, field windbreaks, marshland, and barren land. Developed land is comprised of large urban and built-up areas (i.e., urban and built-up areas 10 acres or more in size), small built-up areas (i.e., developed lands 0.25 to 10 acres in size), and rural transportation land (e.g., roads, railroads, and associated rights-of-way outside urban and built-up areas). Water areas are comprised of waterbodies and streams that are permanent open waters.

The wetlands data from the Fish and Wildlife Service's Status and Trends study and the Natural Resources Conservation Service's National Resources Inventory should not be compared, because they use different methods and analyses to produce their results (Dahl 2011).

Leopold, Wolman, and Miller (1964) estimated that there are approximately 3,250,000 miles of river and stream channels in the United States. This estimate is based on an analysis of 1:24,000 scale topographic maps. Their estimate does not include many small streams. Many small streams, especially headwater streams, are not mapped on 1:24,000 scale U.S. Geological Survey (USGS) topographic maps (Leopold 1994) or included in other inventories (Meyer and Wallace 2001), including the National Hydrography Dataset (Elmore et al. 2013). Many small streams and rivers are not identified through maps produced by aerial photography or satellite imagery because of inadequate image resolution or trees or other vegetation obscuring the visibility of those streams from above (Benstead

and Leigh 2012). In a study of stream mapping in the southeastern United States, only 20 percent of the stream network was mapped on 1:24,000 scale topographic maps, and nearly none of the observed intermittent or ephemeral streams were indicated on those maps (Hansen 2001). Another study in Massachusetts showed that those types of topographic maps exclude over 27 percent of stream miles in a watershed (Brooks and Colburn 2011). For a 1:24,000 scale topographic map, the smallest tributary found by using 10-foot contour interval has a drainage area of 0.7 square mile and length of 1,500 feet, and smaller stream channels are common throughout the United States (Leopold 1994). Benstead and Leigh (2012) found that the density of stream channels (length of stream channels per unit area) identified by digital elevation models was three times greater than the drainage density calculated by using USGS maps. Elmore et al. (2013) made similar findings in watersheds in the mid-Atlantic, where they determined that the stream density was 2.5 times greater than the stream density calculated with the National Hydrography Dataset. Due to the difficulty in mapping small streams, there are no accurate estimates of the total number of river or stream miles in the conterminous United States that might be considered as “waters of the United States.”

The quantity of the Nation’s aquatic resources presented by studies that estimate the length or number of stream channels (see above) or the acreage of wetlands (USFWS status and trends studies, National Wetland Inventory (NWI), and Natural Resources Inventory (NRI) are underestimates, because those inventories do not include many small wetlands and streams. The USFWS status and trends study does not include Alaska, Hawaii, or the territories. The underestimate of national wetland acreage by the USFWS status and trends study and the NWI is primarily the result of the minimum size of wetlands detected through remote sensing techniques and the difficulty of identifying certain wetland types through those remote sensing techniques. The remote sensing approaches used by the USFWS for its NWI maps and its status and trends reports result in errors of omission that exclude wetlands that are difficult to identify through photointerpretation (Tiner 1997a). These errors of omission are due to wetland type and the size of target mapping units (Tiner 1997a). Therefore, it is important to understand the limitations of the source data when describing the environmental baseline for wetlands using maps and studies produced by remote sensing, especially in terms of wetland quantity.

Factors affecting the accuracy of wetland maps made by remote sensing include: the degree of difficulty in identifying a wetland, map scale, the quality and scale of the source information (e.g., aerial or satellite photos), the environmental conditions when the source information was obtained, the time of year source information was obtained, the mapping equipment, and the skills of the people producing the maps (Tiner 1999). The map scale usually affects the target mapping unit, which is the minimum wetland size that can be consistently mapped (Tiner 1997b). In general, wetland types that are difficult to identify through field investigations are likely to be underrepresented in maps made by remote sensing (Tiner 1999). Wetlands difficult to identify through remote sensing include forested wetlands, small wetlands, narrow wetlands, mowed wetlands, farmed wetlands, wetlands with hydrology at the drier end of the wetland hydrology continuum, and significantly drained wetlands (Tiner 1999). In the most recent wetland status and trends report published by the U.S. Fish and Wildlife Service, the target minimum wetland mapping unit was 1 acre,

although some easily identified wetlands as small as 0.1 acre were identified in that effort (Dahl 2011). The National Wetland Inventory identifies wetlands regardless of their jurisdictional status under the Clean Water Act (Tiner 1997b).

Activities authorized by NWPs will adversely affect a smaller proportion of the Nation's wetland base than indicated by the wetlands acreage estimates provided in the most recent status and trends report, or the NWI maps for a particular region.

Not all wetlands, streams, and other types of aquatic resources are subject to federal jurisdiction under the Clean Water Act (Mitsch and Gosselink 2015). Two U.S. Supreme Court decisions have identified limits to Clean Water Act jurisdiction. In 2001, in *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers* (531 U.S. 159) the U.S. Supreme Court held that the use of isolated, non-navigable, intrastate waters by migratory birds is not, by itself a sufficient basis for exercising federal regulatory authority under the Clean Water Act (see 80 FR 37056). In the Supreme Court's 2006 decision in *Rapanos v. United States*, (547 U.S. 715), one justice stated that waters and wetlands regulated under the Clean Water Act must have a "significant nexus" to downstream traditional navigable waters. Four justices (the plurality) concluded that Clean Water Act jurisdiction applies only to relatively permanent waters connected to traditional navigable waters and to wetlands that have a continuous surface connection to those relatively permanent waters. The remaining justices in *Rapanos* stated that Clean Water Act jurisdiction applies to waters and wetlands that meet either the significant nexus test or the Plurality's test.

There are 94,133 miles of shoreline in the United States (NOAA 1975). Of that shoreline, 88,633 miles are tidal shoreline and 5,500 miles are shoreline along the Great Lakes and rivers that connect those lakes to the Atlantic Ocean. More recently, Gittman et al. (2015) estimated that there are 99,524 miles of tidal shoreline in the conterminous United States.

3.2 Quality of Aquatic Ecosystems in the United States

The USFWS status and trends study does not assess the condition or quality of wetlands and deepwater habitats (Dahl 2011). Information on water quality in waters and wetlands, as well as the causes of water quality impairment, is collected by the U.S. EPA under sections 305(b) and 303(d) of the Clean Water Act. Table 3.4 provides U.S. EPA's most recent national summary of water quality in the Nation's waters and wetlands.

Table 3.4. National summary of water quality data (U.S. EPA 2015).

Category of water	Total waters	Total waters assessed	Percent of waters assessed	Good waters	Threatened waters	Impaired waters
Rivers and streams	3,533,205 miles	1,046,621 miles	29.6	476,765 miles	7,657 miles	562,198 miles
Lakes, reservoirs and ponds	41,666,049 acres	17,904,395 acres	43.0	5,658,789 acres	145,572 acres	12,100,034 acres
Bays and estuaries	87,791 square miles	33,402 square miles	38.0	7,291 square miles	0 square miles	26,111 square miles
Coastal shoreline	58,618 miles	8,162 miles	13.9	900 miles	0 miles	7,262 miles
Ocean and near coastal waters	54,120 square miles	1,674 square miles	3.1	616 square miles	0 square miles	1,058 square miles
Wetlands	107,700,000 acres	1,112,438 acres	1.0	573,947 acres	0 acres	538,492 acres
Great Lakes shoreline	5,202 miles	4,431 miles	85.2	78 miles	0 miles	4,353 miles
Great Lakes open waters	60,546 square miles	53,332 square miles	88.1	62 square miles	0 square miles	53,270 square miles

Waters and wetlands classified by states as “good” meets all their designated uses. Waters classified as “threatened” currently support all of their designated uses, but if pollution control measures are not taken one or more of those uses may become impaired in the future. A water or wetland is classified by the state as “impaired” if any one of its designated uses is not met. The definitions of good, threatened, and impaired are applied by states to describe the quality of their waters (the above definitions were found in the metadata in U.S. EPA (2015)). Designated uses include the “protection and propagation of fish, shellfish and wildlife,” “recreation in and on the water,” the use of waters for “public water supplies, propagation of fish, shellfish, wildlife, recreation in and on the water,” and “agricultural, industrial and other purposes including navigation.” (40 CFR 130.3). These designated uses are assessed by states in a variety of ways, by examining various physical, chemical and biological characteristics, so it is not possible to use the categories of “good,” “threatened,” and “impaired” to infer the level of ecological functions and services these waters perform.

According to the latest U.S. EPA national summary (U.S. EPA 2015), 54 percent of assessed rivers and streams, 68 percent of assessed lakes, reservoirs, and ponds, 78 percent of assessed bays and estuaries, 89 percent of assessed coastal shoreline, 63 percent of assessed ocean and near coastal waters, and 48 percent of assessed wetlands are impaired.

For rivers and streams, 34 causes of impairment were identified, and the top 10 causes were pathogens, sediment, nutrients, mercury, organic enrichment/oxygen depletion, polychlorinated biphenyls, metals (other than mercury), temperature, habitat alterations, and

flow alteration(s). The primary sources of impairment for the assessed rivers and streams were agriculture, unknown sources, atmospheric deposition, urban-related runoff/stormwater, hydromodification, municipal discharges/sewage, natural/wildlife, unspecified point source, habitat alterations not directly related to hydromodification, and resource extraction.

Thirty-one causes of impairment were identified for bays and estuaries. The top 10 causes of impairment for these waters is: mercury, polychlorinated biphenyls, pathogens, organic enrichment/oxygen depletion, dioxins, other causes, fish consumption advisories, metals (other than mercury), noxious aquatic plants, and pesticides. For bays and estuaries, the top 10 sources of impairment were atmospheric deposition, unknown sources, municipal discharges/sewage, other sources, industrial, natural/wildlife, urban-related runoff/stormwater, spills/dumping, unspecified non-point sources, and agriculture.

Coastal shorelines were impaired by 15 identified causes, the top 10 of which were: mercury, pathogens, organic enrichment/oxygen depletion, turbidity, pH/acidity/caustic conditions, nutrients, temperature, oil and grease, algal growth, and causes unknown/impaired biota. The top 10 sources of impairment of coastal shorelines are “unknown,” atmospheric deposition, municipal discharges/sewage, urban-related runoff/stormwater, hydromodification, unspecified non-point sources, agriculture, recreational boating and marinas, industrial, and spills/dumping.

For wetlands, 26 causes of impairment were identified, and the top 10 causes were organic enrichment/oxygen depletion, mercury, pathogens, metals (excluding mercury), toxic inorganics, temperature, sediment, algal growth, flow alterations, and turbidity. The primary sources for wetland impairment were “unknown,” agriculture, atmospheric deposition, industrial, municipal discharges/sewage, recreational boating and marinas, resource extraction, natural/wildlife, hydromodification, and unspecified point sources.

Water quality standards are established by states, with review and approval by the U.S. EPA (see Section 303(c) of the Clean Water Act and the implementing regulations at 40 CFR part 131). Under Section 401 of the Clean Water Act States review proposed discharges to determine compliance with applicable water quality standards.

Most causes and sources of impairment are not due to activities regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Inputs of sediments into aquatic ecosystems can result from erosion occurring within a watershed (Beechie et al. 2013, Gosselink and Lee 1989). As water moves through a watershed it carries sediments and pollutants to streams (e.g., Allan 2004, Dudgeon et al. 2005, Paul and Meyer 2001) and wetlands (e.g., Zedler and Kercher 2005, Wright et al. 2006). Non-point sources of pollution (i.e., pollutants carried in runoff from farms, roads, and urban areas) are largely uncontrolled (Brown and Froemke 2012) because the Clean Water Act only requires permits for point sources discharges of pollutants (i.e., discharges of dredged or fill material regulated under section 404 and point source discharges of other pollutants regulated under section 402).

The indirect effects of changes in upland land use (which are highly likely not to be subject to federal control and responsibility, at least in terms of the Corps Regulatory Program), including the construction and expansion of upland developments, have substantial adverse effects on the quality (i.e. the ability to perform hydrologic, biogeochemical, and habitat functions) of jurisdictional waters and wetlands because those upland activities alter watershed-scale processes. Those watershed-scale processes include water movement and storage, erosion and sediment transport, and the transport of nutrients and other pollutants.

Habitat alterations as a cause or source of impairment may be the result of activities regulated under section 404 and section 10 because they involve discharges of dredged or fill material into jurisdictional waters or structures or work in navigable waters, but habitat alterations may also occur as a result of activities not regulated under those two statutes, such as the removal of vegetation from upland riparian areas. Hydrologic modifications may or may not be regulated under section 404 or section 10, depending on whether those hydrologic modifications are the result of discharges of dredged or fill material into waters of the United States regulated under Section 404 of the Clean Water Act or structures or work in navigable waters of the United States regulated under Section 10 of the Rivers and Harbors Act of 1899. When states, tribes, or the U.S. EPA establish total daily maximum loads (TMDLs) for pollutants and other impairments for specific waters, there may be variations in how these TMDLs are defined (see 40 CFR part 130).

As discussed below, many anthropogenic activities and natural processes affect the ability of jurisdictional waters and wetlands to perform ecological functions. Stream and river functions are affected by activities occurring in their watersheds, including the indirect effects of land uses changes (Beechie et al. 2013, Allan 2004, Paul and Meyer 2001). Booth et al. (2004) found riparian land use in residential areas also strongly affects stream condition because many landowners clear vegetation up to the edge of the stream bank. The removal of vegetation from upland riparian areas and other activities in those non-jurisdictional areas do not require DA authorization. Wetland functions are also affected by indirect effects of land use activities in the land area that drains to the wetland (Zedler and Kercher 2005, Wright et al. 2006). Human activities within a watershed or catchment that have direct or indirect adverse effects on rivers, streams, wetlands, and other aquatic ecosystems are not limited to discharges of dredged or fill material into waters of the United States or structures or work in a navigable waters. Human activities in uplands have substantial indirect effects on the structure and function of aquatic ecosystems, including streams and wetlands, and their ability to sustain populations of listed species. It is extremely difficult to distinguish between degradation of water quality caused by upland activities and degradation of water quality caused by the filling or alteration of wetlands (Gosselink and Lee 1989).

Most causes and sources of impairment are not due to activities regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Habitat alterations as a cause or source of impairment may be the result of activities regulated under section 404 and section 10 because they involve discharges of dredged or fill material or structures or work in navigable waters, but habitat alterations may also occur as a result of activities not regulated under those two statutes, such as the removal of vegetation from

upland riparian areas. Hydrologic modifications may or may not be regulated under section 404 or section 10.

The U.S. Environmental Protection Agency (U.S. EPA) has undertaken the National Wetland Condition Assessment (NWCA), which is a statistical survey of wetland condition in the United States (U.S. EPA 2016). The NWCA assesses the ambient conditions of wetlands at the national and regional scales. The national scale encompasses the conterminous United States. The regional scale consists of four aggregated ecoregions: Coastal Plains, Eastern Mountains and Upper Midwest, Interior Plains, and West. In May 2016, U.S. EPA issued a final report on the results of its 2011 NWCA (U.S. EPA 2016).

The 2011 NWCA determined that, across the conterminous United States, 48 percent of wetland area (39.8 million acres) is in good condition, 20 percent of the wetland area (12.4 million acres) is in fair condition, and 32 percent (19.9 million acres) is in poor condition (U.S. EPA 2016). The 2011 NWCA also examined indicators of stress for the wetlands that were evaluated. The most prevalent physical stressors were vegetation removal, surface hardening via conversion to pavement or soil compaction, and ditching (U.S. EPA 2016). In terms of chemical stressors, most wetlands were subject to low exposure to heavy metals and soil phosphorous, but substantial percentages of wetland area in the West and Eastern Mountains and Upper Midwest ecoregions were found to have moderate stressor levels for heavy metals (U.S. EPA 2016). For soil phosphorous concentrations, stressor levels were high for 13 percent of the wetland area in the Eastern Mountains and Upper Midwest ecoregion (U.S. EPA 2016). Across the conterminous United States, for biological stressors indicated by non-native plants, 61 percent of the wetland area exhibited low stressor levels (U.S. EPA 2016). When examined on an ecoregion basis, the Eastern Mountains and Upper Midwest and Coastal Plains ecoregions had high percentages of wetland area with low non-native plant stressor levels, but the West and Interior Plains ecoregions had small percentages of areas with low non-native plant stressor levels (U.S. EPA 2016).

3.3 Aquatic resource functions and services

Functions are the physical, chemical, and biological processes that occur in ecosystems (33 CFR 332.2). Wetland functions occur through interactions of their physical, chemical, and biological features (Smith et al. 1995). Wetland functions depend on a number of factors, such as the movement of water through the wetland, landscape position, surrounding land uses, vegetation density within the wetland, geology, soils, water source, and wetland size (NRC 1995). In its evaluation of wetland compensatory mitigation in the Clean Water Act Section 404 permit program, the National Research Council (2001) recognized five general categories of wetland functions:

- Hydrologic functions
- Water quality improvement
- Vegetation support
- Habitat support for animals
- Soil functions

Hydrologic functions include short- and long-term water storage and the maintenance of wetland hydrology (NRC 1995). Water quality improvement functions encompass the transformation or cycling of nutrients, the retention, transformation, or removal of pollutants, and the retention of sediments (NRC 1995). Vegetation support functions include the maintenance of plant communities, which support various species of animals as well as economically important plants. Wetland soils support diverse communities of bacteria and fungi which are critical for biogeochemical processes, including nutrient cycling and pollutant removal and transformation (NRC 2001). Wetland soils also provide rooting media for plants, as well as nutrients and water for those plants. These various functions generally interact with each other, to influence overall wetland functioning, or ecological integrity (Smith et al. 1995; Fennessy et al. 2007). As discussed earlier in this report, the Corps regulations at 33 CFR 320.4(b) list wetland functions that are important for the public interest review during evaluations of applications for DA permits, and for the issuance of general permits.

Not all wetlands perform the same functions, nor do they provide functions to the same degree (Smith et al. 1995). Therefore, it is necessary to account for individual and regional variation when evaluating wetlands and the functions and services they provide. The types and levels of functions performed by a wetland are dependent on its hydrologic regime, the plant species inhabiting the wetland, soil type, and the surrounding landscape, including the degree of human disturbance of the landscape (Smith et al. 1995).

Streams also provide a variety of functions, which differ from wetland functions. Streams also provide hydrologic functions, nutrient cycling functions, food web support, and corridors for movement of aquatic organisms (Allan and Castillo 2007). When considering stream functions, the stream channel should not be examined in isolation. The riparian corridor next to the stream channel is an integral part of the stream ecosystem and has critical roles in stream functions (NRC 2002). Riparian areas provide many of the same general functions as wetlands (NRC 1995, 2002). Fischenich (2006) conducted a review of stream and riparian corridor functions, and through a committee, identified five broad categories of stream functions:

- Stream system dynamics
- Hydrologic balance
- Sediment processes and character
- Biological support
- Chemical processes and landscape pathways

Stream system dynamics refers to the processes that affect the development and maintenance of the stream channel and riparian area over time, as well as energy management by the stream and riparian area. Hydrologic balance includes surface water storage processes, the exchange of surface and subsurface water, and the movement of water through the stream corridor. Sediment processes and character functions relate to processes for establishing and maintaining stream substrate and structure. Biological support functions include the biological communities inhabiting streams and their riparian areas. Chemical processes and pathway functions influence water and soil quality, as well as the chemical processes and nutrient cycles that occur in streams and their riparian areas. Rivers

and streams function perform functions to different degrees, depending on watershed condition, the severity of direct and indirect impacts to streams caused by human activities, and their interactions with other environmental components, such as their riparian areas (Allan 2004, Gergel et al. 2002).

Ecosystem services are the benefits that humans derive from ecosystem functions (33 CFR 332.2). The Millennium Ecosystem Assessment (2005b) describes four categories of ecosystem services: provisioning services, regulating services, cultural services, and supporting services. For wetlands and open waters, provisioning services include the production of food (e.g., fish, fruits, game), fresh water storage, food and fiber production, production of chemicals that can be used for medicine and other purposes, and supporting genetic diversity for resistance to disease. Regulating services relating to open waters and wetlands consist of climate regulation, control of hydrologic flows, water quality through the removal, retention, and recovery of nutrients and pollutants, erosion control, mitigating natural hazards such as floods, and providing habitat for pollinators. Cultural services that come from wetlands and open waters include spiritual and religious values, recreational opportunities, aesthetics, and education. Wetlands and open waters contribute supporting services such as soil formation, sediment retention, and nutrient cycling.

Examples of services provided by wetland functions include flood damage reduction, maintenance of populations of economically important fish and wildlife species, maintenance of water quality (NRC 1995, MEA 2005b) and the production of populations of wetland plant species that are economically important commodities, such as timber, fiber, and fuel (MEA 2005b). Wetlands can also provide important climate regulation and storm protection services (MEA 2005b).

Stream functions also result in ecosystem services that benefit society. Streams and their riparian areas store water, which can reduce downstream flooding and subsequent flood damage (NRC 2002, MEA 2005b). These ecosystems also maintain populations of economically important fish, wildlife, and plant species, including valuable fisheries (MEA 2005b, NRC 2002). The nutrient cycling and pollutant removal functions help maintain or improve water quality for surface waters (NRC 2002, MEA 2005b). Streams and riparian areas also provide important recreational opportunities. Rivers and streams also provide water for agricultural, industrial, and residential use (MEA 2005b).

Freshwater ecosystems provide services such as water for drinking, household uses, manufacturing, thermoelectric power generation, irrigation, and aquaculture; production of finfish, waterfowl, and shellfish; and non-extractive services, such as flood control, transportation, recreation (e.g., swimming and boating), pollution dilution, hydroelectric generation, wildlife habitat, soil fertilization, and enhancement of property values (Postel and Carpenter 1997).

Marine ecosystems provide a number of ecosystem services, including fish production; materials cycling (e.g., nitrogen, carbon, oxygen, phosphorous, and sulfur); transformation, detoxification, and sequestration of pollutants and wastes produced by humans; support of ocean-based recreation, tourism, and retirement industries; and coastal land development

and valuation, including aesthetics related to living near the ocean (Peterson and Lubchenco 1997).

Activities authorized by this NWP will provide a wide variety of goods and services that are valued by society. For example, utility lines are important components of urban and rural infrastructure. They convey a variety of substances or products to people, such as water, fuel, and electricity. Utility lines are also essential for communication, including telephone lines, internet connections, and cable television. Utility lines are also important for the removal of wastes from residences, as well as commercial and institutional facilities.

4.0 Environmental Consequences

4.1 General Evaluation Criteria

This document contains a general assessment of the foreseeable effects of the individual activities authorized by this NWP and the anticipated cumulative effects of those activities. In the assessment of these individual and cumulative effects, the terms and limits of the NWP, pre-construction notification requirements, and the standard NWP general conditions are considered. The supplemental documentation provided by division engineers will address how regional conditions affect the individual and cumulative effects of the NWP.

The following evaluation comprises the NEPA analysis, the public interest review specified in 33 CFR 320.4(a)(1) and (2), and the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230).

The issuance of an NWP is based on a general assessment of the effects on public interest and environmental factors that are likely to occur as a result of using this NWP to authorize activities in waters of the United States. As such, this assessment must be speculative or predictive in general terms. Since NWPs authorize activities across the nation, projects eligible for NWP authorization may be constructed in a wide variety of environmental settings. Therefore, it is difficult to predict all of the indirect impacts that may be associated with each activity authorized by an NWP. For example, the NWP that authorizes 25 cubic yard discharges of dredged or fill material into waters of the United States may be used to fulfill a variety of project purposes, and the indirect effects will vary depending on the specific activity and the environmental characteristics of the site in which the activity takes place. Indication that a factor is not relevant to a particular NWP does not necessarily mean that the NWP would never have an effect on that factor, but that it is a factor not readily identified with the authorized activity. Factors may be relevant, but the adverse effects on the aquatic environment are negligible, such as the impacts of a boat ramp on water level fluctuations or flood hazards. Only the reasonably foreseeable direct, indirect, and cumulative effects are included in the environmental assessment for this NWP. Division and district engineers will impose, as necessary, additional conditions on the NWP authorization or exercise discretionary authority to address locally important factors or to ensure that the authorized activity results in no more than minimal individual and

cumulative adverse environmental effects. In any case, adverse effects will be controlled by the terms, conditions, and additional provisions of the NWP. For example, Section 7 Endangered Species Act consultation will be required for all activities that may affect endangered or threatened species or critical habitat (see 33 CFR 330.4(f) and NWP general condition 18).

4.2 Impact Analysis

This NWP authorizes the construction, maintenance, repair, or removal of utility lines and associated facilities in waters of the United States. The acreage limit for this NWP is 1/2 acre.

Pre-construction notification is required if: (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. The pre-construction notification requirement allows district engineers to review proposed activities on a case-by-case basis to ensure that the individual and cumulative adverse environmental effects of those activities are no more than minimal. If the district engineer determines that the adverse environmental effects of a particular project are more than minimal after considering mitigation, then discretionary authority will be asserted and the applicant will be notified that another form of DA authorization, such as a regional general permit or individual permit, is required (see 33 CFR 330.4(e) and 330.5).

When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type(s) of resource(s) 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. These criteria are listed in the NWPs in Section D, "District Engineer's Decision." 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 effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

Additional conditions can be placed on proposed activities on a regional or case-by-case

basis to ensure that the activities have no more than minimal individual and cumulative adverse environmental effects. Regional conditioning of this NWP will be used to account for differences in aquatic resource functions, services, and values across the country, ensure that the NWP authorizes only those activities with no more than minimal individual and cumulative adverse environmental effects, and allow each Corps district to prioritize its workload based on where its efforts will best serve to protect the aquatic environment and other appropriate resources. Regional conditions can prohibit the use of an NWP in certain waters (e.g., high value waters or specific types of wetlands or waters), lower pre-construction notification thresholds, or require pre-construction notification for some or all NWP activities in certain watersheds or types of waters. Specific NWPs can also be revoked on a geographic or watershed basis where the individual and cumulative adverse environmental effects resulting from the use of those NWPs are more than minimal.

In high value waters, division and district engineers can: 1) prohibit the use of the NWP in those waters and require an individual permit or regional general permit; 2) decrease the acreage limit for the NWP; 3) lower the pre-construction notification threshold of the NWP to require pre-construction notification for NWP activities with smaller impacts in those waters; 4) require pre-construction notification for some or all NWP activities in those waters; 5) add regional conditions to the NWP to ensure that the individual and cumulative adverse environmental effects are no more than minimal; or 6) for those NWP activities that require pre-construction notification, add special conditions to NWP authorizations, such as compensatory mitigation requirements, to ensure that the adverse environmental effects are no more than minimal. NWPs can authorize activities in high value waters as long as the individual and cumulative adverse environmental effects are no more than minimal.

The construction and use of fills for temporary access for construction may be authorized by NWP 33 or regional general permits issued by division or district engineers. The related activity must meet the terms and conditions of the specified permit(s). If the discharge is dependent on portions of a larger project that require an individual permit, this NWP will not apply. [See 33 CFR 330.6(c) and (d)]

4.3 Cumulative Effects

4.3.1 General Analysis

The Council on Environmental Quality's (CEQ's) NEPA regulations define cumulative effects as: "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." [40 CFR 1508.7.] Therefore, the NEPA cumulative effects analysis for an NWP is not limited to activities authorized by the NWP, other NWPs, or other DA permits (individual permits and regional general permits). The NEPA cumulative effects analysis must also include other Federal and non-Federal activities that affect the Nation's wetlands, streams, and other aquatic resources, as well as other resources

(e.g., terrestrial ecosystems, air) that may be directly or indirectly affected by the proposed action and other actions. According to guidance issued by CEQ (1997), a NEPA cumulative effects analysis should focus on specific categories of resources (i.e., resources of concern) identified during the review process as having significant cumulative effects concerns. These cumulative effects analyses also require identification of the disturbances and stressors that cause degradation of those resources, including those caused by actions unrelated to the proposed action. A NEPA cumulative effects analysis does not need to analyze issues that have little relevance to the proposed action or the decision the agency will have to make (CEQ 1997).

The geographic scope of this cumulative effects analysis is the United States and its territories, where the NWP may be used to authorize specific activities that require DA authorization. The temporal scope of the cumulative effects analysis includes past federal, non-federal, and private actions that continue to affect the Nation's wetlands, streams, and other aquatic resources (including activities authorized by previously issued NWPs, regional general permits, and DA individual permits) as well as present and reasonably foreseeable future federal, non-federal, and private actions that are affecting, or will affect, wetlands, streams, and other aquatic resources. The present effects of past federal, non-federal, and private actions on wetlands, streams, and other aquatic resources are included in the affected environment, which is described in section 3.0. The affected environment described in section 3.0 also includes present effects of past actions, including activities authorized by NWPs issued from 1977 to 2012 and constructed by permittees, which are captured in national information on the quantity and quality of wetlands, streams, and other aquatic resources.

In addition to the activities authorized by this NWP, there are many categories of activities that contribute to cumulative effects on wetlands, streams, and other aquatic resources in the United States, and alter the quantity of those resources, the functions they perform, and the ecosystem services they provide. Activities authorized by past versions of NWP 12, as well as other NWPs, individual permits, letters of permission, and regional general permits have resulted in direct and indirect impacts to wetlands, streams, and other aquatic resources. Those activities may have legacy effects that have added to the cumulative effects and affected the quantity of those resources and the functions they provide. Discharges of dredged or fill material that do not require DA permits because they are exempt from section 404 permit requirements can also adversely affect the quantity of the Nation's wetlands, streams, and other aquatic resources and the functions and services they provide. Discharges of dredged or fill material that convert wetlands, streams, and other aquatic resources to upland areas result in permanent losses of aquatic resource functions and services. Temporary fills and fills that do not convert waters or wetlands to dry land may cause short-term or partial losses of aquatic resource functions and services. During construction of utility lines, where horizontal directional drilling is used to install or replace the utility line, there is a possibility of inadvertent returns of drilling fluids that could adversely affect wetlands, streams, and other aquatic resources. Those inadvertent returns of drilling fluids are not considered discharges of dredged or fill material that require Clean Water Act section 404 authorization. Activities necessary to remediate these inadvertent returns of drilling fluids may involve activities that require Department of the Army authorization, and

those activities may be authorized by NWP 12.

Humans have long had substantial impacts on ecosystems and the ecological functions and services they provide (Ellis et al. 2010). Around the beginning of the 19th century, the degree of impacts of human activities on the Earth's ecosystems began to exceed the degree of impacts to ecosystems caused by natural disturbances and variability (Steffen et al. 2007). All of the Earth's ecosystems have been affected either directly or indirectly by human activities (Vitousek et al. 1997). Over 75 percent of the ice-free land on Earth has been altered by human occupation and use (Ellis and Ramankutty 2008). Approximately 33 percent of the Earth's ice-free land consists of lands heavily used by people: urban areas, villages, lands used to produce crops, and occupied rangelands (Ellis and Ramankutty 2008). For marine ecosystems, Halpern et al. (2008) determined that there are no marine waters that are unaffected by human activities, and that 41 percent of the area of ocean waters are affected by multiple anthropogenic stressors (e.g., land use activities that generate pollution that go to coastal waters, marine habitat destruction or modification, and the extraction of resources). The marine waters most highly impacted by human activities are continental shelf and slope areas, which are affected by both land-based and ocean-based activities (Halpern et al. 2008). Human population density is a good indicator of the relative effect that people have had on local ecosystems, with lower population densities causing smaller impacts to ecosystems and higher population densities having larger impacts on ecosystems (Ellis and Ramankutty 2008). Human activities such as urbanization, agriculture, and forestry alter ecosystem structure and function by changing their interactions with other ecosystems, their biogeochemical cycles, and their species composition (Vitousek et al. 1997). Changes in land use reduce the ability of ecosystems to produce ecosystem services, such as food production, reducing infectious diseases, and regulating climate and air quality (Foley et al. 2005).

Recent changes in climate have had substantial impacts on natural ecosystems and human communities (IPCC 2014). Climate change, both natural and anthropogenic, is a major driving force for changes in ecosystem structure, function, and dynamics (Millar and Brubaker 2006). However, there are other significant drivers of change to aquatic and terrestrial ecosystems. In addition to climate change, aquatic and terrestrial ecosystems are also adversely affected by land use and land cover changes, natural resource extraction (including water withdrawals), pollution, species introductions, and removals of species (Staudt et al. 2013, Bodkin 2012, MEA 2005d) and changes in nutrient cycling (Julius et al. 2013).

Cumulative effects to wetlands, streams, and other aquatic resources in the United States are not limited to the effects caused by activities regulated and authorized by the Corps under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Other federal, non-federal, and private activities also contribute to the cumulative effects to wetlands, streams, and other aquatic resources, by changing the quantity of those resources and the functions they provide. Wetlands, streams, and other aquatic resources and the functions and services they provide are directly and indirectly affected by changes in land use and land cover, alien species introductions, overexploitation of species, pollution, eutrophication due to excess nutrients, resource extraction including water withdrawals,

climate change, and various natural disturbances (MEA 2005b). Freshwater ecosystems such as lakes, rivers, and streams are altered by changes to water flow, climate change, land use changes, additions of chemicals, resource extraction, and aquatic invasive species (Carpenter et al. 2011). Cumulative effects to wetlands, streams, and other aquatic resources are the result of landscape-level processes (Gosselink and Lee 1989). As discussed in more detail below, cumulative effects to aquatic resources are caused by a variety of activities (including activities that occur entirely in uplands) that take place within a landscape unit, such as the watershed for a river or stream (e.g., Allan 2004, Paul and Meyer 2001, Leopold 1968) or the contributing drainage area for a wetland (e.g., Wright et al. 2006, Brinson and Malvárez 2002, Zedler and Kercher 2005).

Cumulative effects also include environmental effects caused by reasonably foreseeable future actions that may take place after the permitted activity is completed. Such effects may include direct and indirect environmental effects caused by the operation and maintenance of the facility constructed on the discharge of dredged or fill material into waters of the United States or the structures or work in navigable waters of the United States. For NWP 12, this includes activities associated with the operation and maintenance of the utility lines, substations, and access roads constructed or expanded as a result of activities authorized by this NWP. Utility line activities and associated will also contribute to other cumulative effects to aquatic and terrestrial environments and to the atmosphere, during their construction, maintenance, and operation. During the operation of utility lines, substances carried by those utility lines may leak into surrounding areas. For oil pipelines, operators are required to comply with the Pipeline and Hazardous Materials Safety Administration's safety requirements, and have plans for addressing the risk of oil spills. Oil spills are also addressed through the Oil Pollution Act of 1990, which is administered by the U.S. Environmental Protection Agency and the U.S. Coast Guard. The U.S. EPA is responsible for oil spills in inland waters and the U.S. Coast Guard is responsible for oil spills in coastal waters and deepwater ports. For natural gas pipelines, there may be gas leaks during the operation of those pipelines. Sewer lines may develop breaks or leaks that discharge sewage into nearby waters and wetlands. Pipelines carrying other types of substances must comply with other applicable federal and state laws and regulations during their operations. For example, the Federal Energy Regulatory Commission regulates the interstate transmission of electricity, natural gas, and oil, and issues licenses for interstate natural gas pipelines. For utility lines that carry oil or natural gas, reasonably foreseeable future actions also include the burning of the fossil fuels, which produce carbon dioxide that contribute to greenhouse gas emissions. The Corps does not have the authority to control the burning of fossil fuels or the adverse environmental effects that are caused by burning those fossil fuels to produce energy.

The construction of utility lines and their rights-of-way will fragment terrestrial and aquatic ecosystems. Utility line substations may leak transformer fluids, or the liquids or gases carried by the utility lines those substations support. A variety of pollutants might be released into the environment during the operation and maintenance of these facilities. Those pollutants may be discharged through either point sources or non-point sources and reach jurisdictional waters and wetlands. Point-source discharges would likely require National Pollutant Discharge Elimination System Permits under Section 402 of the Clean

Water Act, which is administered by U.S. EPA or by states with approved programs. Pollutants may also be discharged through spills and other accidents. Operations and maintenance activities may also have other direct and indirect effects on wetlands, streams, and other aquatic resources. The Corps does not have the authority to regulate operations and maintenance activities that: (1) do not involve discharges of dredged or fill material into waters of the United States; (2) involve activities exempt from Clean Water Act Section 404 permit requirements under section 404(f); and (3) do not involve structures or work requiring DA authorization under Sections 9 or 10 of the Rivers and Harbors Act of 1899. Operations and maintenance activities regulated by the Corps are considered during the permit evaluation process.

In a specific watershed, division or district engineers may determine that the cumulative adverse environmental effects of activities authorized by this NWP are more than minimal. Division and district engineers will conduct more detailed assessments for geographic areas that are determined to be potentially subject to more than minimal cumulative adverse environmental effects. Division and district engineers have the authority to require individual permits in watersheds or other geographic areas where the cumulative adverse environmental effects are determined to be more than minimal, or add conditions to the NWP either on a case-by-case or regional basis to require mitigation measures to ensure that the cumulative adverse environmental effects of these activities are no more than minimal. When a division or district engineer determines, using local or regional information, that a watershed or other geographic area is subject to more than minimal cumulative adverse environmental effects due to the use of this NWP, he or she will use the revocation and modification procedure at 33 CFR 330.5. In reaching the final decision, the division or district engineer will compile information on the cumulative adverse effects and supplement this document.

The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design their projects within the scope of the NWP rather than request individual permits for projects which could result in greater adverse impacts to the aquatic environment. The minimization encouraged by the issuance of this NWP, as well as compensatory mitigation that may be required for specific activities authorized by this NWP, will help reduce cumulative effects to the Nation's wetlands, streams, and other aquatic resources.

Cumulative effects to specific categories of resources (i.e., resources of concern in accordance with CEQ's (1997) guidance) are discussed in more detail below. As discussed above, in addition to activities regulated under section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act of 1899, there are many categories of activities that contribute to cumulative effects to the human environment. The activities authorized by this NWP during the 5-year period it will be in effect will result in no more than minimal incremental contributions to cumulative effects to these resource categories.

4.3.2 Cumulative Effects to Aquatic Ecosystems

The ecological condition of rivers and streams is dependent on the state of their watersheds

(NRC 1992), because they are affected by activities that occur in those watersheds, including agriculture, urban development, deforestation, mining, water removal, flow alteration, and invasive species (Palmer et al. 2010). Land use changes affect rivers and streams through increased sedimentation, larger inputs of nutrients (e.g., nitrogen, phosphorous) and pollutants (e.g., heavy metals, synthetic chemicals, toxic organics), altered stream hydrology, the alteration or removal of riparian vegetation, and the reduction or elimination of inputs of large woody debris (Allan 2004). Agriculture is the primary cause of stream impairment, followed by urbanization (Foley et al. 2005, Paul and Meyer 2001). Agricultural land use adversely affects stream water quality, habitat, and biological communities (Allan 2004). Urbanization causes changes to stream hydrology (e.g., higher flood peaks, lower base flows), sediment supply and transport, water chemistry, and aquatic organisms (Paul and Meyer 2001). Leopold (1968) found that land use changes affect the hydrology of an area by altering stream flow patterns, total runoff, water quality, and stream structure. Changes in peak flow patterns and runoff affect stream channel stability. Stream water quality is adversely affected by increased inputs of sediments, nutrients, and pollutants, many of which come from non-point sources (Paul and Meyer 2001, Allan and Castillo 2007).

The construction and operation of water-powered mills in the 17th to 19th centuries substantially altered the structure and function of streams in the eastern United States (Walter and Merritts 2008) and those effects have persisted to the present time. In urbanized and agricultural watersheds, the number of small streams has been substantially reduced, in part by activities that occurred between the 19th and mid-20th centuries (Meyer and Wallace 2001). Activities that affect the quantity and quality of small streams include residential, commercial, and industrial development, mining, agricultural activities, forestry activities, and road construction (Meyer and Wallace 2001), even if those activities are located entirely in uplands.

Activities that affect wetland quantity and quality include: land use changes that alter local hydrology (including water withdrawal), clearing and draining wetlands, constructing levees that sever hydrologic connections between rivers and floodplain wetlands, constructing other obstructions to water flow (e.g., dams, locks), constructing water diversions, inputs of nutrients and contaminants, and fire suppression (Brinson and Malvárez 2002). Wetland loss and degradation is caused by hydrologic modifications of watersheds, drainage activities, logging, agricultural runoff, urban development, conversion to agriculture, aquifer depletion, river management, (e.g., channelization, navigation improvements, dams, weirs), oil and gas development activities, levee construction, peat mining, and wetland management activities (Mitsch and Hernandez 2013). Upland development adversely affects wetlands and reduces wetland functionality because those activities change surface water flows and alter wetland hydrology, contribute stormwater and associated sediments, nutrients, and pollutants, cause increases in invasive plant species abundance, and decrease the diversity of native plants and animals (Wright et al. 2006). Many of the remaining wetlands in the United States are degraded (Zedler and Kercher 2005). Wetland degradation and losses are caused by changes in water movement and volume within a watershed or contributing drainage area, altered sediment transport, drainage, inputs of nutrients from non-point sources, water diversions, fill activities, excavation activities, invasion by non-native species, land subsidence, and

pollutants (Zedler and Kercher 2005). According to Mitsch and Gosselink (2015), categories of activities that alter wetlands include: wetland conversion through drainage, dredging, and filling; hydrologic modifications that change wetland hydrology and hydrodynamics; highway construction and its effects on wetland hydrology; peat mining; waterfowl and wildlife management; agriculture and aquaculture activities; water quality enhancement activities; and flood control and stormwater protection.

There is also little national-level information on the ecological condition of the Nation's wetlands, streams, and other aquatic resources, or the amounts of functions they provide, although reviews have acknowledged that most of these resources are degraded (Zedler and Kercher 2005, Allan 2004) or impaired (U.S. EPA 2015) because of various activities, disturbances, and other stressors. These data deficiencies make it more difficult to characterize the affected environment to assess cumulative effects, and the relative contribution of the activities authorized by this NWP to those cumulative effects.

As discussed in section 3.0 of this document there is a wide variety of causes and sources of impairment of the Nation's rivers, streams, wetlands, lakes, estuarine waters, and marine waters (U.S. EPA 2015), which also contribute to cumulative effects to these aquatic resources. Many of those causes of impairment are point and non-point sources of pollutants that are not regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Two common causes of impairment for rivers and streams, habitat alterations and flow alterations, may be due in part to activities regulated by the Corps under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. Habitat and flow alterations may also be caused by activities that do not involve discharges of dredged or fill material or structures or work in navigable waters. For wetlands, impairment due to habitat alterations, flow alterations, and hydrology modifications may involve activities regulated under section 404, but these causes of impairment may also be due to unregulated activities, such as changes in upland land use that affects the movement of water through a watershed or contributing drainage area or the removal of vegetation.

Many of the activities discussed in this cumulative effects section that affect wetlands, streams, and other aquatic resources are not subject to regulation under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899.

Estimates of the original acreage of wetlands in the United States vary widely because of the use of different definitions and how those estimates were made (Harris and Gosselink 1990). Dahl (1990) estimates that approximately 53 percent of the wetlands in the conterminous United States were lost in the 200-year period covering the 1780s to 1980s. Much of the wetland loss occurred in the mid-19th century as a result of indirect effects of beaver trapping and the removal of river snags, which substantially reduced the amount of land across the country that was inundated because of beaver dams and river obstructions (Harris and Gosselink 1990). The annual rate of wetland loss has decreased substantially since the 1970s (Dahl 2011), when wetland regulation became more prevalent (Brinson and Malvárez 2002). Between 2004 and 2009, there was no statistically significant difference in wetland acreage in the conterminous United States (Dahl 2011). According to the 2011 wetland

status and trends report, during the period of 2004 to 2009 urban development accounted for 11 percent of wetland losses (61,630 acres), rural development resulted in 12 percent of wetland losses (66,940 acres), silviculture accounted for 56 percent of wetland losses (307,340 acres), and wetland conversion to deepwater habitats caused 21 percent of the loss in wetland area (115,960 acres) (Dahl 2011). Some of the losses occurred to wetlands that are not subject to Clean Water Act jurisdiction and some losses are due to activities not regulated under Section 404 of the Clean Water Act, such as unregulated drainage activities, exempt forestry activities, or water withdrawals. From 2004 to 2009, approximately 100,020 acres of wetlands were gained as a result of wetland restoration and conservation programs on agricultural land (Dahl 2011). Another source of wetland gain is conversion of other uplands to wetlands (389,600 acres during 2004 to 2009) (Dahl 2011). Inventories of wetlands, streams, and other aquatic resources are incomplete, especially at national or regional scales, because the techniques used for those inventories cannot identify all of those resources, especially small wetlands and streams (e.g., Dahl (2011) for wetlands; Meyer and Wallace (2001) for streams).

As discussed in section 3.0, national scale inventories of wetlands, streams, and other types of aquatic resources underestimate the quantity of those resources, and only general information is available on their ability to perform ecological functions and services. Therefore, it is not appropriate to make decisions concerning the significance of cumulative effects by calculating the relative proportion of the aquatic resources baseline impacted by a particular action, or a series of actions subject to a particular federal program. In addition, such an approach does not take into account the many categories of other activities that have direct and indirect effects on aquatic resources that are regulated under other federal, states, or local programs or are not regulated by any entity. Under the Council on Environmental Quality's NEPA definition at 40 CFR 1508.7, a cumulative effects analysis should instead examine the relative contribution that a proposed action will have on cumulative effects to one or more categories of natural resources (i.e., "the incremental impact of the action" and whether that incremental impact is significant or not significant).

For aquatic ecosystems, climate change affects water quality, biogeochemical cycling, and water storage (Julius et al. 2013). Climate change will also affect the abundance and distribution of wetlands across the United States, as well as the functions they provide (Mitsch and Gosselink 2015). Climate change results in increases in stream temperatures, more waterbodies with anoxic conditions, degradation of water quality, and increases in flood and drought frequencies (Julius et al. 2013). The increasing carbon dioxide concentration in the atmosphere also changes the pH of the oceans, resulting in ocean acidification (RS and NAS 2014), which adversely affects corals and some other marine organisms.

Compensatory mitigation required by district engineers for specific activities authorized by this NWP will help reduce the contribution of those activities to the cumulative effects on the Nation's wetlands, streams, and other aquatic resources, by providing ecological functions to partially or fully replace some or all of the aquatic resource functions lost as a result of those activities. Compensatory mitigation requirements for the NWPs are described in general condition 23 and compensatory mitigation projects must also comply with the

applicable provisions of 33 CFR part 332. District engineers will establish compensatory mitigation requirements on a case-by-case basis, after evaluating pre-construction notifications. Compensatory mitigation requirements for individual NWP activities will be specified through permit conditions added to NWP authorizations. When compensatory mitigation is required, the permittee is required to submit a mitigation plan prepared in accordance with the requirements of 33 CFR 332.4(c). Credits from approved mitigation banks or in-lieu fee programs may also be used to satisfy compensatory mitigation requirements for NWP authorizations. Monitoring is required to demonstrate whether the permittee-responsible mitigation project, mitigation bank, or in-lieu fee project is meeting its objectives and providing the intended aquatic resource structure and functions. If the compensatory mitigation project is not meeting its objectives, adaptive management will be required. Adaptive management may involve taking actions, such as site modifications, remediation, or design changes, to ensure the compensatory mitigation project meets its objectives (see 33 CFR 332.7(c)).

The estimated contribution of activities authorized by this NWP to the cumulative effects to wetlands, streams, and other aquatic resources in the United States during the five year period that the NWP would be in effect, in terms of the estimated number of times this NWP would be used until it expires and the projected impacts and compensatory mitigation, is provided in section 7.2.2. It is not practical or feasible to provide quantitative data on the multitude of other contributors to cumulative effects to these resources, including the federal, non-federal, and private activities that are not regulated by the Corps that will also occur during the five year period this NWP is in effect. National-level data on these many categories of activities that are not regulated by the Corps but contribute to cumulative effects are either not collected for the nation or they are not accessible. The activities authorized by this NWP will result in a minor incremental contribution to the cumulative effects to wetlands, streams, and other aquatic resources in the United States because, as discussed in this section, they are one category of many categories of activities that affect those aquatic resources. The causes of cumulative effects discussed in this section include past, present, and reasonably foreseeable future federal, non-federal, and private activities. For the national-scale cumulative effects analysis presented in this section, it is not possible to quantify the relative contributions of all of the various activities that affect the quantity of wetlands, streams, and other aquatic resources and the functions and services they provide, because such data are not available at the national scale.

As discussed above, there are many categories of activities not regulated by the Corps under section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act of 1899 that contribute to cumulative effects to wetland, streams, and other aquatic resources. During the 5-year period this NWP is in effect, the activities it authorizes will result in only a no more than minimal incremental contribution to cumulative effects to wetlands, streams, and other aquatic ecosystems.

4.3.3 Cumulative Effects to Coastal Areas

In the United States, approximately 39 percent of its population lives in counties that are next to coastal waters, the territorial seas, or the Great Lakes (NOAA 2013). Those counties

comprise less than 10 percent of the land area of the United States (NOAA 2013). Coastal waters are also affected by a wide variety of activities. The major drivers of changes to coastal areas are: development activities that alter coastal forests, wetlands, and coral reef habitats for aquaculture and the construction of urban areas, industrial facilities, and resort and port developments (MEA 2005d). Dredging, reclamation, shore protection and other structures (e.g., causeways and bridges), and some types of fishing activities also cause substantial changes to coastal areas (MEA 2005d). Nitrogen pollution to coastal zones change coral reef communities (MEA 2005d). Adverse effects to coastal waters are caused by habitat modifications, point source pollution, non-point source pollution, changes to hydrology and hydrodynamics, exploitation of coastal resources, introduction of non-native species, global climate change, shoreline erosion, and pathogens and toxins (NRC 1994).

Substantial alterations of coastal hydrology and hydrodynamics are caused by land use changes in watersheds draining to coastal waters, the channelization or damming of streams and rivers, water consumption, and water diversions (NRC 1994). Approximately 52 percent of the population of the United States lives in coastal watersheds (NOAA 2013). Eutrophication of coastal waters is caused by nutrients contributed by waste treatment systems, non-point sources, and the atmosphere, and may cause hypoxia or anoxia in coastal waters (NRC 1994). Changes in water movement through watersheds may also alter sediment delivery to coastal areas, which affects the sustainability of wetlands and intertidal habitats and the functions they provide (NRC 1994). Most inland waters in the United States drain to coastal areas, and therefore activities that occur in inland watersheds affect coastal waters (NRC 1994). Inland land uses, such as agriculture, urban development, and forestry, adversely affect coastal waters by diverting fresh water from estuaries and by acting as sources of nutrients and pollutants to coastal waters (MEA 2005d).

Coastal wetlands have been substantially altered by urban development and changes to the watersheds that drain to those wetlands (Mitsch and Hernandez 2013). Coastal habitat modifications are the result of dredging or filling coastal waters, inputs of sediment via non-point sources, changes in water quality, or alteration of coastal hydrodynamics (NRC 1994). Coastal development activities, including those that occur in uplands, affect marine and estuarine habitats (MEA 2005b). The introduction of non-native species may change the functions and structure of coastal wetlands and other habitats (MEA 2005b). Fishing activities may also modify coastal habitats by changing habitat structure and the biological communities that inhabit those areas (NRC 1994).

As discussed above, there are many categories of activities not regulated by the Corps under section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act of 1899 that contribute to cumulative effects to coastal areas. During the 5-year period this NWP is in effect, the activities it authorizes will result in only a no more than minimal incremental contribution to cumulative effects to coastal areas.

4.3.4 Cumulative Effects to Endangered and Threatened Species

The status of species as threatened or endangered is also due to cumulative effects (NRC 1986, Odum 1982), and activities authorized by Department of the Army permits are a

minor contributor to the cumulative effects to endangered and threatened species. Land use and land cover changes are the main cause of the loss of biodiversity (Vitousek et al. 1997). The decline of a species that leads to its status as endangered or threatened is usually caused by multiple factors rather than a single factor (Wilcove et al. 1998, Venter et al. 2006, Czech and Krausman 1997, Richter et al. 1997). It is difficult to determine the relative contribution of each cause of species decline or endangerment (Czech and Krausman 1997). For example, for fish species, the number of factors affecting their status ranged from 1 to 15, with an average of 4.5 threats. Over 40 percent of fish species were endangered or threatened as a result of 5 or more factors, and less than 7 percent of fish species were identified as imperiled because of a single factor. During the past few hundred years, human activities have increased species extinction rates by around 1,000 times the Earth's background extinction rates (MEA 2005c).

The main causes of the decline of species to endangered or threatened status are habitat loss and degradation, introduction of species, overexploitation, disease, and climate change (MEA 2005d). Habitat degradation also includes changes in habitat quality caused by habitat fragmentation and pollution. Habitat fragmentation can occur in rivers, and is characterized by disruption of a river's natural flow regime by dams, inter-basin water transfers, or water withdrawals and affects 90 percent of the world's river water volume (MEA 2005d). Invasive alien species are a major cause of species endangerment in freshwater habitats (MEA 2005d). Losses of biological diversity are directly caused by habitat modifications, including land use changes, alteration of river and stream flows, water withdrawals from rivers, losses of coral reefs, and alteration of the sea bed caused by trawling (MEA 2005c). Other direct causes of losses of biodiversity include pollution, invasive species, species overexploitation, climate change, and disease (MEA 2005c). There are often multiple factors interacting with each other to reduce biodiversity, instead of single factors working alone (MEA 2005c).

Wilcove et al. (1998) evaluated five categories of threats to species in the United States, and conducted further analyses on the types of habitat destruction that caused species to be listed as endangered or threatened under the Endangered Species Act. The five categories of threats were habitat destruction, alien species, overharvest, pollution, and disease. Wilcove et al. (1998) focused on species under the jurisdiction of the U.S. Fish and Wildlife Service. More than half of the endangered and threatened species under the jurisdiction of the NMFS were listed after this study was published. Wilcove et al. (1998) found information on the threats to 1,880 species, out of a total of 2,490 species that were categorized as imperiled at that time. Habitat destruction and degradation was the most common threat, a factor for 85 percent of the imperiled species analyzed. The second most common threat was competition with non-native species, or predation by those species. For aquatic animal species, pollution was the second most common cause of endangerment, after habitat loss (Wilcove et al. 1998).

To more closely examine the causes of habitat loss, Wilcove et al. (1998) analyzed U.S. Fish and Wildlife endangered species listing documents and identified 14 categories of habitat loss or degradation: agriculture; livestock grazing; mining and oil and gas extraction; logging; infrastructure development; road construction and maintenance; military activities;

outdoor recreation; use of off-road vehicles; water development projects (e.g., water diversions, flood control facilities; drainage projects; aquaculture; navigation); dams, impoundments, and other water barriers; pollutants (e.g., sediment and mining pollutants); residential and commercial developments; and disruption of fire ecology. Many species were subject to more than one cause of endangerment (Wilcove et al. 1998). Agriculture was the leading cause of habitat destruction, affecting 38 percent of endangered species, followed by residential and commercial development (35 percent), water development (30 percent), and infrastructure development (17 percent). Habitat destruction caused by water development affected 91 percent of listed fish species and 99 percent of listed mussel species.

Richter et al. (1997) studied the factors that endanger freshwater animals. The most significant threats to those species are habitat destruction, habitat fragmentation, pollution, and exotic species. Richter et al. (1997) also looked at the stressors that are impeding the recovery of aquatic species at risk of extinction and found that changes in stream bed substrate composition (e.g., siltation), hydrologic alteration, interactions with other species, nutrient inputs, and habitat destruction were the most common factors. The major sources of stressors to aquatic species are agricultural land use, urban land use, energy generation industries (especially hydroelectric power), and exotic species (Richter et al. 1997). Agricultural activity was identified as having significant adverse effects on aquatic species through non-point source pollution (sediment and nutrients), interactions with exotic species, and water impoundments (Richter et al. 1997). Water impoundments cause changes in hydrology, as well as habitat destruction and fragmentation. Urban land use resulted in much less non-point source pollution than agricultural activities (Richter et al. 1997).

Note that in these studies on species threats and endangerment, the categories of human activities are discussed in general terms, and may include activities in uplands as well as activities in jurisdictional and non-jurisdictional waters and wetlands. Climate change will also alter species distributions, and extinction may occur for those species that cannot adjust to the changes in climate (Starzmoski 2013).

As discussed above, there are many categories of activities not regulated by the Corps under section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act of 1899 that contribute to cumulative effects to endangered and threatened species and their designated critical habitats. During the 5-year period this NWP is in effect, the activities it authorizes will result in only a no more than minimal incremental contribution to cumulative effects to endangered and threatened species and their habitats.

4.4 Climate Change

Climate change represents one of the greatest challenges our country faces with profound and wide-ranging implications for the health and welfare of Americans, economic growth, the environment, and international security. Evidence of the warming of climate system is unequivocal and the emission of greenhouse gases from human activities is the primary driver of these changes (IPCC 2014). Already, the United States is experiencing the impacts

of climate change and these impacts will continue to intensify as warming intensifies. It will have far-reaching impacts on natural ecosystems and human communities. These effects include sea level rise, ocean warming, increases in precipitation in some areas and decreases in precipitation in other areas, decreases in sea ice, more extreme weather and climate events including more floods and droughts, increasing land surface temperatures, increasing ocean temperatures, and changes in plant and animal communities (IPCC 2014). Climate change also affects human health in some geographic area by increasing exposure to ground-level ozone and/or particulate matter air pollution (Luber et al. 2014). Climate change also increases the frequency of extreme heat events that threaten public health and increases risk of exposure to vector-borne diseases (Luber et al. 2014). Climate impacts affect the health, economic well-being, and welfare of Americans across the country, and especially children, the elderly, and others who are particularly vulnerable to specific impacts. Climate change can affect ecosystems and species through a number of mechanisms, such as direct effects on species, populations, and ecosystems; compounding the effects of other stressors; and the direct and indirect effects of climate change mitigation or adaptation actions (Staudt et al. 2013). Other stressors include land use and land cover changes, natural resource extraction (including water withdrawals), pollution, species introductions, and removals of species (Staudt et al. 2013, Bodkin 2012, MEA 2005d) and changes in nutrient cycling (Julius et al. 2013).

5.0 Public Interest Review

5.1 Public Interest Review Factors (33 CFR 320.4(a)(1))

For each of the 20 public interest review factors, the extent of the Corps consideration of expected impacts resulting from the use of this NWP is discussed, as well as the reasonably foreseeable cumulative adverse effects that are expected to occur. The Corps decision-making process involves consideration of the benefits and detriments that may result from the activities authorized by this NWP.

(a) Conservation: The activities authorized by this NWP may modify the natural resource characteristics of the project area. Compensatory mitigation, if required for activities authorized by this NWP, will result in the restoration, enhancement, establishment, or preservation of aquatic habitats that will offset losses to conservation values. The adverse effects of activities authorized by this NWP on conservation will be minor.

(b) Economics: Utility line activities will have positive impacts on the local economy. During construction, these activities will generate jobs and revenue for local contractors as well as revenue to building supply companies that sell construction materials. Utility lines provide energy, potable water, telecommunications, and other services to residences and schools, as well as factories, offices, stores, and other places of business, to allow those facilities to operate.

(c) Aesthetics: Utility line activities will alter the visual character of some waters of the United States. The extent and perception of these changes will vary, depending on the size and configuration of the activity, the nature of the surrounding area, and the public uses of the area. Utility line activities authorized by this NWP can also modify other aesthetic characteristics, such as air quality and the amount of noise. The increased human use of the project area and surrounding land will also alter local aesthetic values.

(d) General environmental concerns: Activities authorized by this NWP will affect general environmental concerns, such as water, air, noise, and land pollution. The authorized activities will also affect the physical, chemical, and biological characteristics of the environment. The adverse effects of the activities authorized by this NWP on general environmental concerns will be minor. Adverse effects to the chemical composition of the aquatic environment will be controlled by general condition 6, which states that the material used for construction must be free from toxic pollutants in toxic amounts. General condition 23 requires mitigation to minimize adverse effects to the aquatic environment through avoidance and minimization at the project site. Compensatory mitigation may be required by district engineers to ensure that the net adverse environmental effects are no more than minimal. Specific environmental concerns are addressed in other sections of this document.

(e) Wetlands: The construction, maintenance, repair, or removal of utility lines and associated facilities may result in the loss or alteration of wetlands. For the construction or maintenance of utility lines impacts to wetlands will be temporary, unless the site contains forested wetlands. The construction of utility line rights-of-way through forested wetlands will often result in the conversion of forested wetlands to scrub-shrub or emergent wetlands. Those conversions are usually permanent to maintain the utility line in good, operational order. The conversion of wetlands to other types of wetlands may result in the loss of certain wetland functions, or the reduction in the level of wetland functions being performed by the converted wetland. District engineers have the authority to require mitigation to offset losses of wetland functions caused by regulated activities (see paragraph (i) of general condition 23, mitigation). The construction of utility line substations will result in the permanent loss of wetlands. Wetlands may also be converted to other uses and habitat types. Forested wetlands will not be allowed to grow back in the utility line right-of-way so that the utility line will not be damaged and can be easily maintained. Only shrubs and herbaceous plants will be allowed to grow in the right-of-way. Some wetlands may be temporarily impacted by the activity when used as temporary staging areas. These wetlands will be restored, unless the district engineer authorizes another use for the area, but the plant community may be different, especially if the site was originally forested.

Wetlands provide habitat, including foraging, nesting, spawning, rearing, and resting sites for aquatic and terrestrial species. The loss or alteration of wetlands may alter natural drainage patterns. Wetlands reduce erosion by stabilizing the substrate. Wetlands also act as storage areas for stormwater and flood waters. Wetlands may act as groundwater discharge or recharge areas. The loss of wetland vegetation will adversely affect water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds. Wetland vegetation also provides habitat for microorganisms that remove nutrients and pollutants from water. Wetlands, through the accumulation of organic matter,

act as sinks for some nutrients and other chemical compounds, reducing the amounts of these substances in the water.

General condition 23 requires avoidance and minimization of impacts to waters of the United States, including wetlands, at the project site. Compensatory mitigation may be required to offset losses of waters of the United States so that the net adverse environmental effects are no more than minimal. General condition 22 prohibits the use of this NWP to discharge dredged or fill material in designated critical resource waters and adjacent wetlands, which may include high value wetlands. Division engineers can regionally condition this NWP to restrict or prohibit its use in high value wetlands. District engineers will also exercise discretionary authority to require an individual permit if high value wetlands will be affected by the activity and the activity will result in more than minimal adverse environmental effects. District engineers may also add case-specific special conditions to the NWP authorization to reduce impacts to wetlands or require compensatory mitigation to offset losses of wetlands.

(f) Historic properties: General condition 20 states that in cases where the district engineer determines that the activity may affect 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 have been satisfied.

(g) Fish and wildlife values: This NWP authorizes certain utility line activities in all waters of the United States. Discharges of dredged or fill material into waters of the United States for the construction of utility line substations is limited to non-tidal waters, excluding non-tidal waters adjacent to tidal waters. Waters of the United States provide habitat to many species of fish and wildlife. Activities authorized by this NWP may alter the habitat characteristics of streams, wetlands, and other waters of the United States, decreasing the quantity and quality of fish and wildlife habitat. The construction of utility line right-of-ways may fragment existing habitat and increase the amount of edge habitat in the area, causing changes in local species composition. Wetland, riparian, and estuarine vegetation provides food and habitat for many species, including foraging areas, resting areas, corridors for wildlife movement, and nesting and breeding grounds. Open waters provide habitat for fish and other aquatic organisms. Fish and other motile animals will avoid the project site during construction and maintenance. Woody riparian vegetation shades streams, which reduces water temperature fluctuations and provides habitat for fish and other aquatic animals. Riparian and estuarine vegetation provides organic matter that is consumed by fish and aquatic invertebrates. Woody riparian vegetation creates habitat diversity in streams when trees and large shrubs fall into the channel, forming snags that provide habitat and shade for fish. The morphology of a stream channel may be altered by activities authorized by this NWP, which can affect fish populations. However, pre-construction notification is required for certain activities authorized by this NWP, which provides district engineers with opportunities to review those activities, assess potential impacts on fish and wildlife values, and ensure that the authorized activity results in no more than minimal adverse environmental effects. Compensatory mitigation may be required by district engineers to restore, enhance, establish, and/or preserve wetlands to offset losses of waters of the United States. Stream rehabilitation, enhancement, and preservation activities may be required as

compensatory mitigation for impacts to streams. The establishment and maintenance of riparian areas next to open and flowing waters may also be required as compensatory mitigation. These methods of compensatory mitigation will provide fish and wildlife habitat values.

General condition 2 will reduce adverse effects to fish and other aquatic species by prohibiting activities that substantially disrupt the necessary life cycle movements of indigenous aquatic species, unless the primary purpose of the activity is to impound water. Compliance with general conditions 3 and 5 will ensure that the authorized activity has only minimal adverse effects on spawning areas and shellfish beds, respectively. The authorized activity cannot have more than minimal adverse effects on breeding areas for migratory birds, due to the requirements of general condition 4.

For an NWP activity, compliance with the Bald and Golden Eagle Protection Act (16 U.S.C. 668(a)-(d)), the Migratory Bird Treaty Act (16 U.S.C. 703; 16 U.S.C. 712), and the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.) is the responsibility of the project proponent. General condition 19 states that 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.

Consultation pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act will occur as necessary for proposed NWP activities that may adversely affect essential fish habitat. Consultation may occur on a case-by-case or programmatic basis. Division and district engineers can impose regional and special conditions to ensure that activities authorized by this NWP will result in only minimal adverse effects on essential fish habitat.

(h) Flood hazards: The activities authorized by this NWP may affect the flood-holding capacity of the 100-year floodplain, including surface water flow velocities. Changes in the flood-holding capacity of the 100-year floodplain may impact human health, safety, and welfare. Compliance with general condition 9 will reduce flood hazards. This general condition requires the permittee to maintain, to the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters, except under certain circumstances. General condition 10 requires the activity to comply with applicable FEMA-approved state or local floodplain management requirements. Much of the land area within 100-year floodplains is upland, and outside of the Corps scope of review.

(i) Floodplain values: Activities authorized by this NWP may adversely affect the flood-holding capacity of the floodplain, as well as other floodplain values. The fish and wildlife habitat values of floodplains will be adversely affected by activities authorized by this NWP, by modifying or eliminating areas used for nesting, foraging, resting, and reproduction. The water quality functions of floodplains may also be adversely affected by these activities. Modification of the floodplain may also adversely affect other hydrological processes, such as groundwater recharge.

Compensatory mitigation may be required for activities authorized by this NWP, which will offset losses of waters of the United States and provide water quality functions and wildlife habitat. General condition 23 requires avoidance and minimization of impacts to waters of the United States to the maximum extent practicable at the project site, which will reduce losses of floodplain values. The requirements of general condition 23 will minimize adverse effects to floodplain values, such as flood storage capacity, wildlife habitat, fish spawning areas, and nutrient cycling for aquatic ecosystems. Compliance with general condition 10 will ensure that authorized activities in 100-year floodplains will not cause more than no more than minimal adverse effects on flood storage and conveyance.

(j) Land use: Activities authorized by this NWP will often change the land use from natural to developed. The installation of utility lines may induce more development in the vicinity of the project. Since the primary responsibility for land use decisions is held by state, local, and Tribal governments, the Corps scope of review is limited to significant issues of overriding national importance, such as navigation and water quality (see 33 CFR 320.4(j)(2)).

(k) Navigation: Activities authorized by this NWP must comply with general condition 1, which states that no activity may cause more than minimal adverse effects on navigation. This NWP requires pre-construction notification for all activities in section 10 waters, which will allow the district engineer to review the pre-construction notification and determine if the proposed activity will adversely affect navigation.

(l) Shore erosion and accretion: The activities authorized by this NWP will have minor direct effects on shore erosion and accretion processes, since the NWP does not authorize the construction of utility line substations in tidal waters. The construction of utility lines and foundations for overhead utility line towers, poles, and anchors, will have only minimal adverse effects on shore erosion and accretion. However, NWP 13, regional general permits, or individual permits may be used to authorize bank stabilization projects associated with utility line activities, which may affect shore erosion and accretion.

(m) Recreation: Activities authorized by this NWP may change the recreational uses of the area. Certain recreational activities, such as bird watching, hunting, and fishing may no longer be available in the area. Some utility line activities may eliminate certain recreational uses of the area.

(n) Water supply and conservation: Activities authorized by this NWP may adversely affect both surface water and groundwater supplies. Activities authorized by this NWP can also affect the quality of water supplies by adding pollutants to surface waters and groundwater, but many causes of water pollution, such as discharges regulated under Section 402 of the Clean Water Act, are outside the Corps scope of review. Some water pollution concerns can be addressed through the water quality management measures that may be required for activities authorized by this NWP. The quantity and quality of local water supplies may be enhanced through the construction of water treatment facilities. Division and district engineers can prohibit the use of this NWP in watersheds for public water supplies, if it is in

the public interest to do so. General condition 7 prohibits discharges in the vicinity of public water supply intakes. Compensatory mitigation may be required for activities authorized by this NWP, which may help improve the quality of surface waters.

(o) Water quality: Utility line activities in wetlands and open waters may have adverse effects on water quality. These activities can result in increases in sediments and pollutants in the water. The loss of wetland and riparian vegetation will adversely affect water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds. Wetland and riparian vegetation also provides habitat for microorganisms that remove nutrients and pollutants from water. Wetlands, through the accumulation of organic matter, act as sinks for some nutrients and other chemical compounds, reducing the amounts of these substances in the water column. Wetlands and riparian areas also decrease the velocity of flood waters, removing suspended sediments from the water column and reducing turbidity. Riparian vegetation also serves an important role in the water quality of streams by shading the water from the intense heat of the sun. Compensatory mitigation may be required for activities authorized by this NWP, to ensure that the activity does not have more than minimal adverse environmental effects, including water quality. Wetlands and riparian areas restored, established, enhanced, or preserved as compensatory mitigation may provide local water quality benefits.

During the construction, maintenance, and repair of utility lines and related activities, small amounts of oil and grease from construction equipment may be discharged into the waterway. Because most of the construction will occur during a relatively short period of time, the frequency and concentration of these discharges are not expected to have more than minimal adverse effects on overall water quality.

This NWP may require Section 401 water quality certification, since it authorizes discharges of dredged or fill material into waters of the United States. Most water quality concerns are addressed by the State or Tribal Section 401 agency. In accordance with general condition 23, the permittee may be required to implement water quality management measures to minimize the degradation of water quality. Water quality management measures may involve the installation of stormwater management facilities to trap pollutants and the establishment and maintenance of riparian areas next to waters of the United States. Riparian areas help protect downstream water quality and enhance aquatic habitat.

(p) Energy needs: The utility line activities authorized by this NWP may induce higher rates of energy consumption in the area by making electricity, natural gas, and petroleum products more readily available to consumers. Additional power plants or oil refineries may be needed to meet increases in energy demand, but these issues are beyond the Corps scope of review. This NWP may be used to authorize the expansion of existing infrastructure to provide energy to new developments.

(q) Safety: The utility line activities authorized by this NWP will be subject to Federal, state, and local safety laws and regulations. Therefore, this NWP will not adversely affect the safety of the project area. Operators of oil pipelines are required to comply with the Pipeline and Hazardous Materials Safety Administration's safety requirements, and have plans for

addressing the risk of oil spills. Pipelines carrying other types of substances must comply with other applicable federal and state laws and regulations during their operations. For example, the Federal Energy Regulatory Commission regulates the interstate transmission of electricity, natural gas, and oil, and issues licenses for interstate natural gas pipelines.

(r) Food and fiber production: Activities authorized by this NWP may adversely affect food and fiber production, especially when utility line activities are constructed on agricultural land. Utility line activities usually require easements, which may take some agricultural land out of production. These activities may reduce the amount of available farmland in the nation, unless that land is replaced by converting other land, such as forest, to agricultural land. The loss of farmland is more appropriately addressed through the land use planning and zoning authority held by state and local governments. Food production may be increased by activities authorized by this NWP. For example, this NWP can authorize the construction or expansion of utility lines that provide energy, water, and other services to commercial food production facilities, such as bakeries, canneries, and meat processing plants.

(s) Mineral needs: Activities authorized by this NWP may increase demand for aggregates and stone, which may be used to construct utility lines, substations, and foundations for overhead utility line towers. Utility lines authorized by this NWP may increase the demand for other building materials, such as steel, aluminum, and copper, which are made from mineral ores.

(t) Considerations of property ownership: The NWP complies with 33 CFR 320.4(g), which states that an inherent aspect of property ownership is a right to reasonable private use. The NWP provides expedited DA authorization for utility line activities, provided those activities comply with the terms and conditions of the NWP and result in no more than minimal adverse environmental effects.

5.2 Additional Public Interest Review Factors (33 CFR 320.4(a)(2))

5.2.1 Relative extent of the public and private need for the proposed structure or work

This NWP authorizes the construction, maintenance, repair, and removal of utility lines and associated facilities, provided those activities have no more than minimal individual and cumulative adverse environmental effects. These activities satisfy public and private needs for the conveyance of a variety of substances, as well as communications and information transfer. The need for this NWP is based upon the number of these activities that occur annually with only minimal individual and cumulative environmental adverse effects.

5.2.2 Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work

Most situations in which there are unresolved conflicts concerning resource use arise when

environmentally sensitive areas are involved (e.g., special aquatic sites, including wetlands) or where there are competing uses of a resource. The nature and scope of the activity, when planned and constructed in accordance with the terms and conditions of this NWP, reduce the likelihood of such conflict. In the event that there is a conflict, the NWP contains provisions that are capable of resolving the matter (see section 1.2 of this document).

General condition 23 requires permittees to avoid and minimize adverse effects to waters of the United States to the maximum extent practicable on the project site. Consideration of off-site alternative locations is not required for activities that are authorized by general permits. General permits authorize activities that have only minimal individual and cumulative adverse effects on the environment and the overall public interest. The district engineer will exercise discretionary authority and require an individual permit if the proposed activity will result in more than minimal adverse environmental effects on the project site. The consideration of off-site alternatives can be required during the individual permit process.

5.2.3 The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited

The nature and scope of the activities authorized by the NWP will most likely restrict the extent of the beneficial and detrimental effects to the area immediately surrounding the utility line activity. Activities authorized by this NWP will result in no more than minimal individual and cumulative adverse environmental effects.

The terms, conditions, and provisions of the NWP were developed to ensure that individual and cumulative adverse environmental effects are no more than minimal. Specifically, NWPs do not obviate the need for the permittee to obtain other Federal, state, or local authorizations required by law. The NWPs do not grant any property rights or exclusive privileges (see 33 CFR 330.4(b) for further information). Additional conditions, limitations, restrictions, and provisions for discretionary authority, as well as the ability to add activity-specific or regional conditions to this NWP, will provide further safeguards to the aquatic environment and the overall public interest. There are also provisions to allow suspension, modification, or revocation of the NWP.

6.0 Endangered Species Act

The Corps' current regulations and procedures for the NWPs result in compliance with Section 7 of the Endangered Species Act (ESA) and ensure that activities authorized by this NWP will not jeopardize the continued existence or any listed threatened and endangered species or result in the destruction or adverse modification of critical habitat. Current local procedures in Corps districts are effective in ensuring compliance with ESA. Those local procedures include regional programmatic consultations and the development of Standard Local Operating Procedures for Endangered Species (SLOPES). The issuance or reissuance of an NWP, as governed by NWP general condition 18 (which applies to every NWP and

which relates to endangered and threatened species and critical habitat) and 33 CFR 330.4(f), results in “no effect” to listed species or critical habitat, because no activity that “may affect” listed species or critical habitat is authorized by NWP unless ESA Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Service (NMFS) has been completed. Activities that do not comply with general condition 18 or other applicable general or regional conditions are not authorized by any NWP, and thus fall outside of the NWP Program. Unauthorized activities are subject to the prohibitions of Section 9 of the ESA.

Each activity authorized by an NWP is subject to general condition 18, which states that “[n]o 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.” In addition, general condition 18 explicitly states that the NWP does not authorize “take” of threatened or endangered species, which will ensure that permittees do not mistake the NWP authorization as a Federal authorization to take threatened or endangered species. General condition 18 also requires a non-federal permittee to 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 project, or if the project is located in designated critical habitat. This general condition also states that, in such cases, non-federal permittees 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.

Under the current Corps regulations (33 CFR 325.2(b)(5)), the district engineer must review all permit applications for potential impacts on threatened and endangered species or critical habitat. For the NWP program, this review occurs when the district engineer evaluates the pre-construction notification or request for verification. Nationwide permit general condition 18 requires a non-federal applicant to submit a pre-construction notification to the Corps if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat. Based on the evaluation of all available information, the district engineer will initiate consultation with the USFWS or NMFS, as appropriate, if he or she determines that the proposed activity may affect any threatened and endangered species or critical habitat. Consultation may occur during the NWP authorization process or the district engineer may exercise discretionary authority to require an individual permit for the proposed activity and initiate section 7 consultation during the individual permit process. If ESA Section 7 consultation is conducted during the NWP authorization process without the district engineer exercising discretionary authority, then the applicant will be notified that he or she cannot proceed with the proposed NWP activity until section 7 consultation is completed.

If the district engineer determines that the proposed NWP activity will have no effect on any threatened or endangered species or critical habitat, then the district engineer will notify the applicant that he or she may proceed under the NWP authorization as long as the activity complies with all other applicable terms and conditions of the NWP, including applicable regional conditions. When the Corps makes a “no effect” determination, that determination

is documented in the record for the NWP verification.

In cases where the Corps makes a “may affect” determination, formal or informal Section 7 consultation is conducted before the activity is authorized by NWP. A non-federal permit applicant cannot begin work until notified by the Corps that the proposed NWP activity will have “no effect” on listed species or critical habitat, or until ESA Section 7 consultation has been completed (see also 33 CFR 330.4(f)). Federal permittees are responsible for complying with ESA section 7(a)(2) and should follow their own procedures for complying with those requirements (see 33 CFR 330.4(f)(1)). Therefore, permittees cannot rely on complying with the terms of an NWP without considering ESA-listed species and critical habitat, and they must comply with the NWP conditions to ensure that they do not violate the ESA. General condition 18 also states that district engineers may add activity-specific conditions to the NWPs to address ESA issues as a result of formal or informal consultation with the USFWS or NMFS.

Each year, the Corps conducts thousands of ESA section 7 consultations with the FWS and NMFS for activities authorized by NWPs. These section 7 consultations are tracked in ORM2. During the period of March 19, 2012, to September 30, 2016, Corps districts conducted 1,402 formal consultations and 9,302 informal consultations for NWP activities under ESA section 7. During that time period, the Corps also used regional programmatic consultations for 9,829 NWP verifications to comply with ESA section 7. Therefore, each year NWP activities are covered by an average of more than 4,500 formal, informal, and programmatic ESA section 7 consultations with the FWS and/or NMFS. In a study on ESA section 7 consultations tracked by the USFWS, Malcom and Li (2015) found that during the period of 2008 to 2015, the Corps conducted the most formal and informal section 7 consultations, far exceeding the numbers of section 7 consultations conducted by other federal agencies.

Section 7 consultations are often conducted on a case-by-case basis for activities proposed to be authorized by NWP that may affect listed species or critical habitat, in accordance with the USFWS’s and NMFS’s interagency regulations at 50 CFR part 402. Instead of activity-specific section 7 consultations, compliance with ESA may also be achieved through formal or informal regional programmatic consultations. Compliance with ESA Section 7 may also be facilitated through the adoption of NWP regional conditions. In some Corps districts SLOPES have been developed through consultation with the appropriate regional offices of the USFWS and NMFS to make the process of complying with section 7 more efficient.

Corps districts have, in most cases, established informal or formal procedures with local offices of the USFWS and NMFS, through which the agencies share information regarding threatened and endangered species and their critical habitat. This information helps district engineers determine if a proposed NWP activity may affect listed species or their critical habitat and, when a “may effect” determination is made, initiate ESA section 7 consultation. Corps districts may utilize maps or databases that identify locations of populations of threatened and endangered species and their critical habitat. Where necessary, regional conditions are added to one or more NWPs to require pre-construction notification for NWP activities that occur in known locations of threatened and endangered species or critical

habitat. For activities that require agency coordination during the pre-construction notification process, the USFWS and NMFS will review the proposed activities for potential impacts to threatened and endangered species and their critical habitat. Any information provided by local maps and databases and any comments received during the pre-construction notification review process will be used by the district engineer to make a “no effect” or “may affect” determination for the pre-construction notification.

Based on the safeguards discussed in this section, especially general condition 18 and the NWP regulations at 33 CFR 330.4(f), the Corps has determined that the activities authorized by this NWP will not jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of designated critical habitat. Although the Corps continues to believe that these procedures ensure compliance with the ESA, the Corps has taken some steps to provide further assurance. Corps district offices meet with local representatives of the USFWS and NMFS to establish or modify existing procedures such as regional conditions, where necessary, to ensure that the Corps has the latest information regarding the existence and location of any threatened or endangered species or their critical habitat. Corps districts can also establish, through local procedures or other means, additional safeguards that ensure compliance with the ESA. Through ESA Section 7 formal or informal consultations, or through other coordination with the USFWS and NMFS, the Corps establishes procedures to ensure that the NWP is not likely to jeopardize any threatened and endangered species or result in the destruction or adverse modification of designated critical habitat. Such procedures may result in the development of regional conditions added to the NWP by the division engineer, or in conditions to be added to a specific NWP authorization by the district engineer.

If informal section 7 consultation is conducted, and the USFWS and/or NMFS issues a written concurrence that the proposed activity may affect, but is not likely to adversely affect, listed species or designated critical habitat, the district engineer will add conditions (e.g., minimization measures) to the NWP authorization that are necessary to avoid the likelihood of adverse effects to listed species or designated critical habitat. If the USFWS and/or NMFS does not issue a written concurrence that the proposed NWP activity “may affect, but is not likely to adversely affect” listed species or critical habitat, the Corps will initiate formal section 7 consultation if it changes its determination to “may affect, likely to adversely affect.”

If formal section 7 consultation is conducted and a biological opinion is issued, the district engineer will add a condition to the NWP authorization to incorporate the appropriate elements of the incidental take statement of the biological opinion into the NWP authorization, if the biological opinion concludes that the activity is not likely to jeopardize the continued existence of listed species or adversely modify or destroy critical habitat. If the biological opinion concludes that the proposed activity is likely to jeopardize the continued existence of listed species or adversely modify or destroy critical habitat, the proposed activity cannot be authorized by NWP and the district engineer will instruct the applicant to apply for an individual permit. The incidental take statement includes reasonable and prudent measures such as mitigation, monitoring, and reporting requirements that minimize incidental take. The appropriate elements of the incidental take statement are

dependent on those activities in the biological opinion over which the Corps has control and responsibility (i.e., the discharges of dredged or fill material into waters of the United States and/or structures or work in navigable waters and their direct and indirect effects on listed species or critical habitat). The appropriate elements of the incidental take statement are those reasonable and prudent measures that the Corps has the authority to enforce under its permitting authorities. Incorporation of the appropriate elements of the incidental take statement into the NWP authorization by a binding, enforceable permit condition provides an exemption from the take prohibitions in ESA Section 9 (see Section 7(o)(2) of the ESA).

The Corps can modify this NWP at any time that it is deemed necessary to protect listed species or their critical habitat, either through: 1) national general conditions or national-level modifications, suspensions, or revocations of the NWPs; 2) regional conditions or regional modifications, suspensions, or revocations of NWPs; or 3) activity-specific permit conditions (modifications) or activity-specific suspensions or revocations of NWP authorizations. Therefore, although the Corps has issued the NWPs, the Corps can address any ESA issue, if one should arise. The NWP regulations also allow the Corps to suspend the use of some or all of the NWPs immediately, if necessary, while considering the need for permit conditions, modifications, or revocations. These procedures are provided at 33 CFR 330.5.

7.0 Clean Water Act Section 404(b)(1) Guidelines Analysis

The 404(b)(1) Guidelines compliance criteria for general permits are provided at 40 CFR 230.7. This 404(b)(1) Guidelines compliance analysis includes analyses of the direct, secondary, and cumulative effects on the aquatic environment caused by discharges of dredged or fill material authorized by this NWP.

7.1 Evaluation Process (40 CFR 230.7(b))

7.1.1 Alternatives (40 CFR 230.10(a))

General condition 23 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. The consideration of off-site alternatives is not directly applicable to general permits (see 40 CFR 230.7(b)(1)).

7.1.2 Prohibitions (40 CFR 230.10(b))

This NWP authorizes discharges of dredged or fill material into waters of the United States, which require water quality certification. Water quality certification requirements will be met in accordance with the procedures at 33 CFR 330.4(c).

No toxic discharges will be authorized by this NWP. General condition 6 states that the material must be free from toxic pollutants in toxic amounts.

This NWP does not authorize activities that jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of critical habitat. Reviews of pre-construction notifications, regional conditions, and local operating procedures for endangered species will ensure compliance with the Endangered Species Act. Refer to general condition 18 and to 33 CFR 330.4(f) for information and procedures.

This NWP will not authorize the violation of any requirement to protect any marine sanctuary. Refer to section 7.2.3(j)(1) of this document for further information.

7.1.3 Findings of Significant Degradation (40 CFR 230.10(c))

Potential impact analysis (Subparts C through F): The potential impact analysis specified in Subparts C through F is discussed in section 7.2.3 of this document. Mitigation required by the district engineer will ensure that the adverse effects on the aquatic environment are no more than minimal.

Evaluation and testing (Subpart G): Because the terms and conditions of the NWP specify the types of discharges that are authorized, as well as those that are prohibited, individual evaluation and testing for the presence of contaminants will normally not be required. If a situation warrants, provisions of the NWP allow division or district engineers to further specify authorized or prohibited discharges and/or require testing. General condition 6 requires that materials used for construction be free from toxic pollutants in toxic amounts.

Based upon Subparts B and G, after consideration of Subparts C through F, the discharges authorized by this NWP will not cause or contribute to significant degradation of waters of the United States.

7.1.4 Factual determinations (40 CFR 230.11)

The factual determinations required in 40 CFR 230.11 are discussed in section 7.2.3 of this document.

7.1.5 Appropriate and practicable steps to minimize potential adverse impacts (40 CFR 230.10(d))

As demonstrated by the information in this document, as well as the terms, conditions, and provisions of this NWP, actions to minimize adverse effects (Subpart H) have been thoroughly considered and incorporated into the NWP. General condition 23 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. Compensatory mitigation may be required by the district engineer to ensure that the net adverse effects on the aquatic environment are no more than minimal.

7.2 Evaluation Process (40 CFR 230.7(b))

7.2.1 Description of permitted activities (40 CFR 230.7(b)(2))

As indicated by the text of this NWP in section 1.0 of this document, and the discussion of potential impacts in section 4.0, the activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization under a single general permit. Specifically, the purpose of the NWP is to authorize discharges of dredged or fill material into waters of the United States for the construction, maintenance, repair, or removal of utility lines and associated facilities. The nature and scope of the impacts are controlled by the terms and conditions of the NWP.

The activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization by a general permit. The terms of the NWP authorize a specific category of activity (i.e., discharges of dredged or fill material for the construction, maintenance, repair, or removal of utility lines and associated facilities) in a specific category of waters (i.e., waters of the United States). The terms of the NWP do not authorize the construction of utility line substations in tidal waters or in non-tidal wetlands adjacent to tidal waters. The restrictions imposed by the terms and conditions of this NWP will result in the authorization of activities that have similar impacts on the aquatic environment, namely the replacement of aquatic habitats, such as certain categories of non-tidal wetlands, with utility line facilities. Most of the impacts relating to the construction, maintenance, repair, or removal of utility lines will be temporary.

If a situation arises in which the activity requires further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

7.2.2 Cumulative effects (40 CFR 230.7(b)(3))

The 404(b)(1) Guidelines at 40 CFR 230.11(a) define cumulative effects as “...the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material.” For the issuance of general permits, such as this NWP, the 404(b)(1) Guidelines require the permitting authority to “set forth in writing an evaluation of the potential individual and cumulative impacts of the categories of activities to be regulated under the general permit.” [40 CFR 230.7(b)] More specifically, the 404(b)(1) Guidelines cumulative effects assessment for the issuance or reissuance of a general permit is to include an evaluation of “the number of individual discharge activities likely to be regulated under a general permit until its expiration, including repetitions of individual discharge activities at a single location.” [40 CFR 230.7(b)(3)] If a situation arises in which cumulative effects are likely to be more than minimal and the proposed activity requires further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

Based on reported use of this NWP during the period of March 19, 2012, to March 12, 2015,

the Corps estimates that this NWP will be used approximately 11,500 times per year on a national basis, resulting in impacts to approximately 1,700 acres of waters of the United States, including jurisdictional wetlands. The reported use includes pre-construction notifications submitted to Corps districts, as required by the terms and conditions of the NWP as well as regional conditions imposed by division engineers. The reported use also includes voluntary notifications to submitted to Corps districts where the applicants request written verification in cases when pre-construction notification is not required. The reported use does not include activities that do not require pre-construction notification and were not voluntarily reported to Corps districts. The Corps estimates that 2,500 NWP 12 activities will occur each year that do not require pre-construction notification, and that these activities will impact 50 acres of jurisdictional waters each year.

Based on reported use of this NWP during that time period, the Corps estimates that 9 percent of the NWP 12 verifications will require compensatory mitigation to offset the authorized impacts to waters of the United States and ensure that the authorized activities result in only minimal adverse effects on the aquatic environment. The verified activities that do not require compensatory mitigation will have been determined by Corps district engineers to result in no more than minimal individual and cumulative adverse effects on the aquatic environment without compensatory mitigation. During 2017-2022, the Corps expects little change to the percentage of NWP 12 verifications requiring compensatory mitigation, because there have been no substantial changes in the mitigation general condition or the NWP regulations for determining when compensatory mitigation is to be required for NWP activities. The Corps estimates that approximately 300 acres of compensatory mitigation will be required each year to offset authorized impacts. The demand for these types of activities could increase or decrease over the five-year duration of this NWP.

Based on these annual estimates, the Corps estimates that approximately 69,700 activities could be authorized over a five-year period until this NWP expires, resulting in impacts to approximately 8,900 acres of waters of the United States, including jurisdictional wetlands. Approximately 1,500 acres of compensatory mitigation would be required to offset those impacts. Compensatory mitigation is the restoration (re-establishment or rehabilitation), establishment, 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. [33 CFR 332.2]

Wetland restoration, enhancement, and establishment projects can provide wetland functions, as long as the wetland compensatory mitigation project is placed in an appropriate landscape position, has appropriate hydrology for the desired wetland type, and the watershed condition will support the desired wetland type (NRC 2001). Site selection is critical to find a site with appropriate hydrologic conditions and soils to support a replacement wetland that will provide the desired wetland functions and services (Mitsch and Gosselink 2015). The ecological performance of wetland restoration, enhancement, and establishment is dependent on practitioner's understanding of wetland functions, allowing sufficient time for wetland functions to develop, and allowing natural processes of ecosystem development (self-design or self-organization) to take place, instead of over-

designing and over-engineering the replacement wetland (Mitsch and Gosselink (2015). Most studies of the ecological performance of compensatory mitigation projects have focused solely on the ecological attributes of the compensatory mitigation projects, and few studies have also evaluated the aquatic resources impacted by permitted activities (Kettlewell et al. 2008), so it is difficult to assess whether compensatory mitigation has fully or partially offset the lost functions provided by the aquatic resources that are impacted by permitted activities. In its review, the NRC (2001) concluded that some wetland types can be restored or established (e.g., non-tidal emergent wetlands, some forested and scrub-shrub wetlands, sea grasses, and coastal marshes), while other wetland types (e.g., vernal pools, bogs, and fens) are difficult to restore and should be avoided where possible. Restored riverine and tidal wetlands achieved wetland structure and function more rapidly than depressional wetlands (Moreno-Mateos et al. 2012). Because of its greater potential to provide wetland functions, restoration is the preferred compensatory mitigation mechanism (33 CFR 332.3(a)(2)). Bogs, fens, and springs are considered to be difficult-to-replace resources and compensatory mitigation should be provided through in-kind rehabilitation, enhancement, or preservation of these wetlands types (33 CFR 332.3(e)(3)).

In its review of outcomes of wetland compensatory mitigation activities, the NRC (2001) stated that wetland functions can be replaced by wetland restoration and establishment activities. They discussed five categories of wetland functions: hydrology, water quality, maintenance of plant communities, maintenance of animal communities, and soil functions. Wetland functions develop at different rates in wetland restoration and establishment projects (NRC 2001). It is difficult to restore or establish natural wetland hydrology, and water quality functions are likely to be different than the functions provided at wetland impact sites (NRC 2001). Reestablishing or establishing the desired plant community may be difficult because of invasive species colonizing the mitigation project site (NRC 2001). The committee also found that establishing and maintaining animal communities depends on the surrounding landscape. Soil functions can take a substantial amount of time to develop, because they are dependent on soil organic matter and other soil properties (NRC 2001). The NRC (2001) concluded that the ecological performance in replacing wetland functions depends on the particular function of interest, the restoration or establishment techniques used, and the extent of degradation of the compensatory mitigation project site and its watershed.

The ecological performance of wetland restoration and enhancement activities is affected by the amount of changes to hydrology and inputs of pollutants, nutrients, and sediments within the watershed or contributing drainage area (Wright et al. 2006). Wetland restoration is becoming more effective at replacing or improving wetland functions, especially in cases where monitoring and adaptive management are used to correct deficiencies in these efforts (Zedler and Kercher 2005). Wetland functions take time to develop after the restoration or enhancement activity takes place (Mitsch and Gosselink 2015, Gebo and Brooks 2012), and different functions develop at different rates (Moreno-Mateos 2012). Irreversible changes to landscapes, especially those that affect hydrology within contributing drainage areas or watersheds, cause wetland degradation and impede the ecological performance of wetland restoration efforts (Zedler and Kercher 2005). Gebo and Brooks (2012) evaluated wetland compensatory mitigation projects in Pennsylvania and compared them to reference standards

(i.e., the highest functioning wetlands in the study area) and natural reference wetlands that showed the range of variation due to human disturbances. They concluded that most of the wetland mitigation sites were functioning at levels within with the range of functionality of the reference wetlands in the region, and therefore were functioning at levels similar to some naturally occurring wetlands. The ecological performance of mitigation wetlands is affected by on the landscape context (e.g., urbanization) of the replacement wetland and varies with wetland type (e.g., riverine or depressional) (Gebo and Brooks 2012). Moreno-Mateos and others (2012) conducted a meta-analysis of wetland restoration studies and concluded that while wetland structure and function can be restored to a large degree, the ecological performance of wetland restoration projects is dependent on wetland size and local environmental setting. They found that wetland restoration projects that are larger in size and in less disturbed landscape settings achieve structure and function more quickly.

Streams are difficult-to-replace resources and compensatory mitigation should be provided through stream rehabilitation, enhancement, and preservation since those techniques are most likely to be ecologically successful (see 33 CFR 332.3(e)(3)). Stream rehabilitation is usually the most effective compensatory mitigation mechanism since restoring a stream to a historic state is not possible because of changes in land use and other activities in a watershed (Roni et al. 2008). Stream rehabilitation and enhancement projects, including the restoration and preservation of riparian areas, provide riverine functions (e.g., Allan and Castillo (2007) for rivers and streams, NRC (2002) for riparian areas). Improvements in ecological performance of stream restoration projects is dependent on the restoration method and how outcomes are assessed (Palmer et al. 2014). Non-structural and structural techniques can be used to rehabilitate and enhance streams, and restore riparian areas (NRC 1992). Non-structural practices include removing disturbances to allow recovery of stream and riparian area structure and function, reducing or eliminating activities that have altered stream flows to restore natural flows, preserving or restoring floodplains, and restoring and protecting riparian areas, including fencing those areas to exclude livestock and people (NRC 1992). Structural rehabilitation and enhancement techniques include dam removal, as well as channel, bank, and/or riparian area modifications to improve river and stream habitat (NRC 1992).

The restoration and enhancement of river and stream functions and services can be improved through a variety of techniques and in many cases combinations of these techniques are used (Roni et al. 2013). Examples of stream restoration and enhancement techniques include: dam removal and modification, culvert replacement or modification, fish passage structures when connectivity cannot be restored or improved by dam removal or culvert replacement, levee removal or setbacks, reconnecting floodplains and other riparian habitats, road removal, road modifications, reducing sediment and pollution inputs to streams, replacing impervious surfaces with pervious surfaces, restoring adequate in-stream or base flows, restoring riparian areas, fencing streams and their riparian areas to exclude livestock, improving in-stream habitat, recreating meanders, and replacing hard bank stabilization structures with bioengineering bank stabilization measures (Roni et al. 2013). Road improvements, riparian rehabilitation, reconnecting floodplains to their rivers, and installing in-stream habitat structures have had varying degrees of ecological performance in stream rehabilitation activities (Roni et al. 2008). The ecological performance of these stream

rehabilitation activities is strongly dependent on addressing impaired water quality and insufficient water quantity, since those factors usually limit the biological response to stream rehabilitation efforts (Roni et al. 2008). Ecologically successful stream rehabilitation and enhancement activities depend on addressing the factors that most strongly affect stream functions, especially water quality, water flow, and riparian quality, and not focusing solely on rehabilitating or enhancing the physical habitat of streams (Palmer et al. 2010). The ability to restore the ecological functions of streams is dependent on the condition of the watershed draining to the stream being restored because human land uses and other activities in the watershed affect how that stream functions (Palmer et al. 2014). Stream restoration projects should focus on restoring ecological processes, through activities such as dam removal, watershed best management practices, improving the riparian zone, and reforestation, instead of focusing on the manipulation the structure of the stream channel (Palmer et al. 2014).

For compensatory mitigation projects, restoration is the preferred mechanism (see 33 CFR 332.3(a)(2)). In an analysis of 89 ecosystem restoration projects, Rey Banayas et al. (2009) concluded that restoration activities can increase biodiversity and the level of ecosystem services provided. However, such increases do not approach the amounts of biodiversity and ecosystem services performed by undisturbed reference sites. The ability to restore ecosystems to provide levels of functions and services similar to historic conditions or reference standard conditions is influenced by human impacts to watersheds and other types of landscapes (e.g., urbanization, agriculture) and to the processes that sustain those ecosystems (Zedler et al. 2012, Hobbs et al. 2014). Those changes need to be taken into account when establishing goals and objectives for restoration projects (Zedler et al. 2012), including compensatory mitigation projects. The ability to reverse ecosystem degradation to restore ecological functions and services is dependent on the degree of degradation of that ecosystem and the surrounding landscape, and whether that degradation is reversible (Hobbs et al. 2014).

As discussed in section 3.0, the status of waters and wetlands in the United States as reported under the provisions of Sections 303(d) and 305(b) of the Clean Water Act exhibits considerable variation, ranging from good to threatened to impaired. One of the criteria that district engineers consider when they evaluate proposed NWP activities is the “degree or magnitude to which the aquatic resources perform these functions” (see paragraph 1 of Section D, “District Engineer’s Decision.” The quality of the affected waters is considered by district engineers when making decisions on whether to require compensatory mitigation for proposed NWP activities to ensure no more than minimal adverse environmental effects (see 33 CFR 330.1(e)(3)), and amount of compensatory mitigation required (see 33 CFR 332.3(f)). The quality of the affected waters also factors into the determination of whether the required compensatory mitigation offsets the losses of aquatic functions caused by the NWP activity.

The compensatory mitigation required by district engineers in accordance with general condition 23 and activity-specific conditions will provide aquatic resource functions and services to offset some or all of the losses of aquatic resource functions caused by the activities authorized by this NWP, and reduce the contribution of those activities to the

cumulative effects on the Nation's wetlands, streams, and other aquatic resources. The required compensatory mitigation must be conducted in accordance with the applicable provisions of 33 CFR part 332, which requires development and implementation of approved mitigation plans, as well as monitoring to assess ecological success in accordance with ecological performance standards established for the compensatory mitigation project. The district engineer will evaluate monitoring reports to determine if the compensatory mitigation project has fulfilled its objectives and is ecological successful. [33 CFR 332.6] If the monitoring efforts indicate that the compensatory mitigation project is failing to meet its objectives, the district engineer may require additional measures, such as adaptive management or alternative compensatory mitigation, to address the compensatory mitigation project's deficiencies. [33 CFR 332.7(c)]

According to Dahl (2011), during the period of 2004 to 2009 approximately 489,620 acres of former upland were converted to wetlands as a result of wetland reestablishment and establishment activities. Efforts to reestablish or establish wetlands have increased wetland acreage in the United States.

The individual and cumulative adverse effects on the aquatic environment resulting from the activities authorized by this NWP will be no more than minimal. The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design their projects within the scope of the NWP, including its limits, rather than request individual permits for projects that could result in greater adverse impacts to the aquatic environment. Division and district engineers will restrict or prohibit this NWP on a regional or case-specific basis if they determine that these activities will result in more than minimal individual and cumulative adverse effects on the aquatic environment.

7.2.3 Section 404(b)(1) Guidelines Impact Analysis, Subparts C through F

(a) Substrate: Discharges of dredged or fill material into waters of the United States will alter the substrate of those waters, usually replacing the aquatic area with dry land, and changing the physical, chemical, and biological characteristics of the substrate. The original substrate will be removed or covered by other material, such as concrete, asphalt, soil, gravel, etc. Temporary fills may be placed upon the substrate, but must be removed upon completion of the activity (see general condition 13). Higher rates of erosion may result during construction, but general condition 12 requires the use of appropriate measures to control soil erosion and sediment.

(b) Suspended particulates/turbidity: Depending on the method of construction, soil erosion and sediment control measures, equipment, composition of the bottom substrate, and wind and current conditions during construction, fill material placed in open waters will temporarily increase water turbidity. Pre-construction notification is required for certain activities authorized by this NWP, which allows the district engineer to review those activities and ensure that the individual and cumulative adverse effects on the aquatic environment are no more than minimal. Particulates will be resuspended in the water column during removal of temporary fills. The turbidity plume will normally be limited to the immediate vicinity of the disturbance and should dissipate shortly after each phase of the

construction activity. General condition 12 requires the permittee to stabilize exposed soils and other fills, which will reduce turbidity. In many localities, sediment and erosion control plans are required to minimize the entry of soil into the aquatic environment. NWP activities cannot create turbidity plumes that smother important spawning areas downstream (see general condition 3).

(c) Water: Utility line activities can affect some characteristics of water, such as water clarity, chemical content, dissolved gas concentrations, pH, and temperature. The construction of utility lines, and utility line substations can change the chemical and physical characteristics of the waterbody by introducing suspended or dissolved chemical compounds or sediments into the water. Changes in water quality can affect the species and quantities of organisms inhabiting the aquatic area. Water quality certification is required for most activities authorized by this NWP, which will ensure that the activity does not violate applicable water quality standards. Permittees may be required to implement water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. Stormwater management facilities may be required to prevent or reduce the input of harmful chemical compounds into the waterbody. The district engineer may require the establishment and maintenance of riparian areas next to open waters, such as streams. Riparian areas help improve or maintain water quality, by removing nutrients, moderating water temperature changes, and trapping sediments.

(d) Current patterns and water circulation: Activities authorized by this NWP may adversely affect the movement of water in the aquatic environment. Certain utility line activities authorized by this NWP require pre-construction notification to the district engineer, to ensure that adverse effects to current patterns and water circulation are no more than minimal. General condition 9 requires the authorized activity to be designed to withstand expected high flows and to maintain the course, condition, capacity, and location of open waters to the maximum extent practicable. General condition 10 requires activities to comply with applicable FEMA-approved state or local floodplain management requirements, which will reduce adverse effects to surface water flows.

(e) Normal water level fluctuations: The activities authorized by this NWP will have negligible adverse effects on normal patterns of water level fluctuations due to tides and flooding. Most utility lines will have little effect on normal water level fluctuations because they occupy a small proportion of the land surface or are installed under the surface of the substrate. General condition 9 requires the permittee to maintain the pre-construction course, condition, capacity, and location of open waters, to the maximum extent practicable. To ensure that the NWP does not authorize activities that adversely affect normal flooding patterns, general condition 10 requires NWP activities to comply with applicable FEMA-approved state or local floodplain management requirements.

(f) Salinity gradients: The activities authorized by this NWP are unlikely to adversely affect salinity gradients, unless the utility line activity is associated with an outfall structure that will release freshwater into marine or estuarine waters, thereby reducing the salinity of those waters in the vicinity of the outfall structure. These adverse effects will be minimal.

(g) Threatened and endangered species: T The NWP's do not authorize activities that will jeopardize the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973, as amended. In addition, the NWP's do not authorize activities that will destroy or adversely modify critical habitat of those species. See 33 CFR 330.4(f) and paragraph (a) of general condition 18. For NWP activities, compliance with the Endangered Species Act is discussed in more detail in section 6.0 of this document.

(h) Fish, crustaceans, molluscs, and other aquatic organisms in the food web. Certain activities authorized by this NWP require pre-construction notification to the district engineer, which will allow review of those projects to ensure that adverse effects to fish and other aquatic organisms in the food web are no more than minimal. Fish and other motile animals will avoid the project site during construction. Sessile or slow-moving animals in the path of discharges, equipment, and building materials will be destroyed. Some aquatic animals may be smothered by the placement of fill material. Motile animals will return to those areas that are temporarily impacted by the activity and restored or allowed to revert back to preconstruction conditions. Aquatic animals will not return to sites of permanent fills. Benthic and sessile animals are expected to recolonize sites temporarily impacted by the activity, after those areas are restored. Activities that alter the riparian zone, especially floodplains, may adversely affect populations of fish and other aquatic animals, by altering stream flow, flooding patterns, and surface and groundwater hydrology.

Division and district engineers can place conditions on this NWP to prohibit discharges during important stages of the life cycles of certain aquatic organisms. Such time of year restrictions can prevent adverse effects to these aquatic organisms during reproduction and development periods. General conditions 3 and 5 address protection of spawning areas and shellfish beds, respectively. General condition 3 states that activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. In addition, general condition 3 also prohibits activities that result in the physical destruction of important spawning areas. General condition 5 prohibits activities in areas of concentrated shellfish populations. General condition 9 requires the maintenance of pre-construction course, condition, capacity, and location of open waters to the maximum extent practicable, which will help minimize adverse impacts to fish, shellfish, and other aquatic organisms in the food web.

(i) Other wildlife: Activities authorized by this NWP will result in adverse effects to other wildlife associated with aquatic ecosystems, such as resident and transient mammals, birds, reptiles, and amphibians, through the destruction of aquatic habitat, including breeding and nesting areas, escape cover, travel corridors, and preferred food sources. This NWP does not authorize activities that jeopardize the continued existence of Federally-listed endangered and threatened species or result in the destruction or adverse modification of critical habitat. Compensatory mitigation, including the establishment and maintenance of riparian areas next to open waters, may be required for activities authorized by this NWP, which will help offset losses of aquatic habitat for wildlife. General condition 4 states that activities in breeding areas for migratory birds must be avoided to the maximum extent practicable.

(j) Special aquatic sites: The potential impacts to specific special aquatic sites are discussed

below:

(1) Sanctuaries and refuges: The activities authorized by this NWP will have no more than minimal adverse effects on waters of the United States within sanctuaries or refuges designated by Federal or state laws or local ordinances. General condition 22 prohibits the use of this NWP to discharge dredged or fill material in NOAA-managed marine sanctuaries and marine monuments and National Estuarine Research Reserves. District engineers will exercise discretionary authority and require individual permits for specific projects in waters of the United States in sanctuaries and refuges if those activities will result in more than minimal adverse effects on the aquatic environment.

(2) Wetlands: The activities authorized by this NWP will have only minimal adverse effects on wetlands. District engineers will review pre-construction notifications for certain activities authorized by this NWP to ensure that the adverse effects on the aquatic environment are no more than minimal. For some NWP 12 activities, there will be losses of wetlands in cases where the authorized activity involves permanent fills in jurisdictional wetlands to convert those areas to dry land. There may also be permanent conversions of wetlands from forested to scrub-shrub or emergent wetlands in the utility line right-of-way. Division engineers can regionally condition this NWP to restrict or prohibit its use in certain high value wetlands. See paragraph (e) of section 5.1 for a more detailed discussion of impacts to wetlands.

(3) Mud flats: The activities authorized by this NWP will have minor adverse effects on mud flats. Small portions of mud flats may be destroyed by the installation of utility lines, but these adverse effects will be no more than minimal. Pre-construction notification is required for certain activities authorized by this NWP and the pre-construction notification must include a delineation of special aquatic sites, including mud flats.

(4) Vegetated shallows: The activities authorized by this NWP will have only minimal adverse effects on vegetated shallows in tidal waters, since only utility lines and foundations for overhead utility line towers, poles, and anchors can be constructed in tidal waters that may be inhabited by submerged aquatic vegetation. District engineers will receive pre-construction notifications for all utility line activities in section 10 waters to determine if those activities will result in only minimal adverse effects on the aquatic environment. Division engineers can regionally condition this NWP to restrict or prohibit its use in non-tidal vegetated shallows. For those NWP activities that require pre-construction notification, the district engineer will review the proposed activity and may exercise discretionary authority to require the project proponent to obtain an individual permit if the activity will result in more than minimal adverse effects on the aquatic environment.

(5) Coral reefs: The activities authorized by this NWP may affect coral reefs. The activities authorized by this NWP will have no more than minimal adverse effects on coral reefs. Pre-construction notification is required for all section 10 activities authorized by this NWP, so that the district engineer can review each proposed activity and ensure that it results in minimal adverse environmental effects. If the proposed activity will result in more

than minimal adverse effects on the aquatic environment, the district engineer will exercise discretionary authority to require the project proponent to obtain an individual permit.

(6) Riffle and pool complexes: The activities authorized by this NWP will have no more than minimal adverse effects on riffle and pool complexes. Division engineers can regionally condition this NWP to restrict or prohibit its use in riffle and pool complexes. Pre-construction notification is required for certain utility line activities authorized by this NWP, which will allow district engineers to review those proposed activities, and if he or she determines the adverse environmental effects are more than minimal, exercise discretionary authority to require the project proponent to obtain an individual permit.

(k) Municipal and private water supplies: See paragraph (n) of section 5.1 for a discussion of potential impacts to water supplies.

(l) Recreational and commercial fisheries, including essential fish habitat: The activities authorized by this NWP may adversely affect waters of the United States that act as habitat for populations of economically important fish and shellfish species. Division and district engineers can condition this NWP to prohibit discharges during important life cycle stages, such as spawning or development periods, of economically valuable fish and shellfish. All utility lines requiring section 10 authorization require submission of pre-construction notifications to the district engineer, which will allow review of each activity in navigable waters to ensure that adverse effects to economically important fish and shellfish are no more than minimal. Compliance with general conditions 3 and 5 will ensure that the authorized activity does not adversely affect important spawning areas or concentrated shellfish populations. As discussed in paragraph (g) of section 5.1, there are procedures to help ensure that individual and cumulative impacts to essential fish habitat are no more than minimal. For example, division and district engineers can impose regional and special conditions to ensure that activities authorized by this NWP will result in only minimal adverse effects on essential fish habitat.

(m) Water-related recreation: See paragraph (m) of section 5.1 above.

(n) Aesthetics: See paragraph (c) of section 5.1 above.

(o) Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar areas: General condition 22 prohibits the use of this NWP to authorize discharges of dredged or fill material in designated critical resource waters and adjacent wetlands, which may be located in parks, national and historical monuments, national seashores, wilderness areas, and research sites. This NWP can be used to authorize activities in parks, national and historical monuments, national seashores, wilderness areas, and research sites if the manager or caretaker wants to conduct activities in waters of the United States and those activities result in no more than minimal adverse effects on the aquatic environment. Division engineers can regionally condition the NWP to prohibit its use in designated areas, such as national wildlife refuges or wilderness areas.

8.0 Determinations

8.1 Finding of No Significant Impact

Based on the information in this document, the Corps has determined that the issuance of this NWP will not have a significant impact on the quality of the human environment. Therefore, the preparation of an Environmental Impact Statement is not required.

8.2 Public Interest Determination

In accordance with the requirements of 33 CFR 320.4, the Corps has determined, based on the information in this document, that the issuance of this NWP is not contrary to the public interest.

8.3 Section 404(b)(1) Guidelines Compliance

This NWP has been evaluated for compliance with the 404(b)(1) Guidelines, including Subparts C through G. Based on the information in this document, the Corps has determined that the discharges authorized by this NWP comply with the 404(b)(1) Guidelines, with the inclusion of appropriate and practicable conditions, including mitigation, necessary to minimize adverse effects on affected aquatic ecosystems. The activities authorized by this NWP will result in no more than minimal individual and cumulative adverse effects on the aquatic environment.

8.4 Section 176(c) of the Clean Air Act General Conformity Rule Review

This NWP has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities authorized by this permit will not exceed *de minimis* levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR 93.153. Any later indirect emissions are generally not within the Corps continuing program responsibility and generally cannot

be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this NWP.

FOR THE COMMANDER

Dated: 21 Dec 2016

A handwritten signature in black ink, consisting of a large, stylized 'D' followed by several vertical strokes and a horizontal line at the end.

Donald E. Jackson
Major General, U.S. Army
Deputy Commanding General
for Civil and Emergency Operations

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PUBLIC NOTICE

State Water Quality Certification, as required by Section 401 of the Clean Water Act (CWA), is being revised by 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 CERTIFICATION: 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. Rules regarding West Virginia's 401 Water Quality Certification are contained within 47 CSR 5A.

DESCRIPTION OF THE ACTIVITY: On April 13, 2017 WVDEP issued a 401 Water Quality Certification for the U.S. Army Corps of Engineers' (USACE) Nationwide Permits (NWP), which specified certain standard and special conditions to allow the NWPs to be consistent with the State's water quality standards to authorize the discharge of dredged or fill materials into waters of the State. With this notice, WVDEP is modifying this certification and requesting public comment. The proposed modifications subject to this notice replace the proposed modifications to this certification that were previously noticed for public comment on August 9, 2018. The modifications being made are as follows: Standard Condition 22 is being added to allow the waiver of any Standard or Special Conditions of 401 Water Quality Certifications applicable to Nationwide Permits. Nationwide Permit 12 Special Condition A is being amended to reserve WVDEP's right to require an individual water quality certification for facilities or impacts applicable under Special Condition A. Nationwide Permit 12 Special Condition C is being amended to clarify that wet or open-cut stream crossing methods must be completed within 72 hours, and that stream crossings using dry ditch methods are exempt from the 72-hour requirement. Construction and access bridges and crossings on Section 10 rivers are also exempt from the 72-hour requirement. Finally, Nationwide Permit 12 Special Condition L is being amended to clarify that only permanent structures are prohibited from preventing fish movements upstream or downstream.

PROJECT LOCATION: Nationwide permits are available for use statewide.

INFORMATION AVAILABLE: To view the proposed WQC special and standard conditions, please visit:
<https://dep.wv.gov/WWE/Programs/Pages/401Certification.aspx>

COMMENTS: Any interested person may submit written comments on the Nationwide Permits WQC special and standard conditions by addressing such to Nancy Dickson of the 401 Water Quality Certification Program during the comment period, which begins with this notice and ends on March 4, 2019. Comments or requests should be emailed to: WQSComments@wv.gov or by mail addressed to:

401 Water Quality Certification Program
ATTN: Nancy Dickson
601 57th Street SE
Charleston, WV 25304-2345



CELRH – RD-E (LRH 2015-592-GBR)

MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Memorandum Documenting General Permit Verification

1.0 Introduction and overview: Information about the proposal subject to one or more of the Corps regulatory authorities is provided in Section 1, detailed evaluation of the activity is found in Sections 2 through 4 and findings are documented in Section 5 of this memorandum. Further, summary information about the activity including administrative history of actions taken during project evaluation is attached (ORM2 summary).

1.1 Applicant name:

Mr. Robert Cooper
Mountain Valley Pipeline, LLC (Applicant)
2200 Energy Drive
Canonsburg, Pennsylvania 15317

Authorized Agent:

Mr. Henry Schumacher
Tetra Tech, Inc.
661 Anderson Dr. Foster Plaza 7, Suite 200
Pittsburgh, Pennsylvania 15220

1.2 Activity location: The overall project known as the Mountain Valley Pipeline (MVP) would be approximately 303 miles in length and begin at the existing Equitrans, L.P. transmission system near the Mobley processing facility in Wetzel County, WV and end at the Transcontinental Gas Pipe Line Company, LLC's (Transco) Zone 5 Compressor Station 165 in Transco Village, Pittsylvania County, Virginia. The proposed project crosses three (3) United States Army Corps of Engineers (Corps) Regulatory District boundaries including Huntington, Pittsburgh and Norfolk Districts. Within West Virginia, approximately 197 miles of the project pipeline and 151.1¹ miles of project access roads are located within West Virginia. Approximately 164 miles of the proposed pipeline, approximately 137.5 miles of proposed access roads, and three (3) compressor stations are located within the Huntington District's area of responsibility (AOR). The remaining approximately 33 miles of proposed pipeline and 13.6 miles of proposed access roads within West Virginia are located within the Pittsburgh District AOR.

¹ The applicant has indicated that the length of access roads is subject to change based upon conditions in the field. Any change resulting in additional discharges into waters of the United States would require additional Department of the Army (DA) authorization.

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Reference **Enclosure A** – Location Map(s) of this Memorandum for Record (MFR) for additional details.

1.3 Description of activity requiring verification: The MVP would involve the construction of an approximate 303-mile 42-inch natural gas pipeline in Virginia and West Virginia and would include the use of existing access roads, the construction of new access roads, the construction of three (3) compressor stations along the route, as well as the installation of other ancillary facilities that are required for the operation of the pipeline. Within the Huntington District the applicant has requested a DA authorization for the proposed:

- Temporary discharge of dredged and/or fill material into 8,273 linear feet (0.660 acre) of ephemeral streams, 8,696 linear feet (0.992 acre) of intermittent streams, 13,553 linear feet (7.65 acres) of perennial streams, 9.110 acres of palustrine emergent (PEM) wetlands, 0.451 acre of palustrine scrub-shrub (PSS) wetlands and 1.44 acres of palustrine-forested (PFO) wetlands;
- Permanent discharge of dredged and/or fill material into 279 linear feet (0.023 acre) of ephemeral streams, 402 linear feet (0.041 acre) of intermittent streams, 335 linear feet (0.128 acre) of perennial streams, 0.514 acre of PEM wetlands, and 0.451 acre of a single PSS wetland. The applicant indicates there would be no permanent discharge of dredged and/or fill material into PFO wetlands;
- Permanent installation of pipelines under three (3) waterways, subject to regulation under Section 10 of the Rivers and Harbors Act of 1899 (Section 10, 33 USC 403) - the Elk River, the Gauley River, and the Greenbrier River - via subterranean installation methods. This proposed installation method would not result in a discharge of dredged and/or fill material into waters of the U.S. and is not subject to regulation under Section 404 of the Clean Water Act (Section 404, 33 USC 1344); and
- The use of temporary water withdrawals at four (4) locations on the Elk River, the Gauley River, and the Greenbrier River subject to the provisions of Section 10.

Proposed discharges are further described in Tables 1 and 2.

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Table 1 – Proposed Temporary Discharge of Dredged and/or Fill Material into Streams and Wetlands in association with the proposed project for each HUC 8 watershed within the Huntington District's Regulatory Boundary				
Streams				
HUC 8 Name	HUC 8 Number	Temporary Discharge of fill material into Ephemeral Stream (lf)	Temporary Discharge of fill material into Intermittent Stream (lf)	Temporary Discharge of fill material into Perennial Stream (lf)
Elk	05050007	2,730	1,382	2,364*
Gauley	05050005	1,410	2,555	4,725*
Greenbrier	05050003	1,183	419	1,302*
Little Kanawha	05030203	1,662	1,063	3,282
Lower New	05050004	252	1,308	497
Middle Ohio-North	05030201	274	1,366	516
Upper New	05050002	762	603	867
TOTAL		8,256	8,696	13,553
Wetlands				
HUC 8 Name	HUC 8 Number	Temporary Discharge of fill material into PEM Wetlands (ac)	Temporary Discharge of fill material into PSS Wetlands (ac)	Temporary Discharge of fill material into PFO Wetlands (ac)
Elk	05050007	1.6337	0.0718	0.4129
Gauley	05050005	3.7298	0.3423	0.3651
Greenbrier	05050003	0.2305	0.0000	0.2990
Little Kanawha	05030203	1.5376	0.0098	0.1370
Lower New	05050004	0.1517	0.0000	0.0000
Middle Ohio-North	05030201	0.9206	0.0000	0.0547
Upper New	05050002	0.9061	0.0270	0.1750
TOTAL		9.1100	0.4509	1.4437

*Temporary Discharges into perennial streams are indicated as proposed in the applicant's PCN; however the Corps is not considering authorization of the proposed contingency plan to dewater and construct a trench within the Elk River (184 lf), the Gauley River (314 lf), and Greenbrier River (407 lf) as indicated within this section.

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Table 2 – Proposed Permanent Discharge of Dredged and/or Fill Material into Streams and Wetlands in association with the proposed project for each HUC 8 watershed within the Huntington District's Regulatory Boundary				
Streams				
HUC 8 Name	HUC 8 Number	Permanent Discharge of fill material into Ephemeral Stream (lf)	Permanent Discharge of fill material into Intermittent Stream (lf)	Permanent Discharge of fill material into Perennial Stream (lf)
Elk	05050007	0	30	29
Gauley	05050005	62	33	20
Greenbrier	05050003	0	53	0
Little Kanawha	05030203	66	164	162
Lower New	05050004	0	64	0
Middle Ohio-North	05030201	125	58	41
Upper New	05050002	26	0	83
TOTAL		279	402	335
Wetlands				
HUC 8 Name	HUC 8 Number	Permanent Discharge of fill material into PEM Wetlands (ac)	Permanent Discharge of fill material into PSS Wetlands (ac)	Permanent Discharge of fill material into PFO Wetlands (ac)
Elk	05050007	0.1368	0.0084	0.0000
Gauley	05050005	0.1730	0.0000	0.0000
Greenbrier	05050003	0.0000	0.0000	0.0000
Little Kanawha	05030203	0.1041	0.0000	0.0000
Lower New	05050004	0.0000	0.0000	0.0000
Middle Ohio-North	05030201	0.0776	0.0000	0.0000
Upper New	05050002	0.0228	0.0000	0.0000
TOTAL		0.5143	0.0084	0.0000

As indicated on **Enclosure B – Table 3. Single and Complete Crossings** USACE Huntington District Mountain Valley Pipeline Project, there are 451 single and complete projects within the portion of the MVP within the Huntington District's regulatory boundary. All discharges of dredged and/or fill material at a specific interconnect site or compressor station are considered one (1) single and complete project. Each of the four (4) proposed temporary water withdrawal located within a Section 10 waterway is individually considered a single and complete project. For linear portions of the MVP, single and complete projects include: individual crossings of a single wetland or stream with no abutting features; multiple crossings of a stream; and/or crossings of a stream and wetland complex.

The applicant's 28 January 2020 PCN² requests a Department of the Army (DA) authorization to temporarily trench and backfill and/or to install culverts to access

² Reference to the 28 January 2020 PCN and subsequently submitted information provided by the applicant for the purposes of evaluating the PCN,

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those areas where the pipeline has been previously installed for the purposes of access and maintenance should it become apparent that pipeline maintenance is needed prior to project completion in these locations. This document will discuss those single and complete project features located within the Huntington District's AOR regardless of their construction status unless otherwise specified.

The applicant's 28 January 2020 PCN also describes a contingency plan to construct cofferdams for dewatering and to dig trenches via surface methods to install the pipeline within the Elk River, the Gauley River, and the Greenbrier River. The Huntington District is considering only the proposal to install the pipeline via subterranean construction methods at these locations. Should the applicant propose to change the proposed construction methods, as described in the aforementioned contingency plan, additional authorization would be required from the Corps. In addition, Section 7 consultation pursuant to the Endangered Species Act (ESA) would need to be reinitiated between the Federal Energy Regulatory Commission (FERC) and the United States Fish and Wildlife Service (USFWS) to reassess any effects to federally listed species or critical habitat for the construction of these three (3) river crossings in a manner not previously considered.

Compensatory mitigation for unavoidable impacts to waters of the United States were calculated using the West Virginia Stream and Wetland Valuation Metric Version 2.1 (SWVM) and has been accomplished through the purchase of 613 stream credits and 2.4173 wetland credits from the four (4) mitigation banks. Compensatory mitigation is described in Section 2.4.

Project History: On 23 October 2015, the applicant filed an application with the FERC under Section 7(c) of the Natural Gas Act and Part 157 of the FERC's regulations to construct and operate certain interstate natural gas pipeline facilities in Virginia and West Virginia. The FERC is considered the lead federal agency and is responsible for compliance with the National Environmental Policy Act (NEPA) and other applicable statutes.

On 17 February 2017, the applicant submitted a PCN for verification of the MVP under the 2017 Nationwide Permit (NWP) 12.

On 23 June 2017, the FERC issued a Final Environmental Impact Statement (FEIS) for the MVP project and the Equitrans Expansion project. The Corps participated as a cooperating agency in the development of the NEPA documents.

On 13 October 2017, the FERC issued a Certificate of Public Convenience and Necessity authorizing the entire pipeline route subject to certain conditions.

On 1 November 2017, the West Virginia Department of Environmental Protection (WVDEP) waived the requirement for the applicant to obtain an individual Water

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Quality Certification (WQC) under Section 401 of the Clean Water Act.

On 21 November 2017, the USFWS issued a Biological Opinion (BO) for the MVP.

On 18 December 2017, the FERC notified the Corps that the “FERC staff now believes that we have completed compliance with Section 7 of the ESA and Section 106 of the [National Historic Preservation Act] NHPA for the Mountain Valley Pipeline (MVP) in Docket No. CP16-10.”

On 21 December 2017, the Huntington District verified the regulated activities associated with the construction of the MVP under NWP 12.

On 4 January 2018, based on new information, the Huntington District verified the regulated activities associated with the construction of the MVP under NWP 12.

On 2 October 2018, in *Sierra Club v. US Army Corps of Engineers*, No. 18-1173 (4th Cir. 2018), the 4th Circuit Court of Appeals issued an order vacating, in its entirety, the Huntington District’s verification of MVP’s compliance with NWP 12 due to fault found with the WVDEP’s WQC waiver decision and the Corps’ reliance on WV’s decision.

On 24 April 2019, following public notice and public comment procedures, the WVDEP granted a modified Section 401 WQC for the 2017 NWPs in accordance with 40 CFR § 121.2(b). On 15 August 2019, the Region III Administrator of the United States Environmental Protection Agency (USEPA) concurred with the proposed modifications.

On 28 August 2019, the FERC requested re-initiation of Section 7 consultation. On 11 September 2019, the USFWS accepted the FERC’s request. In October 2019, the U.S. Court of Appeals for the Fourth Circuit stayed the 2017 BO pending the resolution of a legal challenge.

On 15 January 2020, after consideration of the public comments received, the Corps Great Lakes and Ohio River Division Commander accepted the WVDEP’s modified WQC for the 2017 NWPs. In accordance with the Corps’ permit conditioning policy at 33 CFR 325.4, the WVDEP’s revised WQC was incorporated as regional conditions to the 2017 NWPs in West Virginia. These modified regional conditions apply to future activities seeking to utilize a NWP 12 authorization.

On 28 January 2020, the applicant submitted a new PCN for verification under the 2017 NWP 12. The new PCN included a reduced number of single and complete projects (451 vs. 591) and an overall reduction in proposed discharges of dredged and/or fill material into waters of the United States within the Huntington District’s AOR.

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The applicant's 28 January 2020 PCN indicated some work was conducted consistent with the non-reporting requirements under NWP 3. The applicant has indicated this work primarily consisted of culvert replacements along existing roads. The applicant's use of existing access roads has reduced the overall need for additional work in waters of the United States.

The applicant's 28 January 2020 PCN also indicates other crossings were constructed by spanning areas with temporary bridges and installing sections of the pipeline via boring under streams and wetlands to avoid the discharge of dredged and/or fill material into waters of the United States. The applicant has indicated the Meadow River crossing was installed via subterranean pipeline installation methods and thus was not subject to regulation under Section 404.

On 4 September 2020, the USFWS provided the BO for the MVP (Project #05E2VA00-2016-F-0880 and #05E2WV00-2015-F-0046) to the FERC.

On 8 September 2020, the FERC indicated to the Corps that Section 7 consultation under the ESA was complete.

On 11 September 2020, on behalf of Sierra Club, the Center for Biological Diversity, West Virginia Rivers Coalition, Inc., West Virginia Highlands Conservancy, Inc., Indian Creek Watershed Association, Inc., Wild Virginia, Inc., Appalachian Voices, and the Chesapeake Climate Action Network (hereinafter, the "Environmental Groups"), the Environmental Groups provided notice, pursuant to Section 11(g) of the ESA, 16 U.S.C. § 1540(g)(2)(A)(i), that, if the Corps were to rely on the 4 September 2020 BO issued by the USFWS for the MVP to satisfy its obligations under Section 7 of the ESA, such reliance would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law and would place the Corps in violation of Section 7 of the ESA, 16 U.S.C. § 1536, and its implementing regulations. The Environmental Groups state that the 4 September 2020 BO did not address the effects of the MVP's proposed open-cut crossing of the Gauley River in West Virginia on the endangered candy darter (*Etheostoma osburni*) or its proposed critical habitat. As indicated in Section 1.3, the Huntington District is not evaluating this alternative plan for authorization under this NWP 12 verification request. Should an alternative installation method become necessary rather than using the subterranean installation methods, additional authorization would be required from the Corps. This requirement would be incorporated as a special condition (Reference Section 4.2, Special Condition 2) of a NWP 12 verification for these proposed activities. In addition, as indicated above, Section 7 consultation pursuant to the ESA would need to be re-initiated between the FERC and the USFWS to reassess any effects to federally listed species or critical habitat in a manner not previously considered. This requirement would be incorporated as a special condition (Reference Section 4.2, Special Condition 7) of a NWP 12

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verification for these proposed activities.

In the event court action is taken that may impact the verifications, the Corps will consider whether or not to suspend the NWP verifications pending resolution of those issues pursuant to 33 CFR 330.5.

1.4 Permit authority: Section 10 and Section 404

1.5 Applicable Permit: NWP 12

1.6 Activity requires written waiver? No

2.0 Evaluation of the Pre-Construction Notification

2.1 Direct and indirect effects caused by the GP activity: Approximately 164 miles of the proposed MVP, approximately 137.5 miles of proposed access roads, and three (3) compressor stations are proposed within the Huntington District's AOR. The FERC June 2017 Mountain Valley Project and Equitrans Expansion Project FEIS describes the direct and indirect effects of the proposed project on streams and wetlands located within the project area.

The proposed construction of the MVP would result in the temporary discharge of dredged and/or fill material into 30,495 linear feet (9.30 acres) of stream(s) and 11.01 acres of wetlands and the proposed permanent discharge of dredged and/or fill material into 1,016 linear feet (0.192 acre) of stream(s) and 0.498 acre of wetlands, at 451 separate and distant locations. Three (3) of these single and complete projects involve the installation of structures under Section 10 waters and four (4) of these single and complete projects involve the use of temporary water withdrawals. These activities are not subject to Section 404.

The installation of the MVP would result in the deforestation of riparian areas/wetlands, in-stream placement of de-watering structures during construction, the placement of culverts/fills for access road crossings, the temporary disturbance of riparian buffers with the creation of temporary work spaces, and the conversion of wetland habitats from PFO/PSS wetlands to PEM wetland. The construction method for the installation of culverts, cofferdams, flumes, temporary bridges, timber mats, and erosion and sediment control for access roads and pipe installation are described in the general construction plans (Reference **Enclosure C** – General Construction Plans of this MFR for additional details). Construction activities would require trench digging, dewatering, installing various types of dams, cofferdams, and temporary impoundments within the streams, and trench backfilling. These construction activities would lead to direct and indirect effects, including increased sedimentation and turbidity, and decreased dissolved oxygen concentrations during in-stream construction. The construction activities would lead

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to the modification of existing aquatic habitat within the work zone and downstream of the construction area. Effects to downstream areas would be limited by compliance with the WVDEP's National Pollutant Discharge Elimination System program and the requirements of a General 401 WQC. Best management practices (BMPs) would be implemented to control erosion and sedimentation on site and during construction. Additional information regarding direct and indirect effects can be found in Section 4.0 of the FEIS and Section 4.3 specifically discusses surface water resources and wetlands.

Within the Huntington District's AOR, the applicant plans to withdraw water from various waterways for hydrostatic testing of the newly installed pipe to verify structural integrity prior to activating the pipeline among other purposes. According to the 28 January 2020 PCN, the applicant's temporary water withdrawals would be from the Elk River, the Gauley River, and the Greenbrier River. The applicant has further clarified that water withdrawals may come from various other water sources as well.

In correspondence dated 18 March 2020, the applicant stated that temporary water intakes would be used and would not rest on the river bottom substrates. Intakes would be screened with the openings not exceeding 3/16-inch and will limit the through-screen approach velocity to 0.5 feet per second or less. Furthermore, the applicant has indicated that they would utilize the WVDEP Water Withdrawal guidance tool (WVDEP <https://dep.wv.gov/wwe/wateruse/pages/waterwithdrawal.aspx>). In the 28 January 2020 PCN, the applicant stated that "limiting the water withdrawals to 10% of the stream's instantaneous flow will help the Rivers maintain their existing physical, chemical and biological characteristics." These water intakes do not involve the discharge of dredged and/or fill material and would not be subject to regulation under Section 404; however, the temporary installation of the intakes in navigable waters of the United States would require a Section 10 authorization. The proposed water withdrawals are described in the applicant's 28 January 2020 PCN and subsequently submitted information.

The applicant's 28 January 2020 PCN describes a proposal to bore under the Elk River, the Gauley River, and the Greenbrier River utilizing subterranean installation methods. While the applicant has indicated the use of subterranean installation methods reduces the potential for bore failure and an inadvertent return, the applicant has also provided a Section 10 River inadvertent return contingency plan as required by the NWP 12 West Virginia Regional Condition (b) and WVDEP NWP 12 WQC Special Condition H. Reference **Enclosure D** – Section 10 Rivers Crossing Summary of this MFR for additional details.

The applicant's 28 January 2020 PCN (as amended) provides a discussion of compliance with NWP General Condition 7, which prohibits certain activities "in the

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proximity of a public water supply intake”. The applicant has indicated public water supply intakes have been identified within three (3) miles downstream of Corps regulated activities proposed by the MVP in West Virginia. The applicant identified a single public water supply intake for the Craigsville Public Service District (PSD) on the Gauley River located approximately 0.7 mile downstream of the project crossing of Strouds Creek. The applicant further provided a description of two (2) additional public water supply intakes because the project was located within 0.5 mile of certain source water protection areas. These crossings include the Big Bend PSD intake located on the Greenbrier River approximately 3.8 miles downstream of the proposed activities, and the Rich Creek crossing located approximately 7.8 miles downstream of the proposed Corps regulated activities. As stated on page 1948 of Federal Register Volume 82, No. 4, the term “proximity” is to be applied using the commonly understood definition of that term (“very near, close” according to Merriam-Webster’s Collegiate Dictionary, 10th edition). Therefore, the proposed NWP activity would have to be very near, or close to, the public water supply intake for general condition 7 to apply. For those NWP activities that require PCNs or are voluntarily reported to Corps districts, district engineers will review the PCNs to determine if general condition 7 applies. ...We do not agree that all NWP activities should be prohibited in water source protection areas for public water systems. NWP activities can be conducted in those areas with little or no minimal adverse effects to water quality. In addition, all NWPs that authorize discharges into waters of the United States require Clean Water Act section 401 water quality certification. The Huntington District has determined that none of these water supply intakes are in “the proximity of a public water supply intake.”

Additionally, the WVDEP WQC Standard Condition 4 requires that a permittee investigate for the presence of water supply intakes within 0.5 mile downstream which may be affected by suspended solids and turbidity increases caused by work in the watercourse. The condition further requires that, if found, the permittee notify the operator of the water supply intake and prior to initiation of the work to allow for sufficient time to prepare for any changes in water quality. None of the downstream public water supply intakes identified by the applicant are located within 0.5 mile of the proposed Corps regulated activities. The applicant has also indicated erosion and sediment controls would be implemented to minimize sediment and turbidity. The FEIS states that the applicant would *implement various BMPs to ensure that construction and operation of the MVP would not negatively impact water supplies and public supply districts.*

The applicant’s 28 January 2020 PCN also describes a contingency plan to utilize the dry-ditch open cut technique should problems arise with the effort to bore/tunnel under the aforementioned rivers. These plans include the installation of cofferdams for dewatering and digging a trench in the dry for installing the pipeline. As indicated in Section 1.3, the Huntington District is not evaluating this alternative plan for authorization under this NWP 12 verification request. Should an alternative

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installation method be determined to be necessary rather than using the subterranean installation methods, additional authorization would be required from the Corps. This requirement would be incorporated as a special condition (Reference Section 4.2, Special Condition 2) of a NWP 12 verification for these proposed activities. In addition, as indicated above, Section 7 consultation pursuant to the ESA would need to be re-initiated between the FERC and the USFWS to reassess any effects to federally listed species or critical habitat in a manner not previously considered. This requirement would be incorporated as a special condition (Reference Section 4.2, Special Condition 7) of a NWP 12 verification for these proposed activities.

2.2 Site specific factors:

Environmental setting in the vicinity of the GP activity: The MVP would cross all three (3) U.S Environmental Protection Agency Level III ecoregions (Western Allegheny Plateau, Central Appalachians and Ridge and Valley) within West Virginia. The Western Allegheny Plateau ecoregion located in northwestern West Virginia is mostly forested, with pasture and cropland, urban development, some coal mining, and development related to natural gas extraction within the Marcellus Shale rock formation. The Central Appalachians ecoregion contains significant coal deposits with forested lands, rural communities, and small areas of pasture and croplands. The Ridge and Valley ecoregion located west of the Allegheny Front consists of large valleys with considerable agricultural lands, forested land, and rural communities.

According to the West Virginia Geological and Economic Survey (WVGES), the MVP would fall within the Appalachian Plateau Province and the Valley and Ridge Province. The WVGES describes the boundary between the two (2) provinces as the Allegheny Front which “is a complex and rather abrupt change in the topography, stratigraphy, and structure.” The WVGES states that “although some natural gas has been obtained from the Valley and Ridge Province, by far the majority of natural gas (perhaps 95 to 98 percent)” comes from the Appalachian Plateau Province.

Type(s) of resource(s) that will be affected by the GP activity: Within the Huntington District’s AOR, the proposed construction of the MVP would result in proposed temporary discharge of dredged and/or fill material into 8,273 linear feet (0.660 acre) of ephemeral streams, 8,696 linear feet (0.991 acre) of intermittent streams, 13,553 linear feet (7.65 acres) of perennial streams, 9.110 acres of PEM wetlands, 0.451 acre of PSS wetland and 1.44 acres of PFO wetland and the proposed permanent discharge of dredged and/or fill material into 279 linear feet (0.0229 acre) of ephemeral streams, 402 linear feet (0.041 acre) of intermittent streams, 335 linear feet (0.128 acre) of perennial streams, 0.514 acre of PEM wetland, and 0.451 acre of a PSS wetland, at 451 separate and distant locations.

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Function(s) provided by the aquatic resource that will be affected by the GP

activity: The ecological function and integrity of wetlands that would be affected by the GP activity were assessed using the Corps *Highway Methodology Workbook Supplement, Wetland Functions and Values, A Descriptive Approach*. This methodology was developed by the Corps New England District Regulatory Program in 1993 and updated in 1999. The methodology is described as a “descriptive approach” that “can be used for any project where the characterization of wetland resources is necessary for Section 404 permit requirements.” The assessment methodology includes evaluating eight (8) functions (groundwater recharge/discharge, floodflow alteration, fish and shellfish habitat, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, sediment/shoreline stabilization wildlife habitat) and five (5) values (recreation, educational/scientific, uniqueness/heritage, visual quality/aesthetics, and threatened or endangered species habitat). MVP provided an assessment of the functions and values of the wetlands that would be affected. The SWVM 2.1 was also utilized to assess the effect of discharges into wetlands and the required compensatory mitigation. The SWVM 2.1 also meets WVDEP’s requirements for wetland mitigation. Reference **Enclosure E – Aquatic Resources – WV Function and Value Table** and **Enclosure F SWVM Forms** of this MFR for details.

Tributaries provide important habitat for amphibians and benthic macroinvertebrates as well as support an abundance of aquatic life and provide a source of drinking water to many communities. Specifically, the Elk River, the Gauley River, and the Greenbrier River are important natural resources for the state of West Virginia. These systems provide functions to flora and fauna and values from recreation to aesthetic resources. The applicant used the SWVM to assess and correlate baseline conditions of the proposed impacts (debits) and compensatory mitigation (credits). Individual assessment methodologies utilized within the state of West Virginia and incorporated into the SWVM for streams include the United States Environmental Protection Agency’s Rapid Bioassessment Protocol Habitat Assessment Value parameters (EPA 841-B-99-002) and the West Virginia Stream Condition Index scores, the Corps’ Engineer Research and Development Center’s Hydrogeomorphic methodology as well as water quality data (pH, conductivity and dissolved oxygen) utilized by the WVDEP in their Water Quality Data Sheet. These individual assessments are utilized together within the SWVM to interpret the physical, chemical and biological integrity of waters of the United States. Within the State of West Virginia, the SWVM utilizes the highest vegetative strata and acreage to quantify project impacts and mitigation needs for wetlands. The applicant provided the results of the SWVM assessments in the 28 January 2020 PCN.

The applicant’s proposal to install portions of the MVP under the Elk River, the Gauley River and the Greenbrier River using subterranean pipeline installation

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techniques would require DA authorization pursuant to Section 10. The applicant submitted updated reports with the 28 January 2020 PCN entitled “Crossing Reports” of the Elk River, the Gauley River, and the Greenbrier River. Reference **Enclosure G** – Section 10 Rivers Crossing Summary for additional details. It is expected that the functions and services of these rivers would not be directly impacted by the subterranean crossing methods proposed. However, the change in the riparian areas at the crossing sites into cleared right-of-way (ROW) areas could indirectly result in changes to temperature and organic input.

The extent that aquatic resource functions will be lost as a result of the GP activity: The proposed discharge of dredged and/or fill material into waters of the United States associated with each single and complete project would result in minimal adverse effects, considered individually and cumulatively, on the aquatic environment. Temporarily affected wetlands and streams would be restored to pre-construction contours and conditions following construction activities.

The applicant has proposed the permanent discharge of fill material in 1,016 linear feet (0.431 acre) of stream and 0.523 acre of wetlands and the permanent conversion of 1.89 acres of PSS and PFO wetlands to PEM wetlands. Those specific aquatic resources permanently filled would be lost. Those wetlands converted from a PSS or PFO wetland type to a PEM type would cease to provide those functions specific to PSS and PFO wetlands but would provide functions typical of PEM wetlands.

The duration of the adverse effects: The discharge of dredged and/or fill material into 279 linear feet (0.023 acre) of ephemeral streams, 402 linear feet (0.041 acre) of intermittent streams, 335 linear feet (0.128 acre) of perennial streams, 0.514 acre of PEM wetland, and 0.451 acre of PSS wetland would be permanent.

The proposed project would involve numerous wetland and stream crossings. In-stream work would be of short duration at all stream crossings (24 to 48 hours for most) and stream flow during construction activities would be maintained through the implementation of BMPs.

According to the applicant, the “duration of construction will be limited to 24 hours across minor waterbodies (10 feet wide or less) and 48 hours across intermediate waterbodies (between 10 and 100 feet wide) when blasting or extensive rock excavation is not required.”

A temporary increase in turbidity in downstream reaches and in the receiving streams may occur. However, these impacts would be temporary and would have minimal impacts on biological or chemical functions of the downstream perennial streams since disturbance arising from the construction activities would be captured by on-site silt fencing and BMPs. Normal water fluctuations would be re-established once the construction activities have ceased. Overall long-term impacts to aquatic

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resources would be minimal. The duration of the adverse effects to the Elk River, the Gauley River and the Greenbrier River are expected to be negligible given the applicant's proposal to install the MVP using subterranean installation techniques.

Figure 1 - Left descending bank of the Greenbrier River approximately pipeline mile point 171.6



Figure 2 - Right descending bank of the Gauley River approximately pipeline mile point 118.9



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Figure 3 - Left descending bank of the Elk River approximately pipeline mile point 87.3



Mitigation required by the district engineer: The applicant has purchased credits from multiple mitigation banks for unavoidable impacts to waters of the United States. Credit purchases are described in Table 4 and further discussed in Section 2.4 of this MFR. The mitigation bank credit purchase(s) are sufficient to satisfy the proposed project's compensatory mitigation requirement.

2.3 Coordination

The Huntington District Regulatory Division coordinated internally with our Real Estate Division, Section 408 coordinator, and the Operations Division regarding compliance with Section 14 of the Rivers and Harbors Act of 1899 (33 USC 408). The proposed project would cross real estate associated with Burnsville Lake, a Huntington District flood control project and property owned by the Corps, described as the Weston Gauley Turnpike. The proposed project was determined to have no Section 408 concerns. A letter was provided to the applicant on 1 November 2017 from the Huntington District Section 408 Coordinator stating a 408 permission is not required. Reference Section 3.8 for further information.

The Huntington District, Pittsburgh District, and Norfolk District participated in bi-weekly calls with the FERC during the preparation of the Environmental Impact Statement.

The FERC is the lead federal agency for compliance with the NEPA, Section 106 of the National Historic Preservation Act, and Section 7 of the ESA, and the Corps' review was coordinated with them and other agencies as appropriate.

2.3.1 Was the PCN coordinated with other agencies? **Yes**

If yes, describe results including resolution of any concerns. The applicant's 28 January 2020 PCN did not require coordination with the resource agencies per the terms of General Condition 32 of the NWP; however, the Corps was a participating

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agency in the development of the FEIS and additional coordination is captured in other sections of this document relevant to historic properties, endangered species, WQC, etc.

2.3.2 Was the PCN coordinated with other Corps offices? **Yes**

If yes, describe results including resolution of any concerns:

As stated above, additional Corps regulatory offices (Pittsburgh and Norfolk Districts) are reviewing portions of the MVP that occur within their respective AORs. The Pittsburgh and Norfolk Regulatory offices received District-specific PCNs with relation to their respective Corps' AORs. Each Corps District is responsible for verifying the use of the NWP 12, or other applicable permits, at each of the single and complete projects within its AOR.

2.4 Mitigation

2.4.1 Provide brief description of how the activity has been designed on-site 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:

It is the Huntington District's determination that MVP has evaluated, avoided, and then minimized potential impacts to aquatic resources to the greatest extent practicable. Approximately 20,284 linear feet of ephemeral streams, 23,257 linear feet of intermittent streams, 24,499 linear feet of perennial streams, 20.52 acres of PEM wetlands, 0.867 acre of PSS wetlands and 1.53 acres of PFO wetlands are located within the project area. The applicant has proposed to reduce the construction ROW to a 75-foot width where practicable to minimize the discharge of dredged and/or fill material into waters of the United States. The applicant states that an estimated 19,000 linear feet of streams and over four (4) acres of wetlands have been avoided by reducing the construction ROW.

MVP would adhere to the FERC *Upland Erosion Control, Revegetation, and Maintenance Plan* and the FERC *Wetland and Waterbody Construction and Mitigation Procedures* for pipeline construction. Additionally, the applicant has indicated Erosion and Sediment Control Plan BMPs would comply with the WVDEP's *Erosion and Sediment Control Best Management Practice Manual* for those parts of the MVP within West Virginia.

2.4.2 Is compensatory mitigation required for unavoidable impacts to jurisdictional aquatic resources to reduce the individual and cumulative adverse environmental effects to a minimal level? **Yes**

Provide rationale: Mitigation is required because the loss of waters associated with the activity is greater than 0.10 acre. The SWVM Version 2.1 was used to calculate

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the amount of compensatory mitigation (credits) required to offset the proposed permanent loss of streams and wetlands, and the conversion of PSS and PFO wetlands to PEM wetlands in West Virginia. Reference **Enclosure F** – SWVM Forms of this MFR for additional details.

2.4.3 Type and location of compensatory mitigation

Is the impact in the service area of an approved mitigation bank? **Yes**

If yes, does the mitigation bank have appropriate number and resource type of credits available? **Yes**

Is the impact in the service area of an approved in-lieu fee program? **Yes.**

If yes, does the in-lieu fee program have the appropriate number and resource type of credits available? **Yes**

Selected compensatory mitigation type/location(s): **See Table 3**

Table 3	
Mitigation bank credits	X
In-lieu fee program credits	
Permittee-responsible mitigation under a watershed approach	
Permittee-responsible mitigation, on-site and in-kind	
Permittee-responsible mitigation, off-site and/or out of kind	

Does the selected compensatory mitigation option deviate from the order of the options presented in §332.3(b)(2)-(6)? **No**

If yes, provide the rationale for the deviation, including the likelihood for ecological success and sustainability, location of the compensation site relative to the impact site and their significance within the watershed, and/or the costs of the compensatory mitigation project (see 33 CFR §332.3(a)(1)): **N/A**

2.4.4 Amount of compensatory mitigation: **The applicant has previously purchased stream and wetland credits from multiple mitigation banks for the unavoidable impacts to waters of the United States. The applicant has since been able to avoid some of the previously verified discharges of dredged and/or fill material into waters of the United States resulting in a reduced mitigation responsibility based on the SWVM Version 2.1. Additionally, the applicant has proposed to provide compensatory mitigation for discharges on a cumulative basis consistent with WVDEP requirements for the entire project. The Stream Impact Unit Yield totals approximately 613 debits and the Wetland Impact Unit Yield totals 2.4173 debits as detailed in the SWVM Version 2.1 forms and summarized in Tables 7 and 8 of the applicant's 28 January 2020 PCN. The applicant has purchased stream credits (613**

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credits) and wetland credits (2.4137 credits) from the mitigation banks noted in Table 4 below. The applicant was able to transfer credits between mitigation banks as additional primary service area credits have become available since the 2017 and 2018 NWP verifications. Table 4 below describes the required credit purchases and the respective watersheds for which they apply.

Table 4 – Mitigation within the Huntington District			
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	Associated Watersheds for Credit Purchases
Kincheloe Mitigation Bank	0.3832	N/A	Middle Ohio River and Little Kanawha
Foster Run Mitigation Bank	N/A	124	Middle Ohio
Spanishburg Mitigation Bank	1.4042	240	Gauley, Lower New, Greenbrier, and Upper New
Beverly Mitigation Bank	0.6298	N/A	Elk River
Hayes Run Mitigation Bank	N/A	249	Little Kanawha
Total Mitigation Credits Required	2.4173	613	

Rationale for required compensatory mitigation amount: The SWVM Version 2.1 was used to calculate the amount of compensatory mitigation (credits) required to offset the proposed permanent loss of streams and wetlands, and the conversion of

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PSS and PFO wetlands to PEM wetlands in West Virginia. Reference **Enclosure G** – SWVM Forms of this MFR for additional details.

3.0 Compliance with Other Laws, Policies and Requirements

3.1 Section 7(a)(2) of the Endangered Species Act (ESA)

- 3.1.1 ESA action area: The ESA action area for purposes of Corps review consists of each single and complete project location and the immediately adjacent uplands that are needed in order to undertake the regulated work. However, because FERC is the lead agency for ESA Section 7 consultation and has jurisdiction and control over the entire pipeline corridor, the USFWS evaluated the entirety of the MVP. The Corps has reviewed the BO issued 4 September 2020 and determined that it is inclusive of the Corps AOR and is sufficient to address the Corps' ESA compliance for the NWP activity.

The portions of the Corps' ESA action area for which the considerations of the BO are necessary vary based on the range, habitat, and needs of the species considered. Within West Virginia, species considered in the B.O. are listed in Table 5 below.

The BO describes the types of activities which are likely to adversely affect those species considered (see Enclosure G).

- 3.1.2 Has another federal agency taken steps to document compliance with Section 7 of the ESA and completed consultation(s) as required? **Yes**

If yes, identify that agency, the actions taken to document compliance with Section 7 and whether those actions are sufficient to ensure the activity(s) requiring DA authorization is in compliance with Section 7 of the ESA:

The FERC is the lead federal agency for this action and has documented ESA compliance for the subject project. The Corps, acting as a cooperating agency, has adopted the FERC's effects determinations for Corps permitting purposes.

In a letter dated 21 November 2017, the USFWS provided the BO for the MVP (FWS File #05E2VA00-2016-F-0880 and #05E2WV00-2015-F-0046) to the FERC.

On 18 December 2017, the FERC via an email to the Corps stated "on 21 November 2017 the FWS service issued its BO for the MVP. This document has previously been filed in the FERC's public record for this proceeding. The issuance of the BO completes the process of complying with Section 7 of the ESA."

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On 28 August 2019, the FERC requested re-initiation of Section 7 consultation. On 11 September 2019, the USFWS accepted the FERC's request. In October 2019, the U.S. Court of Appeals for the Fourth Circuit stayed the 2017 BO pending the resolution of a legal challenge. Multiple extensions to the consultation period were granted, with the last ending on 27 May 2020.

On 4 September 2020, the USFWS provided the BO for the MVP (Project #05E2VA00-2016-F-0880 and #05E2WV00-2015-F-0046) to the FERC. According to the BO, the findings are based on information provided in the FEIS, the 10 July 2017 Biological Assessment (BA) (FERC 2017b), the 28 May 2020 second revised supplement to the BA prepared by the applicant (Mountain Valley 2020), multiple responses for data and information from the FERC and the applicant to the USFWS, telephone conversations, field investigations; and other sources of information. Reference the USFWS BO made a part of the administrative record for additional details. On 8 September 2020, the FERC indicated to the Corps that Section 7 obligations were fulfilled.

Details regarding the federally listed species critical habitat(s), scope of work, reasonable and prudent measures, approved avoidance and minimization measures, can be found within the body of the BO.

The Corps has independently evaluated the above referenced documentation provided by the agencies and determined that it satisfies the Corps' Section 7 ESA compliance obligations for this NWP verification. Further ESA consultation is not necessary.

With respect to *Virginia spiraea* in the Corps' action area, the BO indicates that surveys could not confirm absence within potentially suitable habitat along Streams S-EF53 and Wetland W-MM20-PFO, as well as along the Greenbrier River (ID S-I8) (BO Pg. No. 66).

With respect to the candy darter within the Corps' action area, the BO indicates its presence was assumed at the Gauley River (ID S-J29) at both the pipeline crossing and water withdrawal locations (BO Pg. No. 72).

With respect to threatened and endangered bat species, the range of these terrestrial species include the entire project area within the state of West Virginia, including stream and wetland areas proposed to be impacted by the regulated activities (BO Pg. No. 72-89). Activities which would be conducted and their potential to affect these species are described in the BO (see Enclosure G – Appendix B Tables 4 and 5).

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3.1.3 Known species/critical habitat present? [Yes](#)

Table 5: Listed species found in West Virginia and considered in the 4 September 2020 BO.

Species Common Name	Species Scientific Name	ESA Status
Virginia spiraea	<i>Spiraea virginiana</i>	Threatened
Candy darter	<i>Etheostoma osburni</i>	Endangered, proposed critical habitat
Indiana bat	<i>Myotis sodalis</i>	Endangered
Northern long-eared bat	<i>Myotis septentrionalis</i>	Threatened

Table 5 lists the species specific to West Virginia and incorporated within the BO; however, the BO also address species in Virginia.

Table 6: Listed species found in West Virginia and considered in the USFWS 9 July 2020 Concurrence Letter of May Affect, Not Likely to Adversely Affect

Species Common Name	Species Scientific Name	ESA Status
Clubshell mussel	<i>Pleurobema clava</i>	Endangered
Gray bat	<i>Myotis grisescens</i>	Endangered
Running buffalo clover	<i>Trifolium stoloniferum</i>	Endangered
Snuffbox mussel	<i>Epioblasma triquetra</i>	Endangered
James spiny mussel	<i>Pleurobema collina</i>	Endangered
Virginia big-eared bat	<i>Corynorhinus townsendii virginianus</i>	Endangered
Small whorled pogonia	<i>Isotria medeoloides</i>	Endangered

Table 6 addresses those species whose effects did not warrant preparation of a BO. This table captures those species evaluated within the FERC Biological Assessment and the 9 July 2020 USFWS letter concurring with FERC's may affect, not likely to adversely affect determination. This table features those species specific to West Virginia; however, the 9 July 2020 USFWS letter concurring with FERC's may affect, not likely to adversely affect determination also addresses species in Virginia.

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Table 7: Listed species found in West Virginia and considered in the FERC 8 July 2020 No Effect Determinations for the MVP

Species Common Name	Species Scientific Name	ESA Status
Rusty patched bumble bee	<i>Bombus affinis</i>	Endangered
Shale barren rock cress	<i>Arabis serotina</i>	Endangered
Northeastern bulrush	<i>Scirpus ancistrochaetus</i>	Endangered

Table 7 lists the species specific to West Virginia and incorporated within the FERC No Effect determinations; however, the FERC No Effect determinations also address species in Virginia.

Effect determination(s), including no effect, for all known species/habitat, and basis for determination(s):

In a letter dated 8 July 2020 from the FERC to the USFWS, the FERC summarized the receipt of supplemental information for the BA and provided an updated effects determination for the MVP. By letter dated 9 July 2020 the Service concurred with FERC's determination that the project is not likely to adversely affect certain listed species, which concluded the Section 7 process for those species. On 4 September 2020 the USFWS provided the FERC with a non-jeopardy BO for the purposes of exercising its regulatory authority for compliance with the ESA. As a cooperating agency, the Corps has adopted the FERC FEIS and the BO dated 4 September 2020 for the purposes of exercising its regulatory authority for compliance with the ESA. The USFWS evaluated the entirety of the MVP project; whereas, the Corps' permit area is limited to work within waters of the United States and the immediately adjacent uplands affected by authorizing the discharge of dredged and/or fill material into waters of the United States at each single and complete project area. The BO concludes that the authorization to construct and operate the pipeline, as proposed, including the activities that have already been completed, is not likely to jeopardize the continued existence of the federally threatened Virginia spiraea (*Spiraea virginiana*), the federally endangered Roanoke logperch (*Percina rex*) (located in Virginia), the federally endangered candy darter (*Etheostoma osburni*), the federally endangered Indiana bat (*Myotis sodalis*), and the federally threatened northern long-eared bat (*Myotis septentrionalis*). In addition, the USFWS concluded that the authorization to construct and operate the pipeline, as proposed, including the activities that have already been completed, is not likely to destroy or adversely modify proposed critical habitat of the candy darter. As indicated above, the Huntington District is not evaluating the alternative plan (open cut crossing for the Gauley River) for authorization under this NWP 12 verification request. Should an alternative installation method be determined to be necessary rather than using the subterranean installation methods, additional authorization would be required from the Corps. This requirement would be incorporated as a special condition

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(Reference Section 4.2, Special Condition 2) of a NWP 12 verification for these proposed activities. In addition, as indicated above, Section 7 consultation pursuant to the ESA would need to be re-initiated between the FERC and the USFWS to reassess any effects to federally listed species or critical habitat in a manner not previously considered. This requirement would be incorporated as a special condition (Reference Section 4.2, Special Condition 7) of a NWP 12 verification for these proposed activities. The Corps has reviewed the information, and the revised BO issued 4 September 2020 and determined the provided documentation satisfies the Corps' AOR and is sufficient to document compliance with Section 7 of the ESA and to ensure the activities requiring DA authorization are in compliance with Section 7 of the ESA. No additional consultation is necessary.

- 3.1.4 Consultation with either the National Marine Fisheries Service and/or the U.S. Fish and Wildlife Service was initiated and completed as required, for any determinations other than "no effect" (see the attached "Summary" sheet for begin date, end date and closure method of the consultation). [Reference Sections 3.1.2 and 3.1.3](#). Based on a review of the information above, the Corps has determined that it has fulfilled its responsibilities under Section 7(a)(2) of the ESA.

3.2 Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat (EFH) [N/A, there is no essential fish habitat in this district's area of responsibility.](#)

3.3 Section 106 of the National Historic Preservation Act (Section 106)

- 3.3.1 Section 106 permit area: The permit area includes [only](#) those areas comprising waters of the United States that will be directly affected by the proposed work or structures. Activities outside of waters of the U.S. are not included because all three tests identified in 33 CFR 325, Appendix C(g)(1) have not been met.

Final description of the permit area: [The work outside of the waters of the United States could occur without the work within waters of the United States. The activity outside of waters of the United States is not integrally related to the proposed discharges of dredged and/or fill material into waters of the United States. The proposed discharge of dredged and/or fill material is not essential for the pipeline activities. The project could be constructed by conducting the work through non-regulated activities \(bridge over or bore under the wetland or stream\). Therefore, the permit area for the linear project consists of the area of direct impact, as a result of the discharge of dredged and/or fill material into waters of the United States, and the immediate adjacent uplands directly affected by authorizing the regulated activity at each single and complete project area.](#)

- 3.3.2 Has another federal agency taken steps to comply with Section 106 of the National Historic Preservation Act and completed consultation(s) as required? [Yes](#)

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If yes, identify that agency, the actions taken to document compliance with Section 106 and whether those actions are sufficient to ensure the activity(s) requiring DA authorization is in compliance with Section 106 of the NHPA:

The FERC has been designated as the lead federal agency responsible to determine whether or not the MVP project is in compliance with the applicable requirements of Section 106. The FERC is the designated lead federal agency and coordinator of all federal authorizations and consultation efforts, including coordination with the appropriate State Historic Preservation Offices (SHPO), Tribal Historic Preservation Offices or other representatives, and the Advisory Council on Historic Preservation (ACHP) under Section 106.

On 19 October 2017, the FERC provided a letter to the ACHP that the MVP would have “an adverse effect on historic properties.” The letter indicated that the ACHP had previously suggested the development of a “Programmatic Agreement (PA), under Part 800.14.b, to resolve adverse effects for this Project as a whole.” The letter included supporting documentation regarding the FERC’s adverse effect finding.

On 8 September 2020, the FERC via e-mail indicated that compliance with Section 106 of the NHPA was completed and the PA for the Mountain Valley Mainline Pipeline was executed on 15 December 2017. As stated in the regulations for implementing Section 106 – at Part 800.14b2iii – a PA is in effect and executed when signed by the FERC, State Historic Preservation Officers (SHPO), and Advisory Council on Historic Properties (ACHP). The execution of the PA completes the process of compliance with Section 106 of the NHPA.”

The Corps has reviewed the documentation provided by the FERC and determined it is sufficient to confirm Section 106 compliance for this permit authorization, and additional consultation is not necessary.

Reference **Enclosure H** – FERC PA of this MFR for additional details.

- 3.3.3 Known cultural resource sites present and/or survey or other additional information needed? Yes. Please see FERC Docket made a part of the Corps administrative record.

As a cooperating agency to the FEIS, the Corps hereby incorporates the effects determinations and decision rational of the FERC (lead federal agency) into the Corps determination. Within the Huntington District’s AOR, the entire undertaking for the MVP was reviewed for potential impacts to historic properties; however, the Corps’ permit areas are limited to the work within waters of the United States and the immediately adjacent uplands affected by authorizing the discharge of dredged

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and/or fill material into waters of the United States. The Corps has reviewed the information and determined the provided documentation satisfies the Corps' AOR and is sufficient to document compliance with Section 106 and to ensure the activities requiring DA authorization are in compliance with Section 106 of the NHPA. No additional consultation is necessary.

- 3.3.4 Consultation was initiated and completed as required with the appropriate agencies, tribes and/or other parties for any determinations other than "no potential to cause effects" (see the attached "Summary" sheet for consultation type, begin date, end date and closure method of the consultation). [Refer to Enclosure H – FERC PA of this MFR for additional details.](#)

The Corps has determined that it has fulfilled its responsibilities under Section 106 of the NHPA.

3.4 Tribal Trust Responsibilities

- 3.4.1 Was coordination conducted with any federally recognized tribes? [Yes; The FERC, as the lead federal agency, was required to initiate the Federal, state and tribal coordination required to comply with the NHPA and the applicable state and local laws and regulations.](#)

Provide a description of any consultation(s) conducted including results and how concerns were addressed. [Reference the FEIS published by FERC for a list of the federally recognized tribes that were consulted as well as the specific comments that were received for the Project. The FERC was responsible for identifying and contacting tribal representatives for all tribes that may have an interest as a contributing party for the project. Consultation efforts and comments that were received are described in detail within the Cultural Resources section of FERC's FEIS made a part of the administrative record. The Corps has independently evaluated the above referenced documentation and determined that it satisfies the Corps' tribal coordination responsibilities. Also see \[Enclosure H – FERC PA of this MFR for additional details.\]\(#\) The Corps has determined that it has fulfilled its tribal trust responsibilities.](#)

- 3.4.2 Was government-to-government consultation conducted because proposed activity requiring DA authorization has the potential to significantly affect protected tribal resources, tribal rights (including treaty rights) and/or Indian lands or because consultation was requested? [Reference the FERC FEIS made a part of the administrative record.](#)

The Corps has determined that it has fulfilled its tribal trust responsibilities.

3.5 Section 401 of the Clean Water Act – Water Quality Certification (WQC)

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- 3.5.1 Is a Section 401 WQC required, and if so, has the certification been issued or waived? [A general WQC has been issued for this permit.](#)

On 24 April 2019, in response to the Fourth Circuit's Opinion and Order in *Sierra Club*, and following public notice and public comment procedures, the WVDEP modified its general Section 401 WQC for the 2017 NWP's in accordance with 40 CFR § 121.2(b). On 15 August 2019, the Region III Administrator of the USEPA concurred with the proposed modifications. On 15 January 2020, after consideration of the public comments received, the Corps Great Lakes and Ohio River Division Commander accepted the WVDEP's modified general WQC for the 2017 NWP's. In accordance with the Corps' regulations, the WVDEP's 2019 WQC was incorporated as regional conditions into the 2017 NWP's for the State of West Virginia. The MVP will be a 42-inch natural gas pipeline. Per Special Condition A of West Virginia's general WQC for NWP 12, the Secretary of the WVDEP, in the Secretary's sole discretion, reserves the right to require an individual Section 401 WQC for pipelines equal to or greater than 36 inches in diameter. On 27 February 2020, the WVDEP provided a letter in accordance with Special Condition A of the general WQC for NWP 12 stating that the WVDEP will not require an individual Section 401 WQC for the MVP.

3.6 Coastal Zone Management Act (CZMA)

- 3.6.1 Is a CZMA consistency concurrence required, and if so, has the concurrence been issued, waived or presumed? [N/A, a CZMA consistency concurrence is not required.](#)

3.7 Wild and Scenic Rivers Act

- 3.7.1 Is the project located 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? [No](#)

3.8 Effects on Federal Projects (33 USC 408)

- 3.8.1 Does the activity require permission under Section 14 of the Rivers and Harbors Act (33 USC 408) because of potential for modification(s) to a federal project? [No, the appropriate non-Regulatory office has determined that there will be no effects to federal projects that require permission from the Corps. Reference Section 2.3 above and **Enclosure J** – Section 408 Letter of this MFR for additional details.](#)

If yes, provide date permission is provided:
[1 November 2017](#)

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4.0 Special Conditions

- 4.1 Are special conditions required to ensure minimal effects, protect the public interest and/or ensure compliance of the activity with any of the laws above? **Yes; eight (8) special conditions would be incorporated into any DA authorization.**

If no, provide rationale: N/A

- 4.2 Required special condition(s)

Special Condition 1: This verification is contingent upon the information provided by the permittee in their Pre-Construction Notification (PCN), describing the scope and/or impacts of the project, as further depicted in Figures 1-1 – 1-42 titled *Mountain Valley Pipeline USGS Project Location Map USACE Huntington District* and the aquatic resources identified in the enclosed Table 3 titled *Single and Complete Crossings* (dated January 2020 and updated March 18, 2020). Should the project scope and/or impacts change, or new information become available not previously submitted to this office, the permittee must contact this office as soon as practicable to determine whether further federal authorization is necessary.

Rationale: To ensure that the authorized work is performed in accordance with the plans that were reviewed by the Corps, and to ensure the permittee understands that any modifications to the project could require further federal authorization.

Special Condition 2: The permittee has proposed to conduct the proposed crossings of the Elk River, the Gauley River, and the Greenbrier River utilizing subterranean installation techniques. These techniques are considered to be environmentally preferable to surface construction within large waterways due to the lack of disturbance to the bottom elevation and substrates of the waters of the United States being crossed. The permittee **is not** authorized to conduct the open trench/cofferdam activities within these waterways. Should the applicant's open trench/cofferdam crossing contingency plan be required to complete the project, the permittee must seek authorization of the new crossing plans from the Corps.

Rationale: To ensure the Huntington District authorizes the environmentally preferable crossing method, which is the utilization of subterranean installation techniques. Additionally, the Huntington District did not permit or evaluate the dry-trench contingency plan as discussed in Section 2.1. of this MFR

Special Condition 3: Restoration activities shall be conducted in accordance with Section 8.0 of the 28 January 2020 PCN.

Rationale: To ensure that authorized impacts to waters of the U.S. are restored in accordance with the plans that were reviewed by the Corps.

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Special Condition 4: 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 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 will be obtained by the permittee. All photographs are to be geo-referenced and identified to correspond with aquatic feature names as described in the Table 3 titled *Single and Complete Crossings (dated January 2020 and updated March 18, 2020)* with a date of the photograph taken and corresponding 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 narrative documentation shall include a description of the status of vegetative growth in the affected wetlands/stream banks, a description of substrate and grade, and the stability of the affected resources with reference to the prevention of erosion and sedimentation entering receiving waters. The above-described information must be submitted to the Huntington District along with the enclosed "Activity Completion Certification."

Rationale: To document that the restoration plans referenced in Special Condition 4 were adhered to and unauthorized loss of waters of the United States did not occur.

Special Condition 5: Mitigation amounts for unavoidable impacts to waters of the United States were calculated using the Stream and Wetland Valuation Metric Version 2.1. The permittee has purchased stream and wetland mitigation credits from multiple federally-approved mitigation bank(s) as indicated on the below Table titled *Table 4 - Required Mitigation within the Huntington District's Regulatory Boundary*. The permittee has submitted confirmation to the Huntington District (Permit Number LRH-2015-592-GBR). The credit purchases remain a requirement of this NWP verification.

Table 4 – 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	0.3832	N/A
Foster Run Mitigation Bank	N/A	124

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Table 4 – 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
Spanishburg Mitigation Bank	1.4042	240
Beverly Mitigation Bank	0.6298	N/A
Hayes Run Mitigation Bank	N/A	249
Total Mitigation Credits Required	2.4173	613

Rationale: To ensure the unavoidable authorized impacts to waters of the United States are appropriately compensated.

Special Condition 6: Enclosed is a copy of NWP 12, which contains Regional Conditions a. through e., Water Quality Certification Conditions A. through N., and 32 General Conditions – all of which must be complied with for this verification to be valid. A copy of the NWP 12, the NWP verification letter, and the construction plans provided with the 28 January 2020 PCN must be kept at each site during construction. The permittee will supply a copy of these documents to their project engineer responsible for construction activities.

Rationale: To ensure awareness of the terms and conditions of the NWP 12 authorization.

Special Condition 7: The United States Fish and Wildlife Service (USFWS) Biological Opinion (BO) for the Mountain Valley Pipeline, LLC; Docket Number CP16-10-000; Project #05E2VA00-2016-F-0880 and #05E2WV00-2015-F-0046 BO and dated 4 September 2020 contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with “incidental take” that is also specified in the USFWS BO. The permittee’s authorization under this Corps NWP verification is conditional upon its compliance with the BO whose terms and conditions are incorporated by reference as being special conditions of the Section 404 and Section 10 NWP verification. Section 7 obligations under Endangered Species Act (ESA) 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

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Section 7 consultation with the USFWS, 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 ESA.

Rationale: To ensure compliance with the Endangered Species Act.

Special Condition 8: Temporary water withdrawals are proposed within the Elk River, the Gauley River, and the Greenbrier River which are subject to Section 10 of the Rivers and Harbors Act of 1899. The public's right to free navigation must not be infringed. Temporary water withdrawals must be adequately marked to advise river users of its presence.


Rationale: Protect the public's right to navigation and alert any river users to the temporary water withdrawal location.

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5.0 Determination

- 5.1 Waiver request conclusion, if required or select N/A: [N/A](#)
- 5.2 The activity, with compensatory mitigation, will result in no more than minimal individual and cumulative adverse effects on the aquatic environment and will not be contrary to the public interest, provided the permittee complies with the special conditions identified above.
- 5.3 This activity, as described, complies with all terms and conditions of the [permit](#) identified in Section 1.5. Please reference **Enclosure K** for the ORM2 Summary.

PREPARED BY:



Digitally signed by Adam E. Fannin
Date: 2020.09.25 12:33:32 -04'00'

Date:

ADAM E. FANNIN
Regulatory Project Manager
Energy Resource Branch

REVIEWED and APPROVED BY:



Digitally signed by Teresa Spagna
Date: 2020.09.25 12:37:12 -04'00'

TERESA D. SPAGNA
Chief, North Branch

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Encls

Encl A – Location Maps

Encl B – Aquatic Resource Crossing Table Mountain Valley Pipeline Project

Encl C – General Construction Plans

Encl D – Section 10 Rivers Crossing Summary

Encl E – Aquatic Resources – WV Function and Value Table

Encl F – SWVM Forms

Encl G – USFWS BO

Encl H – FERC PA

Encl I – WVDEP 401 Letter, Corps Great Lakes and Ohio River Division Commander approval, and USEPA concurrence

Encl J – Section 408 Letter

Encl K – ORM2 Summary



west virginia department of environmental protection

Division of Water and Waste Management
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Charleston, WV 25304
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Austin Caperton, Cabinet Secretary
dep.wv.gov

April 24, 2019

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

Re: Nationwide Permit 401 Water
Quality Certification Modification,
State of West Virginia, Public Notice
No. LRH-2016-00006-WV
Issuance Date: April 24, 2019

Dear Mr. Hatten,

The West Virginia Department of Environmental Protection (WVDEP) submits this modification of West Virginia's Section 401 Water Quality Certification standard and special conditions that apply to the Section 404 Nationwide Permits (NWP) 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 (USACE). WVDEP requests that USACE incorporate this modification into its NWP for West Virginia, in accordance with 40 C.F.R § 121.2(b) which states "The certifying agency may modify the certification in such a manner as may be agreed upon by the certifying agency, the licensing or permitting agency, and the Regional Administrator."

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 USACE prior to conducting any activity authorized by an NWP to be advised of applicable conditions. This 401 Water Quality Certification, with all attendant standard conditions and special conditions, is applicable to USACE projects in West Virginia.

State 401 Certification, as required by the Clean Water Act, is hereby granted subject to the attached special conditions and standard conditions for Section 404 Nationwide Permits in West Virginia; provided, that the modifications herein are agreed upon by USEPA as the Regional Administrator and USACE, the permitting agency.

Sincerely,



Harold Ward
Acting Director
Division of Water and Waste Management

cc:

U.S. Army Corps of Engineers – Pittsburgh District – Jon Coleman
U.S. Environmental Protection Agency – Cosmo Servidio
U.S. Environmental Protection Agency – Jessica Martinsen
WVDNR – Wildlife Resources Section, Elkins – Danny Bennett
U.S. Fish and Wildlife Service – John Schmidt

**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> <http://www.dhsem.gov/mitigation/floodplain/Pages/default.aspx>
17. If applicable, the permittee must measure and report Large Quantity Water use pursuant to §22-26-1 et 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 1/2 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 401 Water Quality Certification
Applicable to Individual Nationwide Permits**

Nationwide Permits 1, 2, 4, 8, 10, 11, I6, 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 WQC 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 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 DWVVM 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. The Secretary of the West Virginia Department of Environmental Protection, in the Secretary's sole discretion, reserves the right to require an individual water quality certification for any of the following facilities or impacts:

- 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 using wet or open-cut methods that do not isolate the excavation area must be completed in a continuous, progressive manner and within 72 hours during seasonal normal or below normal stream flow conditions. Stream crossings using the dry ditch method are exempt from the 72-hour requirement. Construction and access bridges and crossings on, Section 10 rivers are also exempt from the 72-hour requirements. Whatever crossing method is chosen by the permittee, the crossing should be completed as rapidly as practicable.
- 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 permanent structure authorized by this permit shall 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 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.**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 till 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 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 to 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 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.

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 I-1 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 1/4 acre.

50. Underground Coal Mining Activities.

Nationwide Permit 50 West Virginia 44)1 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 1/2 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 WQC Standard Condition 18 A, B, and C herein.

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. Activities 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 NWP 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 NWP.

(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 NWP 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 NWP 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 NWP 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. NWP's do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWP's do not grant any property rights or exclusive privileges.
4. NWP's do not authorize any injury to the property or rights of others.
5. NWP's 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 cyphus*), 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 §22-26-1 et 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 $\frac{1}{2}$ 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 coarse 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 NWP, 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.



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June 27, 2019

Via U.S. Mail and Electronic Mail

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**Re: West Virginia Department of Environmental Protection's Request to Modify
its Section 401 Water Quality Certification for Nationwide Permits**

Dear Lt. Gen. Semonite, Maj. Gen. Toy, Col. Evers, and Mr. Hatten:

On April 24, 2019, the West Virginia Department of Environmental Protection ("WVDEP") sent a letter to Mr. Hatten in his capacity as the Chief of the Regulatory Branch of the Huntington



District of the United States Army Corps of Engineers requesting that the Corps incorporate into the Section 404 Nationwide Permits (“NWP”) purported modifications by WVDEP to its Section 401 Water Quality Certification of those NWPs. Sierra Club, the West Virginia Rivers Coalition, the West Virginia Highlands Conservancy, the Indian Creek Watershed Association, Appalachian Voices, the Chesapeake Climate Action Network, and Appalachian Mountain Advocates (hereinafter, collectively, “Commenters”), submit the following comments on WVDEP’s April 24, 2019 request.

WVDEP’s request places the Corps in an untenable position, asking the Corps to commit an unlawful act and to be drawn once more into a time-consuming and expensive conflict over the proper regulation of two proposed natural gas pipelines. As explained below, to preserve the Corps’ institutional integrity and to avoid needless and resource-intensive litigation on this issue, the Corps should decline WVDEP’s request.

PROCEDURAL BACKGROUND

Before determining whether and how to process WVDEP’s request to modify the NWP conditions, it is important that the Corps acknowledge the status quo: As a result of the Corps’ May 12, 2017 issuance of the Nationwide Permits for the State of West Virginia,¹ the NWPs include the Special Conditions in West Virginia’s 2017 Water Quality Certification as conditions of the underlying NWPs by operation of 33 U.S.C. §1341(d). *Sierra Club v. U.S. Army Corps of Eng’rs*, 909 F.3d 635, 650 (4th Cir. 2018). To be clear, those Special Conditions are conditions of the NWPs themselves. *Id.* (providing that a state water quality certification condition “shall become a condition on any Federal license or permit” (emphasis added)). The Fourth Circuit expressly held in *Sierra Club* that “[t]his language leaves no room for interpretation. ‘Shall’ is an unambiguously mandatory term, meaning, as courts have uniformly held, that state conditions *must* be conditions of the NWP.” 909 F.3d at 645 (emphasis original); *see also id.* at 650 (“[A] precondition for ‘authorization’ of the Pipeline project is satisfaction of ‘all of the NWP’s terms and conditions,’ necessarily including state-imposed conditions like Special Condition C under Section 1341(a).” (Quoting 33 C.F.R. §330.1(c); emphasis in *Sierra Club*)). Accordingly, NWP 12 itself includes three conditions pertinent to WVDEP’s April 24, 2019 purported modifications: Special Conditions A, C, and L. *Sierra Club*, 909 F.3d at 650 (describing Special Condition C as a “condition in the underlying NWP”).

Special Condition A to NWP 12 in West Virginia provides, in relevant part, that “Individual State Water Quality Certification is required for . . . [p]ipelines equal to or greater than 36 inches in diameter . . . [and] [p]ipelines crossing a Section 10 river”² WVDEP’s April 24,

¹ U.S. Army Corps of Eng’rs, Nationwide Permits for the State of West Virginia (May 12, 2017).

² U.S. Army Corps of Eng’rs, Nationwide Permits for the State of West Virginia at 20 (May 12, 2017).

2019 purported modifications would relax Special Condition A and expand the availability of NWP 12 in West Virginia, by modifying Special Condition A to read

The Secretary of the West Virginia Department of Environmental Protection, in the Secretary's sole discretion, reserves the right to require an individual water quality certification for any of the following facilities or impacts:

- i. Pipelines equal to or greater than 36 inches in diameter; [or]
- ii. Pipelines crossing a Section 10 river . . . [.]

*****³

That is, if adopted by the Corps (and approved by EPA Region 3), WVDEP's April 24, 2019 purported modifications would expand the availability of NWP 12 in West Virginia to include pipelines equal to or greater than 36 inches in diameter or that cross a Section 10 river, even if those pipelines lack individual water quality certifications.

Special Condition C to NWP 12 in West Virginia provides

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 the Hughes River, are exempt from the 72-hour requirements. All stream activities shall be completed as rapidly as possible.⁴

WVDEP's April 24, 2019 purported modifications would relax Special Condition C, and expand the availability of NWP 12 in West Virginia by modifying Special Condition C to read:

Individual stream crossings using wet or open-cut methods that do not isolate the excavation area must be completed in a continuous, progressive manner and within 72 hours during seasonal normal or below normal stream flow conditions. Stream crossings using the dry ditch method are exempt from the 72-hour requirement. Construction and access bridges and crossings on, [*sic*] Section 10 rivers are also

3 Letter from Harold Ward, Acting Director, W. Va. Dep't of Env'tl. Protection, Div. of Water & Waste Mgmt., to Mr. Michael Hatten, Chief, Regulatory Branch, U.S. Army Corps of Eng'rs, Huntington District at 10-11 (Apr. 24, 2019).

4 U.S. Army Corps of Eng'rs, Nationwide Permits for the State of West Virginia at 20 (May 12, 2017).

exempt from the 72-hour requirements. Whatever crossing method is chosen by the permittee, the crossing should be completed as rapidly as practicable.⁵

If adopted by the Corps (and approved by EPA Region 3), WVDEP's April 24, 2019 purported modifications would expand the applicability of NWP 12 in West Virginia by, among other things, exempting dry stream-crossings and all Section 10 Rivers from the 72-hour restriction.

Special Condition L to NWP 12 in West Virginia provides that "[n]o structure authorized by this permit shall impede or prevent fish movement upstream or downstream."⁶ WVDEP's April 24, 2019 purported modification would relax Special Condition L and expand the availability of NWP 12 in West Virginia by modifying Special Condition L to read, "No permanent structure authorized by this permit shall prevent fish movement upstream or downstream."⁷ That is, if adopted by the Corps (and approved by EPA Region 3), WVDEP's April 24, 2019 purported modification would expand the applicability of NWP 12 in West Virginia to activities using temporary structures that would prevent or impede fish movement upstream or downstream, and to permanent structures that impede such fish movement.

I. 33 C.F.R. §330.4(c)(2) Is Not Applicable to WVDEP's April 24, 2019 Purported Modifications; Rather, if Any Regulation is Applicable, it is 33 C.F.R. §330.5.

The Corps' March 4, 2019 comments on WVDEP's proposal to modify its Section 401 Water Quality Certification suggest that the Corps contemplates that, before the April 24, 2019 purported modifications will be incorporated into the Nationwide Permits for West Virginia, "the division engineer will determine whether the proposed water quality certification modifications are acceptable and comply with the provisions of 33 CFR 325.4."⁸ The quoted language tracks the language of the Corps' regulation at 33 C.F.R. §330.4(c)(2), which provides:

If, prior to the issuance or reissuance of such NWPs, a state issues a 401 water quality certification which includes special conditions, the division engineer will make these special conditions regional conditions of the NWP for activities which

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- 5 Letter from Harold Ward, Acting Director, W. Va. Dep't of Env'tl. Protection, Div. of Water & Waste Mgmt., to Mr. Michael Hatten, Chief, Regulatory Branch, U.S. Army Corps of Eng'rs, Huntington District at 11 (Apr. 24, 2019).
 - 6 U.S. Army Corps of Eng'rs, Nationwide Permits for the State of West Virginia at 21 (May 12, 2017).
 - 7 Letter from Harold Ward, Acting Director, W. Va. Dep't of Env'tl. Protection, Div. of Water & Waste Mgmt., to Mr. Michael Hatten, Chief, Regulatory Branch, U.S. Army Corps of Eng'rs, Huntington District at 12 (Apr. 24, 2019).
 - 8 Letter from Michael E. Hatten, U.S. Army Corps of Eng'rs Huntington District, to Scott Mandirola, W. Va. Dep't of Env'tl. Protection (Mar. 4, 2019).

may result in a discharge into waters of United States in that state, unless he determines that such conditions do not comply with the provisions of 33 CFR 325.4.

(Emphasis added).

Section 330.4(c)(2) is only applicable when the state's 401 water quality certification is issued "prior to the issuance or reissuance of [the] NWP." 33 C.F.R. §330.4(c)(2). WVDEP's April 24, 2019 purported modifications were not issued "prior to the issuance or reissuance of [the] NWP." 33 C.F.R. §330.4(c)(2). Rather, they were issued nearly two years after the Corps included conditions in the NWP based on West Virginia's special conditions in its 2017 Section 401 Water Quality Certification. As a result, 33 C.F.R. §330.4(c)(2) is not the operative regulation, and the Corps would not lawfully be able to rely on it to support an action on WVDEP's April 24, 2019 purported modifications. Because the conditions in WVDEP's 2017 Section 401 Water Quality Certification of the nationwide permits resulted in conditions being added to the underlying NWPs themselves (see *Sierra Club*, 909 F.3d at 650), if any regulation applies, it is 33 C.F.R. §330.5.

Assuming, without conceding, that the Corps is correct that the Division Engineer is the appropriate Corps official to consider WVDEP's April 24, 2019 request, the Division Engineer's discretionary authority is set out in 33 C.F.R. §330.5(c). That regulation provides:

(c) Division Engineer.

(1) A division engineer may use his discretionary authority to modify, suspend, or revoke NWP authorizations for any specific geographic area, class of activities, or class of waters within his division, including on a statewide basis, by issuing a public notice or notifying the individual involved. The notice will state his concerns regarding the environment or the other relevant factors of the public interest. Before using his discretionary authority to modify or revoke such NWP authorizations, division engineers will:

- (i) Give an opportunity for interested parties to express their views on the proposed action (the DE will publish and circulate a notice to the known interested public to solicit comments and provide the opportunity to request a public hearing);
- (ii) Consider fully the views of affected parties;
- (iii) Prepare supplemental documentation for any modification or revocations that may result through assertion of discretionary authority. Such documentation will include comments received on the district public notices and a statement of findings showing how substantive comments were considered;
- (iv) Provide, if appropriate, a grandfathering period as specified in § 330.6(b) for those who have commenced work or are under contract to commence in reliance on the NWP authorization; and
- (v) Notify affected parties of the modification, suspension, or revocation, including the effective date (the DE will publish and circulate a notice to the known interested public and to anyone who commented on the proposed action).

(2) The modification, suspension, or revocation of authorizations under an NWP by the division engineer will become effective by issuance of public notice or a notification to the individuals involved.

(3) A copy of all regional conditions imposed by division engineers on activities authorized by NWPs will be forwarded to the Office of the Chief of Engineers. ATTN: CECW-OR.

33 C.F.R. §330.5(c). “*Discretionary authority* means the authority described in §§330.1(d) and 330.4(e) which the Chief of Engineers delegates to division and district engineers to modify an NWP authorization by adding conditions, to suspend an NWP authorization, or to revoke an NWP authorization and thus require individual permit authorization.” 33 C.F.R. §330.2(g). Section 330.4(e) provides that the procedures by which division and district engineers may exercise their discretionary authority as to “NWP authorizations are detailed in §330.5.” 33 C.F.R. §330.4(e).

If the Corps were to pursue review of WVDEP’s April 24, 2019 request through the procedures set forth in 33 C.F.R. §330.5(c),⁹ Commenters request that the Corps consider them “interested parties” to whom public notice soliciting comments and allowing the opportunity to request a public hearing is required under 33 C.F.R. §330.5(c)(1)(i). Commenters intend to provide full, substantive comments on WVDEP’s April 24, 2019 purported modification at that time, and to request a public hearing on any modification to NWP 12 in West Virginia.¹⁰

II. Even If Section 330.5(c) Were to Provide the Applicable Procedures, Adopting WVDEP’s Purported Modifications Would be An Abuse of the Division Engineer’s Discretionary Authority.

Even if 33 C.F.R. §330.5(c) were to provide the applicable procedure for considering WVDEP’s April 24, 2019 request, the Corps’ regulations unambiguously prohibit the Division Engineer from exercising his discretionary authority to replace existing Special Conditions A, C, and L on NWP 12 in West Virginia with the conditions in WVDEP’s April 24, 2019 purported modifications.¹¹

9 Commenters do not concede that review of WVDEP’s April 24, 2019 request under 33 C.F.R. §330.5(c) would be lawful. Commenters hereby incorporate by reference all the arguments that they made as Petitioners in *Sierra Club*, 909 F.3d 645, regarding the Corps’ authority to modify the Special Conditions on NWP 12’s use in West Virginia.

10 Such substantive comments, beyond these procedural comments, will include a discussion of WVDEP’s lack of statutory or regulatory authority under West Virginia law to modify Section 401 water quality certifications and the failure of the April 24, 2019 purported modifications to reasonably assure compliance with water quality standards.

11 The Corps is not required to accept WVDEP’s April 24, 2019 purported modifications. *Airport Communities Coal. v. Graves*, 280 F.Supp.2d 1207, 1216 (W.D. Wash 2004). Rather, its consideration of the purported modifications is wholly discretionary. *Id.* at 1217. If a state were able to modify a previously issued Section 401 water quality certification at all, it would only be “in such manner as may be agreed upon by the certifying agency, the licensing or permitting

As discussed above, the Corps' regulations define the Division Engineer's discretionary authority this way:

Discretionary authority means the authority described in §330.1(d) and §330.4(e) which the Chief of Engineers delegates to division or district engineers *to modify an NWP authorization by adding conditions*, to suspend an NWP authorization, or to revoke an NWP authorization and thus require individual permit authorization.

33 C.F.R. §330.2(g) (emphasis added). When the Corps finalized that definition, it explained in the preamble to 33 C.F.R. §330.2(g) that

[t]wo commenters [on the proposed definition] requested clarification of the term "modification", within the context of discretionary authority, to clarify that *modification results in additional conditioning of the permit making it more restrictive. Although we never intended the language found at Section 330.1 to allow expansion of NWP coverage*, we have added language to clarify this term (See section 330.1(d)).

Final Rule for Nationwide Permit Program Regulations and Issue, Reissue, and Modify Nationwide Permits, 56 Fed. Reg. 59,110, 59,113 (Nov. 22, 1991) (emphasis added).

Section 330.1(d) describes the Division Engineer's discretionary authority this way:

Discretionary authority. District and division engineers have been delegated a discretionary authority to suspend, modify, or revoke authorizations under an NWP. *This discretionary authority may be used by district and division engineers only to further condition or restrict the applicability of an NWP* for cases where they have concerns for the aquatic environment under the Clean Water Act section 404(b)(1)

agency [here, the Corps], and the Regional Administrator [of EPA.]" 40 C.F.R. §121.2(b). Section 330.4(c)(2) does not apply to WVDEP's April 24, 2019 purported modifications because they were not issued "prior to the issuance or reissuance" of the NWPs. 33 C.F.R. §330.4(c)(2). Some commenters on an earlier proposal by WVDEP to modify its 2017 Water Quality Certification maintained that the purported modifications implicate 33 C.F.R. §330.4(c)(7), which applies "[w]here a state, after issuing a 401 water quality certification for an NWP, subsequently attempts to withdraw it." Faced with an attempted withdrawal of a state water quality certification, "the division engineer will review th[e substantive reasons for the withdraw] and consider whether there is a substantial basis for suspension, modification, or revocation of the NWP authorization as outlined in § 330.5." 33 C.F.R. §330.4(c)(7). But WVDEP's April 24, 2019 purported modification is not an attempted withdrawal; it is an attempted modification that expands the scope of NWP 12. And, as explained below, the Division Engineer lacks the discretionary authority under 33 C.F.R. §§330.1(d), 330.4(e), and 330.5(c) to modify the conditions of NWP 12 in West Virginia in the manner requested by WVDEP.

Guidelines or for any factor of the public interest. . . . Discretionary authority is also discussed at 33 CFR 330.4(e) and 330.5.

33 C.F.R. §330.1(d) (emphasis added). The emphasized sentence was added by the Corps to clarify that the modification permitted under the Division Engineer's discretionary authority "results in additional conditioning of the permit making it more restrictive." 56 Fed. Reg. at 59,113. As the Corps explained in the preamble to 33 C.F.R. §330.1(d):

A few commenters thought [allowing Division and District Engineers the authority to modify NWPs] would lead to a further expansion of the nationwide permit program. This was never our intent. In response to this concern *we have made it clear in the regulation that the Division and District Engineers can not expand a nationwide permit* but rather this provision can only be used to further limit a nationwide permit.

56 Fed. Reg. at 59,110 (emphasis added).

In *Sierra Club*, the Fourth Circuit construed the discretionary authority delegated to the Division and District Engineers in Part 330 to be a one-way ratchet, authorizing only modifications that make an NWP more restrictive and prohibiting modifications that would expand the applicability of an NWP. 909 F.3d at 650–51. On that point, the Fourth Circuit explained:

That the regulations define the Corps' discretionary authority as the power to "add[] conditions" further establishes that the Corps can exercise its discretionary authority only after "all terms and conditions" of an NWP have been satisfied because it presupposes that the NWP's other conditions are already met. The plain language of the regulations does not permit the Corps to *replace* conditions in the NWP Instead, the Corps' discretionary authority allows it to supplement the conditions set forth in an NWP with additional conditions, but that discretionary authority is triggered only upon a successful NWP authorization—i.e., satisfaction of all terms and conditions of the NWP. Further, that authority is limited to providing *additional* conditions, above and beyond those found in the NWP, not replacing them wholesale

Id. at 650 (emphasis original). Accordingly, the Fourth Circuit held that the Corps acts contrary to its regulations when it purports to exercise its discretionary authority to *replace* a condition of the underlying NWP, "rather than merely supplementing or revising the Conditions in the underlying NWP." *Id.* at 651. And the Fourth Circuit clearly held that the Special Conditions in West Virginia's 2017 Water Quality Certification are conditions of the underlying NWPs. *Id.* at 650.

That the regulations define "modification" for purposes of the Division Engineer's discretionary authority in Section 330.4(e) to mean "the imposition of additional or revised terms or conditions on the authorization" does not change that conclusion. 33 C.F.R. §330.4(e). In *Sierra Club*, the Corps argued to the Fourth Circuit that, because its discretionary authority to modify an NWP authorization includes the authority to impose *revised* terms or conditions, Section 330.4(e)

must be construed to grant the Corps the discretionary authority to replace an existing condition with a less restrictive condition. *Id.* at 650.

The Fourth Circuit flatly rejected the Corps' argument that the use of the term "revised" in 33 C.F.R. §330.4(e) gives the Division and District Engineers the authority to entirely *replace* existing NWP conditions with less stringent ones, recognizing that Section 330.4(e)'s use of the word "revised" must be read in the context of the rest of the Corps' regulations. *Id.* (citing *Epps v. JP Morgan Chase Bank, N.A.*, 675 F.3d 315, 324 (4th Cir. 2012)). The Fourth Circuit held that the use of "revised" in Section 330.4(e) only allows revisions to "any activity-specific conditions previously imposed," and only when the "underlying conditions of the NWP" are met. *Id.* at 650–51. Again, the Special Conditions in West Virginia's 2017 Water Quality Certification are conditions of the underlying NWPs. *Id.* at 650.

The limits on the Corps' discretionary authority imposed by 33 C.F.R. §330.1(d)—limiting modifications to those that "further condition or restrict"—conclusively demonstrate that "revised" conditions under 33 C.F.R. §330.4(e) can only be more stringent than the original condition, never less so. *See id.* at 651. The Corps has unambiguously explained that, under the discretionary authority regulations, the Division Engineer "can not expand a nationwide permit." 56 Fed. Reg. at 59,110. For that reason, the Division engineer lacks the authority to accept WVDEP's April 24, 2019 purported modifications.

As explained above, WVDEP's purported modifications to Special Conditions A, C, and L each would result in an expanded applicability of NWP 12 in West Virginia. That is, the conditions would indisputably make NWP 12 less restrictive. *See Sierra Club*, 909 F.3d at 650 (concluding that Special Condition C is a condition of NWP 12 itself). As a result, they are not the type of modifications that the Division Engineer is authorized to make under 33 C.F.R. §330.5(c) because they would not "further condition or restrict" NWP 12 in West Virginia, as required by 33 C.F.R. §330.1(d) and as held by the Fourth Circuit in *Sierra Club*, 909 at 650–51. Accordingly, if the Corps were to consider WVDEP's April 24, 2019 request under 33 C.F.R. §330.5(c), it would have to reject the request as beyond the Division Engineer's discretionary authority, as interpreted in *Sierra Club*.

III. WVDEP's Purported Modifications Are Not Motivated By Concerns for The Aquatic Environment or the Public Interest.

The Division Engineer may only exercise his discretionary authority to modify an NWP authorization where he has "concerns for the aquatic environment under the Clean Water Act section 404(b)(1) Guidelines or for any factor of the public interest." 33 C.F.R. §330.1(d); *see also* 33 C.F.R. §330.4(e)(1). Here, WVDEP's April 24, 2019 purported modifications to Special Conditions A, C, and L were not motivated by a desire to increase protection of the aquatic environment. Rather, they were solely motivated by WVDEP's interest in overturning the Fourth Circuit's ruling in *Sierra Club* for the benefit of two proposed pipelines. After the Fourth Circuit

stayed Mountain Valley Pipeline's NWP 12 verifications because of the pipeline's inability to comply with Special Condition C, West Virginia Governor Jim Justice issued this statement:

While the WVDEP is not a party to this lawsuit we can say that [the Mountain Valley Pipeline] project is extremely important to West Virginia. . . . We will continue to monitor these proceedings closely to determine what role the state may play in expediting the construction of this pipeline.

Press Release, Gov. Justice Issues Statement on Mountain Valley Pipeline Decision (June 21, 2018), *available at* <https://governor.wv.gov/News/press-releases/2018/Pages/Gov.-Justice-Issues-Statement-on-Mountain-Valley-Pipeline-Decision.aspx>. Less than seven weeks later, WVDEP announced its first proposal to modify its Section 401 water quality certifications to "fix" Mountain Valley Pipeline's Fourth Circuit problems. Press Release, WVDEP Accepting Comments on Proposed Stream Crossing Permit Changes (Aug. 8, 2018), *available at* <https://dep.wv.gov/news/Pages/WVDEP-Accepting-Comments-on-Proposed-Stream-Crossing-Permit-Changes.aspx>.

Not only are the reasons behind WVDEP's April 24, 2019 purported modifications not within the scope of concerns for the aquatic environment, they also do not relate to any of the public interest factors the Corps considers in Section 404 permitting. Those factors, set out in 33 C.F.R. §320.4(a), do not include making the use of NWPs available to projects that would otherwise be ineligible. Accordingly, WVDEP's April 24, 2019 purported modifications are not the type of modifications allowed under the Division Engineer's Part 330 discretionary authority.

IV. WVDEP's Purported Modifications Are Impermissible Under 33 C.F.R. §325.4 Because They Are Not Reasonably Enforceable.

WVDEP's April 24, 2019 purported modifications do not meet the criteria for permit conditions set out in 33 C.F.R. §325.4. Permit conditions must be reasonably enforceable, and conditions that are not enforceable will result in permit denial. 33 C.F.R. §§325.4(a) & (c); *Hoosier Envtl. Council, Inc. v. U.S. Army Corps of Eng'rs*, 105 F.Supp.2d 953, 968 n.10 (S.D. Ind. 2000). WVDEP's April 24, 2019 purported modifications to Special Condition A are not reasonably enforceable. Those modifications purport to vest in the Secretary of the WVDEP the "sole discretion" to require an individual water quality certification for certain projects under NWP 12.¹²

That modification is not reasonably enforceable. Although WVDEP attempted to address the enforceability of its April 24, 2019 purported modifications to Special Condition A in its response to public comment on its modification proposal, its efforts fall short and demonstrate a

¹² Letter from Harold Ward, Acting Director, W. Va. Dep't of Envtl. Protection, Div. of Water & Waste Mgmt., to Mr. Michael Hatten, Chief, Regulatory Branch, U.S. Army Corps of Eng'rs, Huntington District at 11 (Apr. 24, 2019).

fundamental misunderstanding of the NWP 12 preconstruction notification (“PCN”) process.¹³ WVDEP insists that it will receive copies of PCNs submitted to the Corps under NWP 12, and that, as a result, “WVDEP should receive Pre-construction Notification (PCN) for projects which meet any of the conditions of NWP 12 Special condition A.i-vii.”¹⁴ That is not so. Although WVDEP will receive copies of any NWP 12 PCNs submitted to the Corps by virtue of NWP 401 Standard Condition 1, PCNs are not required for all pipelines equal to or greater than 36 inches in diameter. The criteria requiring a PCN under NWP 12 do not include pipeline diameter. *Issuance and Reissuance of Nationwide Permits*, 82 Fed. Reg. 1860, 1986 (Jan. 6, 2017). As a result, not every pipeline equal to or greater than 36” will result in a PCN submission to the Corps.

The upshot is this: if the Corps were to adopt WVDEP’s April 24, 2019 purported modifications, a class of activities could be authorized (i.e., pipelines greater than or equal to 36” in diameter) for which the Secretary of WVDEP has reserved the right to require an individual water quality certification, without the Corps or WVDEP ever receiving notice that such activities were authorized. Consequently, WVDEP’s April 24, 2019 purported modifications to NWP 12 Special Condition A is not reasonably enforceable, and cannot be adopted by the Corps under 33 C.F.R. §325.4.

CONCLUSION

The Corps need not accept WVDEP’s invitation to wade back into the controversy over NWP 12’s availability in West Virginia to the Mountain Valley Pipeline and the Atlantic Coast Pipeline. WVDEP’s April 24, 2019 purported modifications need not be accepted in order for those two projects to seek federal approval under Section 404 of the Clean Water Act. If those two pipelines want Section 404 authorization, then they can request individual permits under 33 U.S.C. §1344(a). Indeed, the Corps’ regulations instruct it to direct the two pipelines to the individual permit process because they are ineligible for NWP 12. 33 C.F.R. §330.6(a)(2) (requiring the district engineer to instruct applicants on the procedures to obtain an individual permit where an activity does not comply with the terms or conditions of an NWP).

As the Fourth Circuit observed in *Sierra Club*, “an individual permit will likely be necessary” for Mountain Valley Pipeline. 909 F.3d at 655. Indeed, at oral argument in *Sierra Club*, Judge Wynn repeatedly asked counsel for the Corps why it had not invoked the individual permit process with respect to the Mountain Valley Pipeline. Oral Argument at 16:24, 17:33, 17:50, 26:31, & 27:01, *Sierra Club v. U.S. Army Corps of Eng’rs*, 909 F.3d 635 (4th Cir. 2018) (No. 18-1173(L)), <https://www.ca4.uscourts.gov/OAarchive/mp3/18-1173-20180928.mp3>.

If the Corps were to grant WVDEP’s April 24, 2019 request and purport to replace the existing Special Conditions A, C, and L in NWP 12 with WVDEP’s April 24, 2019 purported

¹³ Letter from Harold Ward, Acting Director, W. Va. Dep’t of Env’tl. Protection, Div. of Water & Waste Mgmt., to Commenters 12 (Apr. 24, 2018) (quoting comments by the Huntington District Regulatory Division).

¹⁴ *Id.*

modifications, for the reasons set forth above it would be unlawfully acting beyond the scope of its authority and would be setting itself up for further litigation (including the possibility of additional questions from the Fourth Circuit about why it did not invoke the individual permit process). But, with the availability of the individual permit process, there is no need for the Corps to expose itself to further litigation over the applicability of NWP 12 to Mountain Valley Pipeline and Atlantic Coast Pipeline. Accordingly, the Corps should decline WVDEP's April 24, 2019 request and direct Mountain Valley Pipeline and Atlantic Coast Pipeline to apply for individual permits.

Sincerely,



Derek O. Teaney

Counsel for Sierra Club, West Virginia Rivers Coalition, West Virginia Highlands Conservancy, Indian Creek Watershed Association, Appalachian Voices, Chesapeake Climate Action Network, and Appalachian Mountain Advocates

cc: David Gunter, U.S. Department of Justice
(via electronic mail to David.Gunter@usdoj.gov)
Ellen Durkee, U.S. Department of Justice
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Jon T. Coleman, U.S. Army Corps of Eng'rs Pittsburgh District
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July 26, 2019

Via U.S. Mail and Electronic Mail

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Suzanne.L.Chubb@usace.army.mil

**Re: State of West Virginia Proposal to Modify Its Clean Water Act Section 401
Water Quality Certification for Nationwide Permits (Public Notice No. 2019-01-LRD)**

Dear Ms. Chubb:

On June 26, 2019, the Great Lakes and Ohio River Division of the United States Army Corps of Engineers issued Public Notice No. 2019-01-LRD, soliciting public comments on the State of West Virginia's Proposal to Modify its Clean Water Act Section 401 Water Quality Certification of the 2017 Nationwide Permits ("NWP"). On July 8, 2019, the Corps extended the public comment period to July 27, 2019. The Sierra Club, the West Virginia Rivers Coalition, the West Virginia Highlands Conservancy, the Indian Creek Watershed Association, Appalachian Voices, the Chesapeake Climate Action Network, Appalachian Mountain Advocates, and the Ohio Valley Environmental Coalition (hereinafter, collectively, "Commenters") appreciate the extension and the opportunity to comment on the State of West Virginia's proposal, and hereby submit the following comments to supplement those included in their June 27, 2019 letter.¹

¹ On June 27, 2019, before they were aware of the June 26, 2019 Public Notice, Commenters (except for the Ohio Valley Environmental Coalition) sent a letter to the Chief of Engineers, the Great Lakes and Ohio River Division Engineer, the Huntington District Engineer, and the Chief of the Regulatory Branch of the Huntington Division regarding West Virginia's proposal. In a July 3, 2019 email, Colonel Evers—the Huntington District Commander—confirmed that the Commenters' June 27, 2019 letter had been made part of the administrative record.

BACKGROUND

As a result of the Corps' May 12, 2017 issuance of the Nationwide Permits for the State of West Virginia,² the 2017 NWP's include the Special Conditions in West Virginia's 2017 Water Quality Certification as conditions of the underlying NWP's by operation of 33 U.S.C. §1341(d). *Sierra Club v. U.S. Army Corps of Eng'rs*, 909 F.3d 635, 650 (4th Cir. 2018). To be clear, those Special Conditions are conditions of the NWP's themselves. *Id.* (providing that a state water quality certification condition "shall become a condition on any Federal license or permit" (emphasis added)). The Fourth Circuit expressly held in *Sierra Club* that "[t]his language leaves no room for interpretation. 'Shall' is an unambiguously mandatory term, meaning, as courts have uniformly held, that state conditions *must* be conditions of the NWP." 909 F.3d at 645 (emphasis original); *see also id.* at 650 ("[A] precondition for 'authorization' of the Pipeline project is satisfaction of 'all of the NWP's terms and conditions,' necessarily including state-imposed conditions like Special Condition C under Section 1341(a).") (Quoting 33 C.F.R. §330.1(c); emphasis in *Sierra Club*.)). Indeed, the Corps acknowledged as much in Public Notice No. 2019-01-LRD, in which it states that, "On May 12, 2017, the Corps published and approved the WV-specific Corps regional conditions, and incorporated into the 2017 NWP's the standard and special conditions of WV's Clean Water Act Section 401 water quality certification . . ." Accordingly, NWP 12 itself includes three conditions pertinent to WVDEP's April 24, 2019 purported modifications: Special Conditions A, C, and L. *Sierra Club*, 909 F.3d at 650 (describing Special Condition C as a "condition in the underlying NWP").

Special Condition A to NWP 12 in West Virginia provides, in relevant part, that "Individual State Water Quality Certification is required for . . . [p]ipelines equal to or greater than 36 inches in diameter . . . [and] [p]ipelines crossing a Section 10 river . . ."³ WVDEP's April 24, 2019 purported modifications would relax Special Condition A and expand the availability of NWP 12 in West Virginia, by modifying Special Condition A to read

The Secretary of the West Virginia Department of Environmental Protection, in the Secretary's sole discretion, reserves the right to require an individual water quality certification for any of the following facilities or impacts:

- i. Pipelines equal to or greater than 36 inches in diameter; [or]
- ii. Pipelines crossing a Section 10 river . . . [.]

*****4

That is, if adopted by the Corps (and approved by EPA Region 3), WVDEP's April 24, 2019 purported modifications would expand the availability of NWP 12 in West Virginia to include

2 U.S. Army Corps of Eng'rs, Nationwide Permits for the State of West Virginia (May 12, 2017).

3 U.S. Army Corps of Eng'rs, Nationwide Permits for the State of West Virginia at 20 (May 12, 2017).

4 Letter from Harold Ward, Acting Director, W. Va. Dep't of Env'tl. Protection, Div. of Water & Waste Mgmt., to Mr. Michael Hatten, Chief, Regulatory Branch, U.S. Army Corps of Eng'rs, Huntington District at 10-11 (Apr. 24, 2019).

pipelines equal to or greater than 36 inches in diameter or that cross a Section 10 river, even if those pipelines lack individual water quality certifications.

Special Condition C to NWP 12 in West Virginia provides

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 the Hughes River, are exempt from the 72-hour requirements. All stream activities shall be completed as rapidly as possible.⁵

WVDEP's April 24, 2019 purported modifications would relax Special Condition C and expand the availability of NWP 12 in West Virginia by modifying Special Condition C to read:

Individual stream crossings using wet or open-cut methods that do not isolate the excavation area must be completed in a continuous, progressive manner and within 72 hours during seasonal normal or below normal stream flow conditions. Stream crossings using the dry ditch method are exempt from the 72-hour requirement. Construction and access bridges and crossings on, [sic] Section 10 rivers are also exempt from the 72-hour requirements. Whatever crossing method is chosen by the permittee, the crossing should be completed as rapidly as practicable.⁶

If adopted by the Corps (and approved by EPA Region 3), WVDEP's April 24, 2019 purported modifications would expand the applicability of NWP 12 in West Virginia by, among other things, exempting dry stream-crossings and all Section 10 Rivers from the 72-hour restriction.

Special Condition L to NWP 12 in West Virginia provides that "[n]o structure authorized by this permit shall impede or prevent fish movement upstream or downstream."⁷ WVDEP's April 24, 2019 purported modification would relax Special Condition L and expand the availability of NWP 12 in West Virginia by modifying Special Condition L to read, "No permanent structure

5 U.S. Army Corps of Eng'rs, Nationwide Permits for the State of West Virginia at 20 (May 12, 2017).

6 Letter from Harold Ward, Acting Director, W. Va. Dep't of Env'tl. Protection, Div. of Water & Waste Mgmt., to Mr. Michael Hatten, Chief, Regulatory Branch, U.S. Army Corps of Eng'rs, Huntington District at 11 (Apr. 24, 2019).

7 U.S. Army Corps of Eng'rs, Nationwide Permits for the State of West Virginia at 21 (May 12, 2017).

authorized by this permit shall prevent fish movement upstream or downstream.”⁸ That is, if adopted by the Corps (and approved by EPA Region 3), WVDEP’s April 24, 2019 purported modification would expand the applicability of NWP 12 in West Virginia to activities using temporary structures that would prevent or impede fish movement upstream or downstream, and to permanent structures that impede such fish movement.

As discussed in the Commenters’ June 27, 2019 letter to the Corps, because West Virginia has already certified the 2017 NWPs under Section 401, the Corps is not required to accept WVDEP’s April 24, 2019 purported modifications. *Airport Communities Coal. v. Graves*, 280 F.Supp.2d 1207, 1216 (W.D. Wash. 2004). Rather, the Corps’ consideration of the purported modification is wholly discretionary. *Id.* at 1217. The Corps’ regulation at 33 C.F.R. §330.4(c)(2) does not apply to WVDEP’s April 24, 2019 purported modifications because those modifications were not issued “prior to issuance or reissuance” of the NWPs. 33 C.F.R. §330.4(c)(2). For the following reasons, the Division Engineer cannot and should not accept and incorporate WVDEP’s April 24, 2019 purported modifications into the 2017 NWPs.

I. The Division Engineer Does Not Have the Authority to Incorporate WVDEP’s April 24, 2019 Purported Modification into the 2017 NWPs; Only the Chief of Engineers Can Modify Special Conditions A, C, and L Because Those Conditions are Conditions of NWP Itself By Operation of 33 U.S.C. §1341(d).

Public Notice No. 2019-01-LRD solicits public comment “on whether the Division Engineer should accept and incorporate WV’s modified 401 WQC into the Corps’ 2017 NWPs.” Simply stated, the Division Engineer does not have the authority to accept and incorporate the purported modifications into the Corps’ 2017 NWPs.

The Division Engineer’s discretionary authority with regard to NWPs is limited to “the authority described in §§330.1(d) and 330.4(e) which the Chief of Engineers delegates to division and district engineers to modify an NWP authorization by adding conditions, to suspend an NWP authorization, or to revoke an NWP authorization and thus require individual permit authorization.” 33 C.F.R. §330.2(g). Section 330.4(e) provides that the procedures by which division and district engineers may exercise their discretionary authority as to “NWP authorizations are detailed in §330.5.” 33 C.F.R. §330.4(e). Section 330.5(c) details the Division Engineer’s discretionary authority this way:

(c) Division Engineer.

(1) A division engineer may use his discretionary authority to modify, suspend, or revoke NWP authorizations for any specific geographic area, class of activities, or class of waters within his division, including on a statewide basis, by issuing a public notice or notifying the individual involved. The notice will state his concerns regarding the environment or the other relevant factors of the public interest. Before

⁸ Letter from Harold Ward, Acting Director, W. Va. Dep’t of Env’tl. Protection, Div. of Water & Waste Mgmt., to Mr. Michael Hatten, Chief, Regulatory Branch, U.S. Army Corps of Eng’rs, Huntington District at 12 (Apr. 24, 2019).

using his discretionary authority to modify or revoke such NWP authorizations, division engineers will:

- (i) Give an opportunity for interested parties to express their views on the proposed action (the DE will publish and circulate a notice to the known interested public to solicit comments and provide the opportunity to request a public hearing);
- (ii) Consider fully the views of affected parties;
- (iii) Prepare supplemental documentation for any modification or revocations that may result through assertion of discretionary authority. Such documentation will include comments received on the district public notices and a statement of findings showing how substantive comments were considered;
- (iv) Provide, if appropriate, a grandfathering period as specified in § 330.6(b) for those who have commenced work or are under contract to commence in reliance on the NWP authorization; and
- (v) Notify affected parties of the modification, suspension, or revocation, including the effective date (the DE will publish and circulate a notice to the known interested public and to anyone who commented on the proposed action).

(2) The modification, suspension, or revocation of authorizations under an NWP by the division engineer will become effective by issuance of public notice or a notification to the individuals involved.

(3) A copy of all regional conditions imposed by division engineers on activities authorized by NWPs will be forwarded to the Office of the Chief of Engineers. ATTN: CECW-OR.

33 C.F.R. §330.5(c).

The Division Engineer's discretionary authority with regard to NWPs is expressly limited to modifying, suspending, or revoking "NWP authorizations. 33 C.F.R. §330.5(c); *see also id.* §330.1(d); §330.2(g); §330.4(e). *Authorizations* are distinct from the nationwide permits themselves. The Corps' regulations at 33 C.F.R. §330.2(c) provide, "*Authorization* means that specific activities that qualify for an NWP may proceed, provided that the terms and conditions of the NWP are met." In briefing before the United States Court of Appeals for the Fourth Circuit, the Corps conceded that the discretionary authority discussed in 33 C.F.R. §330.5 "applies to the 'authorization,' not to the broader Nationwide Permit."⁹ In other words, the Chief of Engineers has delegated to the Division Engineer the authority to modify authorizations *only*; the Division Engineer does not have the authority to modify the terms and conditions of the broader NWP.

That distinction is crucial because, here, by operation of Section 401(d) of the Clean Water Act (33 U.S.C. §1341(d)), Special Conditions A, C, and L in WVDEP's 2017 Section 401 Water

9 Br. for the Federal Respondents at 23, *Sierra Club v. U.S. Army Corps of Eng'rs*, No. 18-1173(L) (4th Cir.), *cited in Sierra Club*, 909 F.3d at 651.

Quality Certification became conditions of the broader NWP 12, not conditions on authorizations. See 33 U.S.C. §1341(d) (providing that state water quality certification conditions “shall become a condition on any Federal license or permit” (emphasis added)). The Fourth Circuit expressly held in *Sierra Club* that “[t]his language leaves no room for interpretation. ‘Shall’ is an unambiguously mandatory term, meaning, as courts have uniformly held, that state conditions *must* be conditions of the NWP.” 909 F.3d at 645 (emphasis original); see also *id.* at 650 (“[A] precondition for ‘authorization’ of the Pipeline project is satisfaction of ‘all of the NWP’s terms and conditions,’ necessarily including state-imposed conditions like Special Condition C under Section 1341(a).” (Quoting 33 C.F.R. §330.1(c); emphasis in *Sierra Club*)). Indeed, the Corps acknowledged that Special Conditions A, C, and L are conditions in NWP 12 itself in Public Notice No. 2019-01-LRD when it stated, “On May 12, 2017, the Corps published the approved WV-specific Corps regional conditions, and incorporated into the 2017 NWPs the standard and special conditions of WV’s Clean Water Act Section 401 water quality certification” (Emphasis added.).

Furthermore, the Fourth Circuit recognized in *Sierra Club* that the discretionary authority described in 33 C.F.R. §330.5(c) and (d) “specifically refer[s] to the Corps’ ability to modify ‘authorizations under an NWP’ (Section 330.1(d)) and ‘NWP authorizations’ (Section 330.4(e)).” 909 F.3d at 650. In other words, the Division Engineer’s discretionary authority is limited to *authorizations*. Accordingly, the Fourth Circuit concluded that “full compliance with each and every condition in the underlying NWP, including Special Condition C, is a precondition for the Corps to exercise its discretionary authority to modify the conditions.” *Id.* (emphasis added).

Stated otherwise, the conditions imposed by WVDEP’s 2017 Section 401 Water Quality Certification—including Special Conditions A, C, and L—are conditions of NWP itself, and no authorization may occur under NWP 12 in West Virginia without compliance with those permit conditions. As a result, the Division Engineer lacks the authority to modify Special Conditions A, C, and L.

The upshot is that only the Chief of Engineers may modify the conditions of an existing NWP, as opposed to an authorization, and only in compliance with the procedures set out in 33 C.F.R. §330.5(b). And, as established above, Special Conditions A, C, and L are conditions of existing NWP 12. Bluntly stated, WVDEP has asked for a “do-over” and requests that the Corps launder Special Conditions A, C, and L from NWP 12. The State makes that request only so that two proposed natural gas pipelines can use NWP 12 instead of seeking individual permits. That is a remarkable ask, because only the Chief of Engineers can achieve what WVDEP requests by reissuing NWP 12 anew. That is, if the Corps were able to consider adopting WVDEP’s April 24, 2019 purported modifications, at minimum the Chief of Engineers would have to invoke and implement the procedures set out in 33 C.F.R. §330.5(b). Under that regulation, “[f]rom time-to-time . . . modification to existing NWPs will be evaluated by the Chief of Engineers following the procedures specified in this section.” 33 C.F.R. §330.5(b). Those procedures include public notice, comment, the opportunity for a public hearing, and the preparation of appropriate documentation under the National Environmental Policy Act and the Section 404(b)(1) guidelines. 33 C.F.R. §330.5(b)(2)–(3).

If the Division Engineer were to accept and incorporate WVDEP’s April 24, 2019 purported modifications into the Corps’ 2017 NWPs, without action by the Chief of Engineers

under 33 C.F.R. §330.5(b), such an action would not survive judicial review. Under the Administrative Procedures Act, federal courts “shall . . . hold unlawful and set aside agency action, findings, and conclusions found to be . . . without observance of procedure required by law.” 5 U.S.C. §706(2); *see also Sierra Club*, 909 F.3d at 651–54 (holding action taken without proper notice and comment to be unlawful and emphasizing the importance of the Clean Water Act’s public participation requirements). Accordingly, exercise of discretionary authority by the Division Engineer—as opposed to the Chief of Engineers—would be insufficient to lawfully accept and incorporate WVDEP’s April 24, 2019 purported modifications into the 2017 NWP.

II. The Corps Cannot Accept the April 24, 2019 Purported Modifications and Incorporated them Into the 2017 NWPs Because WVDEP Lacks the Authority to Modify Its 2017 Section 401 Water Quality Certification.

Even if the Division Engineer had the authority to accept and incorporate WVDEP’s April 24, 2019 purported modifications into the 2017 NWPs, to do so would be arbitrary and capricious here because WVDEP’s action was *ultra vires*. Under *Keating v. F.E.R.C.*, 926 F.2d 616, 624–25 (D.C. Cir. 1997), the federal agency whose permit is subject to a state Section 401 water quality certification must review any effort by the state to modify its prior modification for compliance with applicable law. Accordingly, before the Corps determines whether to accept WVDEP’s April 24, 2019 purported modifications and incorporate them into the 2017 NWPs, it must first ensure that those modifications comply with applicable law. For the foregoing reasons, they do not.

1. WVDEP Lacks Statutory Authority to Modify Previously Issued Section 401 Certifications Under State Statutes.

West Virginia law does not permit WVDEP to modify West Virginia’s certification of the Corps’ nationwide permits between the Corps’ five-year reissuances. The West Virginia legislature may “delegate to an administrative agency the power to . . . implement the statute under which the agency functions.” *Simpson v. W. Va. Office of the Ins. Comm’r*, 678 S.E.2d 1, 12 (W. Va. 2009) (quoting *Rowe v. W. Va. Dep’t of Corr.*, 292 S.E.2d 650, Syl. Pt. 3 (W. Va. 1982)). Nevertheless, “an administrative body may not [act] . . . out of harmony with, . . . alter[], or limit[] the statute being administered” *E. Gas & Fuel Assocs. v. Hatcher*, 107 S.E.2d 618, 623 (W. Va. 1959) (citation omitted). At their core “[a]dministrative agencies . . . are creatures of statute Their power is dependent upon statutes, so that they must find within the statute warrant for the exercise of any authority which they claim.” *Reed v. Thompson*, 772 S.E.2d 617, 620 (W. Va. 2015) (quoting *Mountaineer Disposal Serv., Inc. v. Dyer*, 197 S.E.2d 111, Syl. Pt. 2 (W. Va. 1973)). Thus, whatever power the legislature deemed appropriate to delegate to the WVDEP, the WVDEP “may not [act] . . . inconsistent with . . . its statutory authority.” *Simpson*, 678 S.E.2d at 12. The legislature’s delegation is the desideratum of agency action. *See id.*

The West Virginia Legislature has not granted WVDEP the power to modify Section 401 certifications. WVDEP’s organic act is silent as to its authority to modify a prior certification pursuant to Section 401 of the CWA. And that silence is controlling. The statute only authorizes the WVDEP Secretary to “[i]ssue certifications *required* under [Section 401] of the federal Clean Water Act.” W. Va. Code §22-1-6(d)(7) (emphasis added). By incorporating federal law into the state statute, the West Virginia Legislature confined WVDEP’s authority to that required by

Section 401. The requirements of Section 401 do not permit modification of a prior Section 401 certification except in specific circumstances not at issue here. *See* 33 U.S.C. §1341(a)(1)–(3). WVDEP, as a state administrative agency, is therefore without the legislative authority to modify its prior certification of the Corps’ 2017 NWP.

2. WVDEP Lacks Regulatory Authority to Modify Section 401 Certifications Under West Virginia’s Code of State Rules.

Likewise, WVDEP’s regulations provide no mechanism for it to modify its Section 401 Certification of the 2017 NWP. “An administrative body must abide by the remedies and procedures it properly establishes to conduct its affairs.” *State ex rel. Wilson v. Truby*, 281 S.E.2d 231, 236 (W. Va. 1981) (citing *State ex rel. Hawkins v. Tyler County Bd. of Educ.*, 275 S.E.2d 903, 912 (W. Va. 1980)). Further, “due process requires governmental agencies to comply with their own regulations.” *Hutchinson v. City of Huntington*, 479 S.E.2d 649, 666 (W. Va. 1996) (citing *Truby*, 281 S.E.2d at 236; *Trimboli v. Bd. of Educ.*, 254 S.E.2d 561 (W. Va. 1979)).

WVDEP’s regulations governing Section 401 certifications are codified at Sections 47-5A-1 to 57-5A-8 of the West Virginia Code of State Rules. W. Va. Code R. §47-5A-1—47-5A-8. Section 1.1 of the regulations states that “[t]he purpose of this legislative rule is to carry out the responsibilities placed upon the State by Section 401 of the Federal Clean Water Act” W. Va. Code R. §47-5A-1.1. The regulations, like W. Va. Code §22-1-6, are condemningly silent concerning modifications to Section 401 certifications. *See id.* Likewise, they affirmatively incorporate the federal standards into the state certification process. *Id.*

The regulations themselves limit WVDEP’s actions to: “grant, grant with conditions, deny, or waive” W. Va. Code R. §47-5A-3.1. “Modify” is not one of the actions WVDEP may take. WVDEP’s “express mention of one thing implies the exclusion of another.” *Stonewall Jackson Mem’l Hosp. v. Am. United Life Ins. Co.*, 525 S.E.2d 649, 655 (W. Va. 1999). Were the regulation to contemplate a modification, it would have been included in the language. WVDEP’s list of various actions it may take also fall within the general rule of interpretation of *ejusdem generis*. *See State v. Morrison*, 227 S.E.2d 75, 77 (W. Va. 1925). The specifically enumerated actions (grant, grant with conditions, deny, or waive) all imply action WVDEP can take on a pending application for Section 401 certifications. In contrast, “modification,” necessarily requires that a certification has already been made and is to be revisited. The enumeration of actions to be made upon a pending application for certification cannot be read to also include an action that can only be taken during the operative period of a certification. *See id.* “Modify” is not of the same kind as “grant, grant with conditions, deny or waive,” and therefore its place among dissimilar terms cannot be assumed.

In short, WVDEP cannot modify a previously issued Section 401 certification because it has no regulatory authority to do so. *See Truby*, 281 S.E.2d at 236. Thus, for the Division Engineer to accept WVDEP’s April 24, 2019 purported modifications and incorporate them into the 2017 NWP would be arbitrary and capricious.

3. WVDEP Lacks Authority to Modify its Section 401 Water Quality Certification of the 2017 NWP Under the Clean Water Act.

Federal law also precludes WVDEP from modifying its Section 401 water quality certification of the 2017 NWPs at this time. Once a state certifies a federal permit under Section 401, any conditions placed on that certification become conditions of the federal permit. 33 U.S.C. §1341(d). “Whatever 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*, 927 F.2d at 623. Section 401 only allows “a state to revoke a prior certification . . . pursuant to the terms of, and for the reasons indicated in, section 401(a)(3).” *Keating*, 927 F.2d at 622. Section 401(a)(3) permits 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 and 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) (emphasis added). None of the circumstances described are applicable here. Moreover, WVDEP, in its call for public comments, did not base its proposed changes on any of Section 401’s permissible grounds to modify a certification. The Clean Water Act, therefore, precluded WVDEP’s action in its April 24, 2019 purported modification to its Section 401 Water Quality Certification.¹⁰

III. WVDEP’s Purported Modifications Do Not Address Environmental Concerns or Serve the Public Interest as Required by 33 C.F.R. §330.5(c)(1).

1. WVDEP’s Purported Modification of Special Condition A Cannot be Reasonably Explained and Does Not Reasonably Assure Compliance With Water Quality Standards.

Existing Special Condition A expressly requires an individual state water quality certification for certain utility lines and impacts. That condition reflects a determination by WVDEP that the terms and conditions of the 2017 NWP 12, combined with the Special Conditions imposed in WVDEP’s 2017 Section 401 Water Quality Certification of that permit, do not necessarily ensure compliance with state water quality standards and that further examination of the utility line and its impacts would be required in order to make the determination required by 40 C.F.R. §121.2(a)(3) that “there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards.”

WVDEP’s April 24, 2019 action purports to modify Special Condition A to replace the requirement of an individual certification for certain utility lines and impacts with a reservation to

¹⁰ As was the case in *Keating*, the South Carolina Supreme Court, confronting whether the state could suspend and revoke a prior 401 certification, found that the state did not have federal authority to either suspend or revoke the prior certification. *Triska v. Dep’t of Health and Envtl. Control*, 355 S.E.2d 531, 533–34 (S.C. 1987). The *Triska* Court noted that Section 401(a)(3) provides the exclusive mechanism to modify a certification. *Id.* at 534.

the Secretary of the discretion to require an individual certification. The purported modification sets no bounds on the Secretary's discretion in that regard.

WVDEP has not provided a sufficient, rational justification for its purported modification to Special Condition A. “[A]n agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change” *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.* 463 U.S. 29, 42 (1983). A reasoned analysis “must explain the evidence which is available, and must offer a ‘rational connection between the facts found and the choice made.’” *Id.* at 52 (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962)). The agency must “display awareness that it is changing position and show that there are good reasons for the new policy.” *Encino Motorcars, LLC v. Navarro*, ___ U.S. ___, 136 S.Ct. 2117, 2126 (2016) (internal citations and quotation marks omitted). Where, as here, an agency proposes a policy that contradicts a prior, long-standing policy, “a reasoned explanation is needed for disregarding facts and circumstances that underlay . . . the prior policy.” *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515–16 (2009).

West Virginia’s requirement of an individual certification for pipelines 36” or greater in diameter dates back to at least 1992.¹¹ Thus, for more than 25 years, WVDEP has recognized that certain pipelines require greater scrutiny to ensure that water quality standards will be protected. With the purported modification to Special Condition A, WVDEP attempts to abandon its long-standing and well-considered policy of requiring a case-by-case examination of certain high-impact utility lines, but has not provided a sufficient justification for doing so.

Indeed, no rational and reasoned explanation for the abandonment of the individual certification requirement can be offered. The utility lines and impacts that trigger the requirement for an individual water quality certification under existing Special Condition A are exceptionally large projects that affect important and sensitive aquatic and wildlife resources. The terms and conditions of NWP 12 and West Virginia’s general Section 401 certification are inadequate to reasonably assure that these large projects in sensitive areas will comply with water quality certifications. Accordingly, the need for Special Condition A persists, notwithstanding WVDEP’s contrived explanations for its removal. *Dep’t of Commerce v. New York*, 588 U.S. ___, ___, 139 S.Ct. 2551, 2575–76 (2019) (“The reasoned explanation requirement of administrative law . . . is meant to ensure that agencies offer genuine justifications for important decisions, reasons that can be scrutinized by courts and the interested public. Accepting contrived reasons would defeat the purpose of the enterprise.”).

2. WVDEP’s Proposed Modifications to Special Condition C to NWP 12 Fail to Reasonably Assure Compliance With Water Quality Standards and Impermissibly Change Long-Standing Regulatory Requirements Without a Reasoned Justification.

WVDEP’s April 24, 2019 action purports to modify the 72-hour limitation on stream-crossing duration in Special Condition C to exempt “[s]tream crossings using the dry ditch method” and Section 10 rivers. Those exemptions do not reasonably assure compliance with water quality

¹¹ Nationwide Permits for the State of West Virginia (1992).

standards—and hence do not protect the environment or the public interest better than the existing condition (33 C.F.R. §330.5(c)(1))—for at least two reasons.

First, by focusing on crossing methodology, the exemptions appear to focus myopically on sedimentation and turbidity at the expense of the aquatic life use. Although sedimentation and turbidity are important water quality considerations, they are not the only potential threats to water quality from prolonged in-stream construction. For example, Mountain Valley Pipeline, LLC (“MVP”), has proposed to dewater significant segments of the Greenbrier River for weeks at a time.¹² Phase I of MVP’s Greenbrier crossing would dewater 16,500 square feet of the riverbed for multiple weeks, with Phase 2 dewatering 15,000 square feet on the opposite side for a similar period of time.¹³

Water quality standards “consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based on such uses.” 33 U.S.C. §1313(c)(2)(A). “[A] project that does not comply with a designated use of the water does not comply with the applicable water quality standards.” *PUD No. 1 of Jefferson Cty. v. Wash. Dep’t of Ecology*, 511 U.S. 700, 715 (1994). All West Virginia waters “are designated for the Propagation and Maintenance of Fish and Other Aquatic Life[.]” W. Va. Code R. §47-2-6.1. Moreover, West Virginia’s water quality standards prohibit “[a]ny . . . condition which adversely alters the integrity of the waters of the State” or results in an “adverse impact to the . . . physical . . . or biological components of aquatic ecosystems.” *Id.* §47-2-3.2.i. Subject to a few narrow and inapplicable regulatory exceptions, those standards “apply at all times,” *id.* §47-2-7.2 (emphasis added), and to “the entire water body,” OFFICE OF WATER, EPA, 820-B-14-008, WATER QUALITY STANDARDS HANDBOOK 4-4 (2014) (emphasis added).

Dewatering large portions of streambeds for weeks at a time will eliminate their use for aquatic-life propagation and maintenance during construction. *Cf. PUD No. 1*, 511 U.S. at 719 (“[A] sufficient lowering of water quantity in a body of water could destroy all of its designated uses.”). Fish, mussels, crayfish, and benthic macroinvertebrates will be unable to use the construction areas for foraging, breeding, or refuge. Studies conducted in Pennsylvania examining the effect of reduced flow and dewatering on streams on the Appalachian Plateau have discovered profound reductions in aquatic animal populations as a result of flow loss and dewatering. *See* PA. DEPT. OF ENVTL. PROT., THE EFFECTS OF SUBSIDENCE RESULTING FROM UNDERGROUND BITUMINOUS COAL MINING 2008-2013.¹⁴ Measures of biological diversity of the macroinvertebrate community declined by thirteen percent in streams with only partial flow loss. *Id.* XI-6. In streams with complete dewatering the declines in macroinvertebrate populations would

¹² Memorandum for Record, CELRH-RD-E (LRH 2015-592-GBR) at 9 (Dec. 22, 2017).

¹³ Fed. Energy Regulatory Comm’n, Mountain Valley Project and Equitrans Expansion Project: Final Env’tl. Impact Statement at F6-8 (June 2017).

¹⁴ By statute the Pennsylvania Department of Environmental Protection is required to conduct a study of the effects of longwall coal mining every five years. The most recent report found that stream dewatering or flow loss are common effects of longwall mining under streams. The report’s findings on the effects of dewatering are therefore informative here.

be even more severe. West Virginia Department of Natural Resources biologist Janet Clayton put it more bluntly: “You can’t dewater a stream and expect aquatic life to live.” John McCoy, *Effect of Marcellus drilling on West Virginia Fisheries could be profound*, MCCLATCHY—TRIBUNE BUSINESS NEWS (Feb. 20, 2011).

Notwithstanding the threat of adverse impacts on the aquatic-life use from prolonged streambed dewatering, WVDEP impermissibly downplays that aspect of the problem in its April 24, 2019 purported modifications. Special Condition C’s 72-hour limitation minimizes the duration of aquatic-life impacts and would, in turn, minimize modifications to the physical and biological components of the aquatic ecosystems. Special Condition C’s 72-hour limitation serves as a proxy for the threshold below which no significant adverse impacts from streambed dewatering could be expected. By eliminating the time restriction, the purported exemptions fail to reasonably assure compliance with West Virginia’s water quality standards protecting the aquatic-life use.

Second, the exemptions fail to protect a category of rivers where prolonged instream construction may be the most harmful—Section 10 rivers protected by the Rivers and Harbors Act. Those rivers are navigable-in-fact, and the longer that flow is obstructed in such rivers by instream construction, the greater the impacts on their use as navigable rivers. Moreover, because of their size, Section 10 rivers are rarely dry in their natural state and are home to larger aquatic life species, on which reduction in foraging, sheltering, and spawning habitat can have a greater negative impact. Categorically exempting this important class of rivers from the 72-hour restriction on instream construction has the effect of allowing significant segments of those rivers to be dewatered indefinitely and, therefore, cannot reasonably assure compliance with the designated navigational and aquatic-life uses of those rivers.

Moreover, as with the purported modification to Special Condition A, the purported modifications to Special Condition C lack the required reasoned explanation for a change in long-standing agency policy. *See Encino Motorcars*, 136 S.Ct. at 2126; *State Farm*, 463 U.S. at 42, 52; *Fox Television Stations*, 556 U.S. at 515–16. West Virginia wants this change to expedite construction of the Mountain Valley Pipeline.¹⁵ But changing the rules in favor of a preferred project is not the type of “reasoned explanation” sufficient to justify deviation from a long-standing and well-considered regulatory requirement designed to protect water quality.¹⁶ The law requires more—specifically an explanation grounded in the facts, circumstances, and underlying statutory purposes of the long-standing regulatory requirement, rather than a contrived justification.

15 See Letter from Derek O. Teaney, Counsel for Commenters, to Lt. Gen. Todd T. Semonite, Chief of Engineers, U.S. Army Corps of Eng’rs et al. at 10 (June 27, 2019).

16 In fact, like Special Condition A, Special Condition C’s 72-hour rule dates back to 1992. Nationwide Permits for the State of West Virginia (1992). Although the condition made an exception the 72-hour for blasting in the 1997, 2002, 2007, and 2012 iterations, WVDEP removed the exception for blasting in its 2017 certification, demonstrating a desire to expand the scope of the well-established rule to ensure that no stream crossing exceeded 72-hours, no matter the construction method.

Special Condition C to NWP 12 ensures that stream crossings impose the least environmental damage balanced against the burden placed on utility line developers to construct stream crossings quickly. The purported modifications do not ensure the same protection to water quality and aquatic communities as the 72-hour rule. Permitting utility developers to create longer periods of dewatering through the use of “dry cuts” is directly contrary to the intent of the original 72-hour rule. Dry cuts remove the dewatered section from aquatic plant and animal habitat. The longer these crossing are dewatered, the longer the plants and animals will have to make use of other parts of the river to survive, putting greater competitive stress on the aquatic denizens of neighboring reaches. That would not make Special Condition C more protective. Instead, reducing the amount of time permitted for stream-crossing construction is the most obvious—and only—path to greater protection. Consequently, Commenters do not understand how prolonging dewatering in a stream can ever be more environmentally protective.¹⁷ As a result, no sufficient reasoned justification exists for the purported modifications to Special Condition C. *See Encino Motorcars*, 136 S.Ct. at 2126; *State Farm*, 463 U.S. at 42, 52; *Fox Television Stations*, 556 U.S. at 515–16.

3. WVDEP’s Purported Modifications to Special Condition L Cannot be Reasonably Explained and Fail to Reasonably Assure Compliance with Water Quality Standards.

Currently, Special Condition L to NWP 12 provides that “[n]o structures authorized by this permit shall impede or prevent fish movement upstream or downstream.” WVDEP included this condition in its Special Conditions to NWP 12 in 2007, 2012, and 2017. WVDEP’s April 24, 2019 action purports to modify Special Condition L to limit its application to “permanent” structures, and to remove the prohibition against impediments to fish movement.

Once again, WVDEP failed to provide the requisite reasoned explanation for its proposed change in long-standing regulatory requirements. *See Encino Motorcars*, 136 S.Ct. at 2126; *State Farm*, 463 U.S. at 42, 52; *Fox Television Station*, 556 U.S. at 515–16. Nor can such a reasoned explanation be made. Structures that impede or prevent fish movement, whether permanent or temporary, have the potential to adversely affect the aquatic-life use of the rivers and streams in which they are constructed. Even a *temporary* structure has the potential to restrict fish movement at crucial stages of a species’ life-cycle. WVDEP’s purported modifications to Special Condition L give no consideration to the potential effects on the aquatic-life use of West Virginia’s rivers.

¹⁷ Commenters understand that a “dry cut” method likely produces less sedimentation than a “wet cut” method even if the wet cut method is completed within 72 hours. Nonetheless, prolonged dewatering from a “dry cut” method increases the ill effects of foraging, stress, and suffocation of aquatic organisms that require water to respire. WVDEP’s decision to impose greater harm from dewatering from sedimentation should be explained. Further, there are obvious conditions that would both reduce sedimentation and dewatering instead of prioritizing one over the other. For example, WVDEP could require all stream crossings to be completed using the “dry cut” method and in some number of hours less than 72. It could also require conventional boring underneath streams. Some explanation of why none of these possible options were selected is required.

Rather, as with the purported modifications to Special Condition C, they appear designed to change well-considered rules for the purpose of benefitting certain projects that have found WVDEP's existing regulations inconvenient.¹⁸

Moreover, the purported modifications to Special Condition L are not merely clarifying amendments, as WVDEP has asserted. In one such "clarification," WVDEP maintained that (1) "structure"—as used in Special Condition L—does not apply to temporary structures and (2) the "structure authorized by [NWP 12] is the permanent pipeline, not [a] temporary [structure]."¹⁹

But Special Condition L is unambiguous and its plain language cannot be "clarified" in the manner WVDEP attempts. None of Special Condition L's terms limit the "structures" to which it applies to solely permanent or solely temporary structures. Rather, "structure" is modified only by the term "no" as a negative article or quantifier, indicating that "structure" applies broadly and without limitation. *See, e.g., Matamoros v. Starbucks Corp.*, 699 F.3d 129, 134 (1st Cir. 2012) ("'[N]o means 'no,' and we interpret that easily understood term in its ordinary sense: 'not any.'" (Citing dictionary definitions; modification in original.)).

Moreover, the Corps' NWPs plainly and unambiguously define "structure" to "include, without limitation . . . any . . . manmade obstacle or obstruction." (Emphasis added.). When the Corps included the definition of "structure" in the NWPs in 2007, it explained that it derived the definition from its Rivers and Harbors Act regulations at 33 C.F.R. §322.2(b). *Reissuance of Nationwide Permits*, 72 Fed. Reg. 11092, 11175 (Mar. 12, 2007). When it finalized that regulatory definition of structure in 1986, the Corps explained that it intends obstacles and obstructions to be considered "structures" "whether permanent or not." *Final Rule for Regulatory Programs of the Corps of Eng'rs*, 51 Fed. Reg. 41206, 41208 (Nov. 13, 1986). Furthermore, the text of NWP 12 itself provides that it "authorizes temporary structures . . . necessary to conduct the utility line activity." (Emphasis added.) Thus, the term "structure" as used in NWP 12, unambiguously includes temporary obstacles and obstructions, including those used during the construction of utility lines.

WVDEP cannot rely on the long-repealed regulatory definitions of the terms "permanent structure" and "temporary structure" at W. Va. Code. R. §§47-5A-2.13 and 2.16 (2002) to insist that the purported modifications to Special Condition L are just clarifying amendments, rather than drastic changes to existing regulatory prohibitions as it has previously contended.²⁰ Those now-repealed definitions must be treated as if they had never existed. *Jefferson Cty. Citizens for Econ. Pres. v. Cty. Comm'n of Jefferson Cty.*, 686 S.E.2d 16, 17 (W. Va. 2009). The definitions were

18 In *Sierra Club v. U.S. Army Corps of Engineers*, No. 18-1743(L), the United States Court of Appeals for the Fourth Circuit granted a motion for stay pending review of Atlantic Coast Pipeline, LLC's NWP 12 authorization that was based on Special Condition L.

19 Letter from Scott Mandirola, Deputy Cabinet Secretary to Michael Hatten, Regulatory Branch Chief, Huntington District of the U.S. Army Corps of Eng'rs (Oct. 29, 2018).

20 Letter from Scott Mandirola, Deputy Cabinet Secretary to Michael Hatten, Regulatory Branch Chief, Huntington District of the U.S. Army Corps of Eng'rs (Oct. 29, 2018).

previously part of WVDEP's legislative rules governing certifications under Section 401. W. Va. Code R. §§47-5A-2.13, -2.16 (2002). But the West Virginia Legislature repealed those definitions at WVDEP's request in 2014, indicating that neither WVDEP nor the Legislature wanted to define them in that way any longer. *Notice of Agency Approval of a Proposed Rule & Filing With the Legislative Rule-making Review Committee* (July 26, 2013), <http://apps.sos.wv.gov/adlaw/csr/readfile.aspx?DocId=25185&Format=PDF>; *Notice of Final Filing & Adoption of a Legislative Rule Authorized by the West Virginia Legislature* (Apr. 14, 2014), <http://apps.sos.wv.gov/adlaw/csr/readfile.aspx?DocId=25746&Format=PDF>.

It has long been the law in West Virginia that, “when an act of the Legislature is repealed without a saving clause, . . . it must be considered . . . as if it had never existed.” *Jefferson Cty. Citizens for Econ. Pres.*, 686 S.E. 2d at 17 (citing *Curran v. Owens*, 15 W. Va. 208 (1879)). And “legislative rules in West Virginia are authorized by acts of the Legislature and . . . [should be] treated as statutory enactments.” *Appalachian Power Co. v. State Tax Dep’t*, 466 S.E.2d 424, 435 (W. Va. 1995). Accordingly, the repealed regulations on which WVDEP has relied must be treated as if they had never existed and cannot provide context for the meaning of the term “structure” as WVDEP used it in Special Condition L.

But even if the repealed regulations were to be considered, any effort by WVDEP to assert that the proposed modifications to Special Condition L are clarifying amendments, rather than abrupt policy changes, would defy logic. The repealed regulations did not define the term “structure”; rather, they differentiated “permanent” structures from “temporary” structures for purposes of calculating monetary mitigation. W. Va. C.S.R. §§ 47-5A-2.12, -2.16, -6.2.d.1 (2002). If WVDEP recognizes that structures can be either permanent or temporary, depending on how the term is modified, then it must also know that the use of the term without modification includes both types of structures. The use of the phrase “[n]o structure” in Special Condition L—unadorned by any temporal modifier—unambiguously indicates a prohibition on *all* types of structures that prevent fish movement, regardless of whether temporary or permanent. Accordingly, the proposed changes to Special Condition L are not simply clarifying amendments. Therefore, a reasoned explanation of the modifications is required. *See Encino Motorcars*, 136 S.Ct. at 2126; *State Farm*, 463 U.S. at 42, 52; *Fox Television Stations*, 556 U.S. at 515–16; *see also* W. Va. Code R. §47-5A-5.1.e (requiring WVDEP to prepare a response to significant comments). WVDEP has not and cannot provide a sufficient reasoned explanation due to the reduction in protection of water quality standards—including the aquatic life use—that would accompany the adoption of the proposed modifications to Special Condition L.

CONCLUSION

The Corps need not accept WVDEP's invitation to wade back into the controversy over NWP 12's availability in West Virginia to the Mountain Valley Pipeline and the Atlantic Coast Pipeline. WVDEP's April 24, 2019 purported modifications need not be accepted in order for those two projects to seek federal approval under Section 404 of the Clean Water Act. If the proponents of those two pipelines want Section 404 authorization, then they can request individual permits under 33 U.S.C. §1344(a). Indeed, the Corps' regulations instruct it to direct the two pipelines to the individual permit process because they are ineligible for NWP 12. 33 C.F.R. §330.6(a)(2)

(requiring the district engineer to instruct applicants on the procedures to obtain an individual permit where an activity does not comply with the terms or conditions of an NWP).

As the Fourth Circuit observed in *Sierra Club*, “an individual permit will likely be necessary” for Mountain Valley Pipeline. 909 F.3d at 655. Indeed, at oral argument in *Sierra Club*, Judge Wynn repeatedly asked counsel for the Corps why it had not invoked the individual permit process with respect to the Mountain Valley Pipeline. Oral Argument at 16:24, 17:33, 17:50, 26:31, & 27:01, *Sierra Club v. U.S. Army Corps of Eng’rs*, 909 F.3d 635 (4th Cir. 2018) (No. 18-1173(L)), <https://www.ca4.uscourts.gov/OAarchive/mp3/18-1173-20180928.mp3>.

If the Corps were to grant WVDEP’s April 24, 2019 request and purport to replace the existing Special Conditions A, C, and L in NWP 12 with WVDEP’s April 24, 2019 purported modifications, for the reasons set forth above it would be unlawfully acting beyond the scope of its authority and would be setting itself up for further litigation (including the possibility of additional questions from the Fourth Circuit about why it did not invoke the individual permit process). But, with the availability of the individual permit process, there is no need for the Corps to expose itself to further litigation over the applicability of NWP 12 to Mountain Valley Pipeline and Atlantic Coast Pipeline. Accordingly, the Corps should decline WVDEP’s April 24, 2019 request and direct Mountain Valley Pipeline and Atlantic Coast Pipeline to apply for individual permits.

Sincerely,



Derek O. Teaney

Counsel for Sierra Club, West Virginia Rivers Coalition, West Virginia Highlands Conservancy, Indian Creek Watershed Association, Appalachian Voices, Chesapeake Climate Action Network, Appalachian Mountain Advocates, and the Ohio Valley Environmental Coalition

cc: David Gunter, U.S. Department of Justice
 (via electronic mail to David.Gunter@usdoj.gov)
 Ellen Durkee, U.S. Department of Justice
 (via electronic mail to Ellen.Durkee@usdoj.gov)
 Jon T. Coleman, U.S. Army Corps of Eng’rs Pittsburgh District
 (via electronic mail to jon.t.coleman@usace.army.mil)
 William T. Walker, U.S. Army Corps of Eng’rs Norfolk District
 (via electronic mail to William.T.Walker@usace.army.mil)
 Scott McLendon, U.S. Army Corps of Eng’rs Wilmington District
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 Cosmo Servidio, U.S. E.P.A Region 3
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**Public Notice****U S Army Corps
of Engineers**

Huntington District
Pittsburgh District

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

Stream:
N/A

Issuance Date: 24 January 2020

Closing Date: 18 March 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

**NATIONWIDE PERMITS FOR THE STATE OF WEST VIRGINIA
U.S. ARMY CORPS OF ENGINEERS (CORPS) REGULATORY PROGRAM
NOTIFICATION OF 2017 NATIONWIDE PERMITS WITH REISSUED
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP)
401 WATER QUALITY CERTIFICATION**

On April 24, 2019, the WVDEP submitted a request to modify their Clean Water Act Section 401 water quality certification (WQC) for the 2017 Nationwide Permits (NWP) published in the Federal Register (82 FR 1860) on January 6, 2017. The Corps' Great Lakes and Ohio River Division, representing the Huntington and Pittsburgh Districts, issued a public notice on June 26, 2019, and requested comments from interested parties.

This notice is to notify you that on January 15, 2020, after consideration of the comments received, the Division Commander accepted the WVDEP's modified WQC for the 2017 NWPs. The modification includes changes to Special Conditions A, C, and L of the WQC for NWP 12 (Utility Line Activities); no other changes to the standard or permit-specific special conditions of the Section 401 WQC were made. In accordance with the Corps' permit conditioning policy at 33 CFR 325.4, the WVDEP's revised WQC is incorporated as regional conditions to the 2017 NWPs. These modified regional conditions will apply to future activities seeking to utilize a NWP 12 authorization. A complete copy of the existing 2017 NWPs, Corps regional conditions, and the WVDEP WQC conditions is attached.

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 proposed project unless the plans for the proposed activity are modified. Furthermore, if you commence or under contract to commence the authorized 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.

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

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 NWP 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 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 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 cyphus*), snuffbox (*Epioblasma triquetra*), spectaclecase (*Cumberlandia monodonta*), and tubercled-blossom 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 Section H 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.

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.

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.** The Secretary of the West Virginia Department of Environmental Protection, in the Secretary's sole discretion, reserves the right to require an individual water quality certification for any of the following facilities or impacts:
 - 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 using wet or open-cut methods that do not isolate the excavation area must be completed in a continuous, progressive manner and within 72 hours during seasonal normal or below normal stream flow conditions. Stream crossings using the dry ditch method are exempt from the 72-hour requirement. Construction and access bridges and crossings on, Section 10 rivers are also exempt from the 72-hour requirements. Whatever crossing method is chosen by the permittee, the crossing should be completed as rapidly as practicable.
- 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 permanent 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 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. 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 Section H 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)

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.

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:

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 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. 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 Section H 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 Section H 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 Section H 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. Activities 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 NWP 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 NWP.

(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 NWP 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 NWP, 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 NWP.

(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 NWP 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 NWP, 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 coarse 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 NWP, 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.

(W)



Friends of the Earth



SIERRA CLUB



July 1, 2019

Sent via U.S. Certified Mail, Return Receipt Requested, and Email to:

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Re: 60-Day Notice of Intent to Sue: Violations of the Endangered Species Act Regarding Nationwide Permit 12 and the Keystone XL Pipeline

Dear Sirs/Madams:

This letter serves as formal notice by the Center for Biological Diversity, Natural Resources Defense Council, Friends of the Earth, the Sierra Club, Bold Alliance, and Northern Plains Resource Council ("Conservation Groups") of their intent to sue the U.S. Army Corps of Engineers ("Corps") for violations of the Endangered Species Act, 16 U.S.C. §§ 1531–1544 ("ESA"), in connection with the reissuance of nationwide permit 12 ("NWP 12") under Section 404 of the Clean Water Act ("CWA"), and for failing to ensure that its verification, approval, or

permitting of the Keystone XL pipeline (or the “Project”) under NWP 12 will not jeopardize the continued existence of listed species in violation of Section 7 of the ESA.¹

The Corps has failed to initiate formal programmatic consultation with the U.S. Fish and Wildlife Service (“FWS”) and the National Marine Fisheries Service (“NMFS”) (together, the “Services”) regarding the effects of NWP 12 on terrestrial and aquatic species, in direct violation of the requirements of Section 7 of the ESA.² NWP 12 allows for an unquantified and virtually limitless number of “discharges” of dredged or fill material to the nation’s waters and wetlands in connection with utility projects, such as transmission lines and pipelines. Yet, the Corps has reauthorized NWP 12 without considering or even disclosing the cumulative, adverse environmental consequences of the impacts of discharges under NWP 12 on protected species or their critical habitat. Indeed, the Corps reauthorized NWP 12 without having even basic procedures in place that would allow the agency to know the full extent of the harm to listed species from activities permitted under NWP 12. The Corps has therefore failed to ensure that discharges resulting from NWP 12-authorized activities are not likely to jeopardize the continued existence of listed species, and/or destroy or adversely modify any such species’ designated critical habitat, in violation of the ESA.³

Furthermore, the Corps has verified, approved, or permitted activities under NWP 12 for the Keystone XL pipeline in Montana, South Dakota, and Nebraska absent compliance with the ESA. The pipeline would make more than 1,000 water crossings in these states, including rivers, wetlands, small tributary creeks, and dry stream beds that fill during periods of heavy precipitation. The Corps’ responses to our requests under the Freedom of Information Act indicate that TransCanada (now TC Energy) submitted preconstruction notifications (“PCNs”)

¹ See Issuance and Reissuance of Nationwide Permits, 82 Fed. Reg. 1860 (Jan. 6, 2017). The Corps has reauthorized NWP 12 for a five-year period, effective March 19, 2017. *Id.* at 1860. NWP 12 allows for the discharge of dredge or fill material resulting in the loss of up to ½ acre of jurisdictional waters (for each separate and distant crossing) for the construction, maintenance, repair, and removal of utility lines (including transmission lines and pipelines). *Id.* at 1985. It further authorizes the construction or maintenance of foundations for overhead utility line towers, and the construction of access roads for the construction and maintenance of utility lines. *Id.*

² Pursuant to the Services’ revised regulations defining “framework programmatic action,” programmatic consultation generally does not result in the issuance of an incidental take statement (“ITS”). Rather any incidental take should be subsequently authorized under a project-specific Section 7 or Section 10 process. See 80 Fed. Reg. 26,832, 26,844 (May 11, 2015) (adding definition of “framework programmatic action” to 50 C.F.R. § 402.02 and adding 50 C.F.R. § 402.14(i)(6) on ITSs not being required at the programmatic level because subsequent actions resulting in incidental take will be separately consulted on). While the Corps has acknowledged that it must undertake a “nation-scale” cumulative impacts analysis under NEPA and CWA, 82 Fed. Reg. at 1860, the Corps has failed to undertake a national-scale programmatic ESA consultation with the Services on NWP 12, as set forth herein.

³ 16 U.S.C. § 1536(a)(2).

for these states, but the Corps has not completed a Section 7 consultation for its authorization of the application of NWP 12 to any of these waterbodies.

For example, the Corps verified the use of NWP 12 for the Yellowstone River crossing in Montana and the Cheyenne River crossing in South Dakota, yet never consulted to ensure against jeopardy and to minimize and monitor the adverse effects to listed species at those river crossings, from the pipeline crossings of tributaries that flow into those rivers, or the direct, indirect, and cumulative impacts associated with the hundreds of other wetlands, stream and river crossings throughout Montana and South Dakota.⁴ In addition, the Corps has not ensured through a site-specific consultation and incidental take statement that the pending Section 408 permit for Keystone XL to cross the Missouri River near Fort Peck will not result in jeopardy to listed species or to implement appropriate measures to minimize adverse effects on listed species at this river crossing.⁵

While the Corps purportedly relied on the State Department's 2012-2013 consultation with FWS for Section 7 ESA compliance, those consultation documents did not adequately address the take of listed species, nor did they ensure that jeopardy will not result from construction and operation of Keystone XL, and were subsequently enjoined by the Montana District Court.⁶ Moreover, following the issuance of a permit for Keystone XL by President Trump, the State Department confirmed that its consultation has been rescinded, and therefore there is no existing ESA Section 7 consultation that sufficiently analyzes the impacts of water crossings for Keystone XL.

Likewise, the Corps has failed to undertake ESA Section 7 consultation to ensure against jeopardy and unlawful take of listed species from construction and operation of Keystone XL in Nebraska. The State Department reinitiated but has not yet completed consultation on the Nebraska route after it was modified, and it remains unclear whether or when the Corps will complete the required consultation on the Nebraska route.⁷ However, TC Energy previously submitted a PCN to the Corps pursuant to NWP General Condition 18 due to potential impacts to

⁴ For example, Keystone XL would use HDD to cross under the Milk River (milepost 83.41) and the Missouri River (milepost 89.66), two locations where endangered pallid sturgeon are present. However, in the span of ten miles on either side of these two crossings (i.e., between milepost 73 and 100), the pipeline would cross 41 other waterways using conventional trenching methods. Discharges and/or oil spills into those 41 waterways during construction or operation could flow into the Missouri and Milk Rivers and harm pallid sturgeon. Similar concerns exist with respect to HDD crossings in South Dakota and Nebraska.

⁵ Although the Montana PCN covered all water crossings in Montana, the Corps issued a verification that was limited to the Yellowstone River. Similarly, while the South Dakota PCN covered all water crossings in South Dakota, the Corps issued a verification that was limited to the Cheyenne River. It appears that the Corps intended these verifications to constitute a tacit verification of all other crossings addressed by the PCNs; but regardless, the Corps did not conduct any section 7 consultation on any of the Montana or South Dakota water crossings.

⁶ *Indigenous Env'tl. Network v. U.S. Dep't of State*, 347 F. Supp. 3d 561, 591 (D. Mont. 2018).

⁷ On information and belief, TC Energy has not submitted a revised PCN for the new route through Nebraska.

listed species from the Platte and Niobrara River crossings. The Corps responded to TC Energy by letter, stating that because TC Energy intends to use horizontal directional drilling (“HDD”) for the Platte and Niobrara River crossings, it could proceed under NWP 12 without submitting a PCN or waiting for NWP 12 verification. This ignores the impacts from the dozens of other wetland and stream crossings in Nebraska that may affect listed species. And, as set forth in more detail below, the use of HDD does not avoid all impacts to listed species at these river crossings, which may be adversely affected by “frac-outs” of drilling fluids, and/or discharges or oil spills into tributaries that flow into those river crossings—to the contrary, it presents these and additional risks of its own. Thus, the Corps’ determination regarding the water crossings in Nebraska is erroneous, and the Corps has failed to comply with Section 7 of the ESA.

As explained below, construction, operation, and maintenance of Keystone XL will proximately cause the unauthorized take of listed species, including the whooping crane, American burying beetle, pallid sturgeon, interior least tern, and piping plover, by killing, injuring, harming, and harassing these species without any form of take coverage or adequate Section 7 consultation. In particular, the placement of hundreds of miles of new transmission lines in the whooping crane migratory corridor to power pump stations for the Project will result in take of these critically endangered birds through collisions, which are the primary known cause of death for the species, thereby presenting a classic “death-by-a-thousand-cuts” scenario that would jeopardize this sole wild population of whooping cranes. Further, the Project will result in spills and leaks of oil or other toxic contaminants and diluted bitumen, which will cause take of whooping cranes as well as other endangered and threatened species including American burying beetle, pallid sturgeon, interior least tern, and piping plover.

These impacts to endangered wildlife from Keystone XL have never been subjected to a complete and adequate formal consultation pursuant to Section 7(a)(2) of the ESA to ensure that any actions that the Corps authorizes are “not likely to jeopardize the continued existence of any endangered species or threatened species” or “result in the destruction or adverse modification” of their critical habitat.⁸

The Corps is therefore in violation of the ESA regarding its failure to initiate formal programmatic consultation with the Services on the reissuance of NWP 12 and on its issuance of verifications for Keystone XL’s crossings of the Yellowstone and Cheyenne rivers, as well as its failure to ensure that Keystone XL’s other water crossings in Montana, South Dakota, and Nebraska are not likely to jeopardize any listed species. Unless the violations described in this letter are remedied within 60 days, we intend to bring suit and will seek declaratory and injunctive relief as well as reasonable litigation costs and attorneys’ fees for your violations of the ESA.⁹

⁸ 16 U.S.C. § 1536(a)(2).

⁹ *Id.* § 1540(g).

I. IMPACTS TO LISTED SPECIES

A. Adverse Effects to listed species from NWP 12 activities

Activities authorized under NWP 12 “may affect,” and are “likely to adversely affect,” species listed under the ESA and/or destroy or adversely modify any such species’ designated critical habitat.¹⁰ For example, pipelines constructed in U.S. waters pursuant to NWP 12, including the Keystone XL pipeline, have the potential to leak and spill into the Corps’ jurisdictional waterways, with disastrous impacts on aquatic resources.

In its Decision Document for NWP 12, the Corps acknowledged the potential for harm to the environment and the species that rely on areas affected by NWP 12-authorized activities, including from inadvertent returns of drilling fluids; fragmentation of terrestrial and aquatic ecosystems; leaks and spills of transformer fluids or petroleum products; conversion of wetlands resulting in loss of wetland functions as well as permanent loss of wetland habitat and alteration of natural drainage patterns; and adverse effects on water quality from increases in sediments and pollutants in the water that impair the quality of fish and wildlife habitat by modifying or eliminating areas used for nesting, foraging, resting, and reproduction.¹¹ Other impacts include power line collisions for migratory birds (the greatest known cause of mortality for whooping cranes, as discussed below), predation of imperiled species by raptors perching on power lines, and increased greenhouse gas emissions associated with pipeline development, which will exacerbate the climate crisis that continues to threaten listed species.

More than one-third of the United States’ endangered and threatened species live only in wetlands, including several snake, salamander, frog, and turtle species, as well as many endangered or threatened plants. Nearly half of listed species require rivers and wetlands at some point in their lives for feeding, breeding, and shelter, including migratory birds like the whooping crane and piping plover. Other such species live in and rely on rivers and streams that may be crossed by power lines or pipelines, such as imperiled salmon, sturgeon, and freshwater mussels. Many other endangered and threatened animals and plants depend on wetlands and other aquatic resources for their survival or recovery—for instance, Indiana bats which feed on water-dependent insects.

Pipelines and power lines cause immediate and irreparable impacts to ecosystem functions of streams and adjacent wetlands through several means, including: spreading of invasive species; damaging soils; degrading water quality and harming fish; causing cumulative impacts to bank stability and floodplain vegetation leading to erosion, sedimentation, release of toxic substances, reduced biodiversity and productivity; conversion of forested wetlands to scrub wetlands; and cumulative adverse impacts from forest fragmentation, habitat loss, erosion and sedimentation,

¹⁰ 50 C.F.R. § 402.14.

¹¹ For a discussion of the potential harm to listed species under NMFS jurisdiction from NWP activities, see National Marine Fisheries Service, Biological Opinion on U.S. Army Corps of Engineers’ Nationwide Permit Program (2014) (“2014 NMFS BiOp”) at 304-17.

and soil nutrient loss.¹² These impacts could adversely affect hundreds of listed species that rely on rivers, streams, and wetland habitats and other aquatic resources across the country.

In a 2014 Biological Opinion regarding the Corps' NWP program, NMFS determined that activities undertaken pursuant to NWP 12 could permanently change "impervious surface cover" of the nation's wetlands and waterbodies, and when such changes are taken in the aggregate, they correspond to "large scale hydrologic phenomena that are critical to the survival and recovery of threatened and endangered species under NMFS' jurisdiction and their critical habitat."¹³ However, the extent of the impacts remains unknown: NMFS found that "numerous studies have identified cumulative impacts resulting from activities historically authorized by Nationwide Permits," but that the "Corps' assessments generally failed to consider the cumulative impacts of its authorizations."¹⁴

B. Adverse effects to listed species from construction and operation of Keystone XL

As set forth above, the Corps issued NWP 12 verifications for the Keystone XL river crossings at the Yellowstone and Cheyenne rivers without completing a legally valid Section 7 consultation or addressing the adverse effects of river crossings in Montana, South Dakota, and Nebraska. Keystone XL and related power line infrastructure will cause take of American burying beetles, pallid sturgeon, whooping cranes, interior least terns and piping plovers through habitat loss, power line collisions, increased predation, oil spills, and construction activities.

For example, the FWS and State Department have acknowledged that the Project will negatively impact whooping cranes (*Grus Americana*), interior least terns (*Sternula antillarum*), and piping plovers (*Charadrius melodus*) through collisions with the hundreds of miles of new electrical power transmission lines and distribution lines that would serve pump stations along the route.¹⁵

¹² See Princeton Hydro, LLC, *The Short and Long-Term Consequences of the Construction of the PennEast Pipeline* (July 2015) (study examining the short and long-term consequences of the construction of the PennEast Gas Pipeline, which found that it will "irreversibly disturb and alter the ecological properties of natural waterways including high quality waters, a variety of habitats, preserved farmland and preserved, public open-space." Long-term impacts identified by the study include, but are not limited to: destabilization of the traversed ecosystem, increased predation/loss of native forest core species, introduction and colonization of invasive species, reduction in water quality, fragmentation of habitat, increased pollutant loading to wetlands and streams, and increased erosion); See generally, e.g., Newcombe, C. P., & Jensen, J. O. (1996). Channel suspended sediment and fisheries: a synthesis for quantitative assessment of risk and impact. *North American Journal of Fisheries Management*, 16(4), 693-727; Newcombe, C. P., & MacDonald, D. D. (1991). Effects of suspended sediments on aquatic ecosystems. *North American Journal of Fisheries Management*, 11(1), 72-82.

¹³ 2014 NMFS BiOp at 302.

¹⁴ *Id.* at 261.

¹⁵ See, e.g., State Department, Final Biological Assessment for the Keystone XL Project (2012) ("2012 Biological Assessment") at 3.0-11 (acknowledging that the transmission lines for the

This increased collision risk is especially dangerous for the survival and recovery of the whooping crane, a critically imperiled bird that was listed as endangered on March 11, 1967.¹⁶ The only self-sustaining population of whooping cranes has an annual migration path that spans the Central Flyway of North America, from Canada to the Gulf of Mexico, largely tracking the proposed Keystone XL route across the Great Plains.¹⁷ The primary cause of whooping crane mortality is collisions with power lines,¹⁸ and “[p]ower lines associated with the proposed Project” would present new “collision hazards to migrant whooping cranes” as well as to interior least terns and piping plovers.¹⁹ Moreover, none of the power companies that will erect the lines have agreed to implement the conservation measures set forth in the Service’s “Region 6 Guidance for Minimizing Effects from Power Line Projects within the Whooping Crane Migration Corridor” (the “Region 6 Guidance”), which include a five-mile buffer for documented high-use whooping crane areas, burying lines within one mile of potentially suitable habitat where feasible, and otherwise marking existing lines as well as proposed new lines.²⁰ Rather, the power companies have only consented to marking the proposed new lines with bird flight diverters. But bird flight diverters are known to be less than 50 percent effective at reducing crane collisions. Therefore, while they can partially mitigate this hazard, bird diverters can *reduce* the threat of collisions, but *they cannot eliminate the likelihood of take or the possibility of jeopardy*.²¹

Take of whooping cranes, terns, and plovers is therefore reasonably certain to occur as a result of construction and operation of the Project. Given the low numbers and genetic bottleneck as well as the slow reproduction of the whooping crane in particular, many whooping crane experts believe that the loss of a few, and even one, breeding adult could jeopardize the continued existence of this iconic species.

Furthermore, Keystone XL will inevitably result in oil spills over the 50-year life of the Project, presenting another threat to listed species, including whooping cranes, interior least terns, piping plovers, and pallid sturgeon.²²

Project create a “[c]umulative collision mortality” risk that “would be most detrimental to the whooping crane, interior least tern, and piping plover”).

¹⁶ 32 Fed. Reg. 4001 (Mar. 11, 1967).

¹⁷ See 2012 Biological Assessment at 3.0-13, 3.0-17.

¹⁸ See *id.*

¹⁹ Thomas v. Stehn & Tom Wassenich, *Whooping Crane Collisions with Power Lines: an Issue Paper* 25 (2008). 2012 Biological Assessment at 3.0-11 to 3.0-12; State Department, Final Supplemental Environmental Impact Statement for the Keystone XL Project (“2014 FEIS”) at 4.8-18 to 4.8-19, 4.8-48.

²⁰ 2014 FEIS at 4.8-52 to 4.8-53.

²¹ FEIS 4.8-19.

²² Interior least terns breed in the Missouri River system and feed on fish and minnows from the river. 2012 Biological Assessment at 3.0-5 to 3.0-6. The Yellowstone River in Montana, the Cheyenne River in South Dakota, and the Niobrara River in Nebraska currently support breeding

Oil spills along the Platte River in Nebraska or the Missouri River in Montana would be devastating to the endangered pallid sturgeon, which is very sensitive to harm from spills or other contamination that smothers the benthic habitat that it relies on for feeding and breeding.²³ These populations of pallid sturgeon are some of the last pallid sturgeon populations remaining on Earth, and would be decimated should a spill happen along the pipeline's crossing of these rivers or in the many tributaries the pipeline would cross.²⁴ The same risks apply to pallid sturgeon in the Milk, and Yellowstone Rivers.

Oil spills are an impact that the District Court specifically directed the agencies to address on remand. *Indigenous Env'tl. Network v. U.S. Dep't of State*, 347 F. Supp. 3d 561, 587 (D. Mont. 2018) (ordering State Department to consider "new information regarding oil spills" and in particular their "potential effects on listed species"). This analysis has not been completed. As a result, the Service has not considered whether oil spills or frac-outs may jeopardize these listed species, and never provided incidental take coverage for listed species that may be harmed from oil spills, leaks, or frac-outs caused by Keystone XL. *See id.* at 582 (observing that "the risk of spills likely would affect Keystone's potential impact on other areas of the [record of decision's] analysis, including risks to water and wildlife").²⁵ Although the Ninth Circuit has vacated that

populations and there is suitable nesting and foraging habitat along the Project route in all three states. *Id.* at 3.0-6 to 3.0-7.

Piping plovers are in the Project area in Montana and Nebraska. *Id.* at 3.0-64 to 3.0-65. They nest on the Platte and Niobrara rivers and in the Fort Peck Reservoir, and are otherwise found in associated rivers and wetlands. *Id.* at 3.0-64. Piping plover critical habitat is designated at the Fort Peck Reservoir (which is downstream of the Project's Milk River crossing), and on the Missouri River downstream of Wolf Point in the vicinity of the Project. *Id.* at 3.0-70.

Pallid sturgeon may occur within the Project area in Montana at the crossing of the Milk River above the Fort Peck Reservoir, at the crossing of the Missouri River below the Fort Peck Dam, and at the crossing of the Yellowstone River downstream of Fallon, Montana. 2014 FEIS at 3.8-20. They may also be present in the Missouri and lower Yellowstone Rivers between Fort Peck Dam (where the pipeline would cross) and Lake Sakakawea, as well as the Niobrara and Platte rivers in Nebraska. *Id.*

²³ *See id.* at 3.0-26, 3.0-30. The pallid sturgeon was listed as endangered on September 6, 1990. 55 Fed. Reg. 36,641 (Sept. 6, 1990).

²⁴ While the project would use HDD for the Platte River crossing, this still presents a threat of "frac-out," which is when pressurized fluids and drilling lubricants escape the active bore, migrate up through the soils, and come to the surface at or near the construction site. *See* 2012 Biological Assessment at 3.0-30. Therefore, the use of HDD may still adversely affect listed species. *Id.*

²⁵ Although the rescinded State Department Biological Assessment mentioned the possibility of oil spill impacts on the pallid sturgeon, it addressed waterbodies only where species are present and HDD would be used. *See* 2012 Biological Assessment at 3.0-9, 3.0-29 to 3.0-30, 3.0-67. It did not analyze the impacts of oil spills at specific crossings using crossing methods other than HDD. *Id.*; *see also* 2014 FSEIS at 4.8-21 (not likely to adversely affect finding for pallid sturgeon based on HDD, screening of water pump intakes and conservation measures).

decision as moot, the fact remains that the previous consultations never properly addressed the risks of oil spills.

In addition, the State Department and the FWS have already admitted that Keystone XL will adversely affect remaining occupied habitat of the American burying beetle in Nebraska and South Dakota.²⁶ Take of beetles will occur from direct harm associated with construction activities (i.e., habitat loss and crushing of beetles) and mortality if beetles are trapped and moved, as well as heat emanating from the pipeline during operation.²⁷ The Service's 2013 incidental take statement ("ITS") for Keystone XL found that the Project would result in take of over 350 American burying beetles, mostly through construction-related impacts in South Dakota and Nebraska.²⁸

Furthermore, American burying beetles have adapted an overwinter survival strategy that requires either freezing or cooling to very near freezing, which slows metabolism to a point that fat reserves are sufficient to last overwinter until emergence in late May or early June.²⁹ Therefore, heat pollution—as would occur from operation of the Keystone XL pipeline—adversely affects the species by increasing the metabolic demand on overwintering beetles, reducing their survival and productivity.³⁰ The Project would result in permanent thermal effects that would make the surrounding overwinter American burying beetle habitat unsuitable and cause take of individual beetles by killing, injuring, harming, and/or harassing them.³¹

However, most of the tributary crossings would not use HDD, and yet the risk of surface pipeline leaks and spills directly into tributaries was never analyzed. A valid consultation must address the use of NWP 12 for these tributaries. Also, while Attachment G to the 2012 Biological Assessment discusses the types of harm to fish and birds from oil spills generally, it does not mention these specific waterbodies or the pallid sturgeon, interior least tern, or piping plover. *See* 2012 Biological Assessment Att. G at 4-5 to 4-6.

²⁶ *See, e.g.*, 2012 Biological Assessment at 3.0-62 to 3.0-63. The American burying beetle was listed as endangered in 1989. 54 Fed. Reg. 29,652 (July 13, 1989).

²⁷ *See* 2012 Biological Assessment at 3.0-56 ("Direct impacts to American burying beetles as a result of construction during vegetation clearing, site grading, and trench excavation would result in temporary habitat loss, potential alteration of suitable habitat to unsuitable habitat, temporary habitat fragmentation where the pipeline is not already co-located with other utilities, and potential mortality to eggs, larvae, and adults through construction vehicle traffic and exposure during excavation."); *id.* at 3.0-59 (describing harm from heat pollution); FWS, Biological Opinion for the Keystone XL Project ("2013 Biological Opinion") at 56 ("[Construction activities] would likely cause direct injury or mortality of [American burying beetle] adults, larvae, and eggs by crushing or exposure to desiccation during soil excavation."); *id.* at 62-63 (describing harm from capture and relocation); *id.* at 63-65 (describing harm from heat pollution).

²⁸ 2013 Biological Opinion at 62, 74.

²⁹ 2012 Biological Assessment at 3.0-32.

³⁰ *Id.* at 3.0-39, 3.0-50.

³¹ *Id.*

While the FWS issued an ITS to the State Department regarding the harm to American burying beetles, the State Department claims it no longer has authority over the permit for the Project, and therefore cannot enforce any of the reasonable and prudent measures that the Service included with the Biological Opinion and ITS. This, of course, renders the prior consultation obsolete. Likewise, the current permit issued by President Trump contains no conservation measures to prevent or mitigate harm to listed species from the construction and operation of Keystone XL.

II. VIOLATIONS

A. The Corps is in violation of the ESA for failing to complete formal programmatic Section 7 consultation on the issuance of NWP 12

As set forth above, issuance of NWP 12 “may affect” listed species, and therefore programmatic Section 7 consultation is required. NWP 12 allows activities that result in direct harm to listed species from habitat loss, power line collisions, sedimentation and contamination of waters relied on by listed species, as well as indirect impacts associated with climate change. The ESA requires that the Corps consider the cumulative, national-scale programmatic impacts of NWP 12 on listed species.

The Corps, however, has wrongly concluded that the issuance of the NWPs will have “no effect” on species protected under the ESA, averring that:

[B]ecause no NWP can or does authorize an activity that may affect a listed species or critical habitat absent an activity-specific ESA section 7 consultation, and because any activity that may affect a listed species or critical habitat must undergo an activity-specific consultation before the district engineer can verify that the activity is authorized by NWP, the issuance or reissuance of NWPs has “no effect” on listed species or critical habitat.³²

This argument has been squarely rejected by the D.C. District Court in *National Wildlife Federation v. Brownlee*, 402 F. Supp. 2d 1, 10 (D.D.C. 2005), where the Court held that “overall consultation for the NWPs is necessary to avoid piece-meal destruction of [] habitat through failure to make a cumulative analysis of the program as a whole.” The *NWF* Court further found that the ESA regulations are clear that “[a]ny request for formal consultation may encompass . . . a number of similar individual actions within a given geographical area or a segment of a comprehensive plan. This does not relieve the Federal agency of the requirements for considering the effects of the action as a whole.” *Id.* (quoting 50 C.F.R. § 402.14(c)).³³

³² 81 Fed. Reg. 35,186, 35,193 (June 1, 2016). This opinion was reiterated in the Final NWP Rule, 82 Fed. Reg. at 1,874.

³³ See also *Pac. Coast Fed’n of Fishermen’s Ass’ns v. Nat’l Marine Fisheries Serv.*, 482 F. Supp. 2d 1248, 1267 (W.D. Wash. 2006) (holding that deferral of analysis to the project level “improperly curtails the discussion of cumulative effects”).

The prospect for project-specific consultation at a future time does not relieve the Corps of its duty to consult on the issuance of NWP 12 on a programmatic level now. While project-specific consultation is clearly required for any project that may affect listed species, the Corps cannot justify a “no effect” determination for the issuance of NWP 12 based on that later, site-specific consultation. Reliance on site-specific consultation fails to capture the cumulative impacts that NWP 12 will have (and is having) on listed species. Moreover, as set forth herein, the Corps’ claims are belied by the fact that it approved the use of NWP 12 for Keystone XL *without* conducting any project-specific ESA consultation.

The only way to ensure that the issuance of NWP 12 will not jeopardize listed species is to consult at a programmatic level; otherwise the Services are not provided the opportunity to identify where NWP 12 may be problematic for listed species or critical habitat, and to provide reasonable and prudent measures to minimize take, such as measures to ensure that the Corps gathers and analyzes sufficient data to prevent jeopardy to listed species, and to ensure that incidental take does not occur at unsustainable levels.

In fact, when the Services issued the 2015 regulations defining framework programmatic consultations (*see* 50 C.F.R. § 402.02), they provided a Questions and Answers document, which used the Corps’ Nationwide Permit Program as a specific example of a federal program where programmatic consultation would be required.³⁴ The Services have therefore already explicitly admonished the Corps to complete programmatic consultation on the NWP program, yet the Corps has unlawfully ignored its clear ESA duties.

The Corps must therefore ensure that the cumulative impacts of NWP 12 do not cause jeopardy to listed species or destroy or adversely modify critical habitat. Such consultation will help to ensure that sufficient data keeping, monitoring, and corrective actions to mitigate impacts are in place. In order to comply with Section 7 of the ESA, the Corps must initiate and complete formal programmatic consultation on NWP 12.

B. The Corps has failed to ensure through formal ESA Section 7 consultation that permitting, approving, or verifying Keystone XL under NWP 12 will not jeopardize listed species

The ESA requires federal agencies to consider the effects of their actions at the earliest possible time to ensure that they are not likely to jeopardize the continued existence of endangered or threatened species.³⁵ The only way to satisfy the duties in Section 7(a)(2) of the ESA is to complete the procedural requirements set forth in the ESA’s implementing regulations, and in doing so, to rely on the best scientific information available.³⁶

³⁴ FWS & NMFS, ESA Regulatory Reform: Final Rule Governing Incidental Take Statements Questions and Answers (2015) at 3, https://www.fws.gov/endangered/improving_ESA/pdf/ITS%20Final%20Rule%20FAQs%20Final%205-1-15.pdf.

³⁵ 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

³⁶ 50 C.F.R. pt. 402.

As set forth in detail above, Keystone XL has the potential to adversely affect listed species through, for example, power line collisions, habitat loss, construction activities, heat pollution, and oil spills. The State Department's prior consultation has been withdrawn and cannot be relied on by the Corps to fulfill its duties under the ESA.

The Corps has failed to independently analyze these impacts through formal project-specific ESA consultation, and has therefore not satisfied the requirements of Section 7 of the ESA. A biological opinion that meaningfully addresses impacts on listed species through formal ESA consultation is mandated unless it is absolutely clear the proposed action is not likely to adversely affect a particular species.³⁷ Given the foregoing, the Corps has not met that burden, and has thereby failed to ensure that Keystone XL will not jeopardize the continued existence of listed species, in direct violation of Section 7(a)(2) of the ESA.

C. The Corps may not allow activities to proceed under NWP 12 until it complies with the ESA

The Corps cannot lawfully authorize any activities under NWP 12 until it fulfills its obligation to consult under ESA Section 7. Section 7(d) of the ESA provides:

After initiation of consultation required under subsection (a)(2) [of this section], the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection(a)(2) of this section.³⁸

Congress included Section 7(d) in the ESA to prevent Federal agencies from “steamrolling” bureaucratic authorizations to secure completion of projects regardless of their impact on endangered species. Section 7(d) clarifies the requirements of Section 7(a)(2) by mandating that the status quo be maintained until the consultation process is complete and a biological opinion is rendered. Therefore, until the Corps completes formal consultation on NWP 12, no utility line activities may be allowed to proceed under that permit, but would require individual CWA 404 permits along with project-specific ESA consultation.

This includes Keystone XL, and the Corps must therefore ensure that construction activities for this project do not commence absent completion of the requirements of the ESA pursuant to Section 7(d). TC Energy or the power companies may not commence Project construction until the Corps ensures that this Keystone XL will not jeopardize listed species or destroy or adversely modify critical habitats that listed species depend upon for survival. If this does not occur, Keystone XL will preclude the ability to minimize or mitigate the adverse consequences of power line collisions and oil spills, including by foreclosing the formulation of any alternatives to the currently proposed route or reasonable measures to minimize impacts such as burying

³⁷ The threshold for triggering formal consultation is very low, indeed, “[a]ny possible effect . . . triggers the formal consultation requirement.” 51 Fed. Reg. 19,926, 19,949 (June 3, 1986).

³⁸ 16 U.S.C. § 1536(d); 50 C.F.R. § 402.09.

power lines. To preserve the status quo, construction must be stalled until such time when the Corps complies with its duties pursuant to Section 7 of the ESA.

III. CONCLUSION

For the forgoing reasons, the Corps is in violation of the ESA for: (a) reissuing NWP 12 in 2017 absent compliance with Section 7 of the ESA; and (b) authorizing, permitting, or verifying the use of NWP 12 for the Keystone XL pipeline without completing project-specific ESA consultation. The Corps must consider the cumulative impacts that the issuance of NWP 12 will have on listed species and ensure through national-scale programmatic ESA consultation with both FWS and NMFS that sufficient data keeping, monitoring, and corrective actions to mitigate impacts are in place to prevent jeopardy, and must deny or revoke any permits, verifications, or other authorizations for use of NWP 12, including for Keystone XL, until the Corps has fully complied with the requirements of the ESA.

Please do not hesitate to contact the undersigned if we can provide additional information or otherwise assist in this matter, rather than having to resort to the judicial remedies provided by the ESA. We look forward to your prompt response.

Sincerely,

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NOAA Fisheries Comments on the Department of the Army, USACE Nationwide Permits Draft Rule

January 14, 2016

Introduction

Enclosed are NOAA's National Marine Fisheries Service (NOAA Fisheries) comments on the US Army Corps of Engineers (USACE) draft *Proposed Rule to Reissue and Modify Nationwide Permits, General Conditions, and Definitions*. NOAA Fisheries appreciates the opportunity to comment on this interagency review of the 2017 NWP draft rule. These are combined comments from NOAA Fisheries' Office of Protected Resources, Office of Habitat Conservation, and Office of Aquaculture. NOAA Fisheries is providing these comments pursuant to our authorities under the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), the Fish and Wildlife Coordination Act and the Subpart J of the Magnuson-Stevens Fishery Conservation and Management Act related to Essential Fish Habitat (EFH).

As discussed in the 2015 US Army Corps of Engineers Institute of Water Resources report "The Mitigation Rule Retrospective: A Review of the 2008 Regulations Governing Compensatory Mitigation for Losses of Aquatic Resources", the USACE's implementation of these Nationwide Permit (NWP) are responsible for a majority of the authorizations of impacts to waters of the United States. NOAA Fisheries considers these NWPs to be a very important component of maintaining the significant ecosystem services provide by the marine, estuarine, and riverine habitats for commercial, recreational, listed, and other managed marine species. As the rapid population growth and associated development in coastal areas continues, and new stresses associated with climate change intensify, the cumulative effect of habitat loss and alteration in coastal areas becomes more and more critical. Our agency believes the successful implementation of the NWP in a manner that avoids and minimizes effects – direct and indirect - on MMPA and ESA listed species, their designated critical habitat, and EFH is critical given the fact that the NWPs allow for the permitting of thousands of actions each year that affect NOAA Fisheries' trust resources

While these NWPs are predicated on the principle that nothing can be authorized by a NWP if it has more than a minimal adverse effect, individually or cumulatively, on the environment (Clean Water Act, section 404(E)), NOAA Fisheries is very concerned that the aggregate effects of these NWPs are having adverse effects on coastal habitats important to NOAA Fisheries' trust resources. In particular, activities described in the NWP draft rule that occur within or in close proximity to sensitive aquatic habitats (e.g. EFH, Habitat Areas of Particular Concern, deep sea corals) have a high potential to exceed the no more than minimal threshold of the NWPs. NOAA Fisheries encourages the USACE to address this concern by coordinating closely with NOAA Fisheries regional staff during the regional conditioning process.

We thank the USACE for working with us in implementing portions of the 2014 biological opinion on the USACE NWP authorizations. Since the issuance of the 2014 biological opinion, the USACE has developed information packages for its Districts to enable compliance with General Condition 18 (Endangered Species) and issued implementation guidance to the USACE Districts for coordinating with NOAA Fisheries Regional or local offices for developing regional conditions. The USACE has also issued guidance to include a special condition in NWP verifications to require permittees to report listed species injured or killed to NOAA Fisheries. We are also aware that the USACE is currently preparing guidance for its Districts on conducting cumulative effects analyses under the National Environmental Policy Act, the Clean Water Act 404(b)(1) and the ESA.

We appreciate the one year of reporting data on the NWPs that USACE has provided thus far. However, in order to make any meaningful assessment, we require reporting data across multiple years. The letter from Assistant Secretary for the Army Jo-Ellen Darcy, dated March 6, 2014, as reflected in 2014 biological opinion stated that the USACE would conduct a rulemaking to require Pre-Construction Notifications (PCNs) for NWPs 12, 13, 14, and 36. There is no reference to that requirement in this draft proposal. We ask that the USACE specify if that modification will be part of a separate rulemaking.

In reviewing the NWP draft rule proposal, we are providing general and specific comments relevant to the NWP draft rule. We hope that these comments will assist our agencies to work together to successfully implement the NWP.

General Comments

The Working Relationship between NOAA Fisheries and the USACE on the implementation of the NWPs

The working relationship between NOAA Fisheries and the USACE is important because the NWP draft rule as proposed is focused on Regional and District implementation of the NWP rather than taking a holistic approach at the national level including an ESA programmatic consultation at the national level that would tier back to regional consultations. NOAA Fisheries has five Regional Offices that work with their respective USACE Districts as the USACE implements the NWP. Feedback from our Regional Offices points to inconsistencies in the manner in which USACE Districts work with NOAA Fisheries on NWP implementation. Throughout the proposed NWP draft rule it states that the District Engineer will make the determination regarding whether actions have minimal adverse effects on the aquatic environment, both individually and cumulatively. The thresholds or criteria for reaching such a determination should be clearly defined and articulated. Otherwise this determination could be inconsistently applied across the country particularly between different USACE Districts.

There is a good deal of variation in the interactions between the USACE Districts and the NOAA Fisheries Regional Offices. Our Pacific Islands Regional Office, for example, believes that the working relationship they have with the USACE District they work with is working to the extent that District is not sending them many projects that could be considered “no effect.” Some USACE Districts do not respond to comments, do not incorporate NOAA Fisheries recommendations, and do not explain why NOAA Fisheries recommendations are not accepted (Alaska). For our Alaska Regional Office, there is often substantive activity with their USACE District when responding to requests for comments, and then

followed by time with little communication. As an example, during the last request for comments on regional condition development and ESA implementation guidance for applicants, our Alaska Regional Office submitted comments and heard no response from the Alaska District despite repeated follow-up. Based on the USACE Alaska District's website, none of our recommendations on regional conditions were implemented. As a result, we currently have no regional conditions directed at pile driving.

Others have been working with NOAA Fisheries to modify regional conditions only to be contradicted by Division arguments that the modifications are not necessary. Our West Coast Regional Office has not been able to make sufficient progress on working with the California USACE District offices to modify regional conditions. For example, our intensive efforts in 2013 to work with the California USACE District Offices to recommend regional conditions were challenged by the South Pacific Division's argument that the current regional conditions and NWP general conditions are already effective in ensuring minimal impacts.

After a number of years of intensive coordination we have made progress in coordinating with the Jacksonville District. But this District is still not screening the projects that they send to the Southeast Regional Office in a manner that helps either us or them successfully manage that workload.

In implementing the current NWPs, the four USACE Districts that work with our Greater Atlantic Regional Fisheries Office (GARFO) use the NWPs (i.e. excluding the Northeast USACE) to notify them, either with PCNs or in joint processing meetings, of all activities they intend to authorize including activities that are often no effect. This significantly increases GARFO's workload and as importantly reduces the amount of time they have to discuss, modify, develop and ultimately consult on actions that may indeed have an effect on MMPA or ESA-listed species and designated critical habitat and where their effort can reduce impacts.

In GARFO, the USACE actions make up the majority of their actions and they have had substantial success working with the USACE regions to categorize or "bin" their activities in advance either through joint processing meetings or via use of programmatic consultations. GARFO's Habitat Conservation Division also has had a long history working closely with the USACE Districts within GARFO providing regional terms and conditions to protect EFH in the Regional Condition documents.

Even with this, GARFO suggested that the USACE and NOAA Fisheries work at the national level on Project Design Criteria (PDC) and Best Management Practices (BMP) that could help reduce workloads with responding to ESA related permit reviews and gain greater consistency with NWP draft rule implementation in their Region and across the country. NOAA Fisheries have a number of programmatic consultations¹ that could be used to develop a "master set" of PDCs and BMPs that could be used to set the "base standard" for the country, with additional refinement occurring at the NOAA Fisheries Regional Office/USACE District level. The PDCs and BMPs could help reduce workloads related to NWP permit reviews and gain greater consistency with NWP draft rule implementation within regions and

¹ These consultations include the Standard Local Operating Procedures for Endangered Species (SLOPES) Programmatic biological opinions (2012, 2013) in the Northwest Region, and the Programmatic biological opinion on the 12 USACE South Atlantic Jacksonville General Permits Renewal in the Southeast Region in 2012.

across the country. But this will not be possible if the USACE believes that they are not legally obligated to consult with NOAA Fisheries under the ESA on the NWP draft rule.

If these NWPs is not being implemented in a consistent manner across the country, then that calls into question the reliability of the NWPs to avoid and minimize effects to MMPA and ESA-listed species, designated critical, habitat and EFH.

Working Relationship between NOAA Fisheries and the USACE on the implementation of NWP 48

Regarding aquaculture, NOAA Fisheries participated as a member of the Regulatory Task Force of the Interagency Working Group on Aquaculture to produce a set of Fact Sheets to facilitate agency coordination and demystify the regulatory process for shellfish growers. These documents highlight the advantages of using NWP 48 and other types of general permits for both [federal agencies](#) and the [regulated public](#). The Task Force charter expires on March 31, 2016, and participating agencies, including the USACE, have expressed interest in continuing the coordinating efforts in the future outside a formal Task Force structure. NOAA Fisheries would like to continue to engage the USACE at the headquarters level in resolving any questions and concerns we have in the reissuance of NWP 48, and we also request the USACE to remind its district engineers that these Task Force products – which will be updated before the Task Force charter expires - are available as a reference.

At the regional level, NOAA Fisheries actively participates in state shellfish initiatives with similar goals to the headquarters Task Force with respect to interagency coordination on commercial shellfish permitting issues. NOAA Fisheries requests the USACE District Engineers proactively engage our aquaculture coordinators in the process of developing the regional conditions for the 2017 NWP 48, and to reach out to them with any questions they have about commercial shellfish aquaculture industry practices and its impacts as the reissuance process for the NWPs proceeds in 2016 and as regional conditions are developed.

SUMMARY OF TOPIC: Having regular communication between USACE and NOAA Fisheries at the Headquarters and Regional levels is critical and that the NWP rule is finalized and implemented to address effects to NOAA Fisheries' trust resources.

RECOMMENDATION: NOAA Fisheries recommends that the USACE direct its Districts to coordinate closely and effectively with NOAA Fisheries regional offices to address concerns about NOAA trust resources and establish processes that efficiently manage workload for both agencies.

Legal Defensibility of the USACE's no effect determination on the issuance of the 2017 NWP draft rule

Appendix 1 of our NWP draft rule review fully explains our position, but in summary, NOAA Fisheries disagrees with the USACE's determination on pages 11-14 of the draft proposed rule that the USACE's proposed reissuance/issuance of NWP draft rule will result in "no effect" on ESA-listed species or designated critical habitat under NOAA Fisheries' jurisdiction. Without a large-scale examination of the aggregate effects of the activities authorized by NWPs and the procedures established under the NWPs to address potential effects to listed species and critical habitat, we do not believe that the USACE can

arrive at the conclusion that there is “no effect” from these NWP on ESA-listed species or designated critical habitat.

ESA section 7 requires each federal agency to ensure, through consultation with NOAA Fisheries and/or the U.S. Fish and Wildlife Service, that any action authorized, funded, or carried out by that agency is not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitat. 16 U.S.C. § 1536(a)(2). The ESA and its regulations support timing formal consultation to occur upon a determination that an activity “may affect” ESA-list species or designated critical habitat. The USACE relies on general condition 18 and 33 C.F.R. § 330.4(f) for its “no effect” determination. This reliance is misplaced and belied by the statute, regulations, and history of the effects of the NWPs on ESA-listed species and their critical habitat. The USACE has a regulatory obligation per the ESA to consult with NOAA Fisheries and we stand ready to work with them to develop a national, programmatic biological opinion for the 2017 NWP draft rule.

SUMMARY OF TOPIC: NOAA Fisheries disagrees with the USACE’s determination of “no effect” as stated in the 2017 NWP draft rule.

RECOMMENDATION: NOAA Fisheries recommends that the USACE initiate formal consultation on the 2017 NWPs.

Accounting for Aggregate Effects in the 2017 NWP Draft Rule

Part of NOAA Fisheries’ concern about the aggregate effects of these NWPs stems from the fact that the magnitude of its effects can be only estimated, due to the large number of non-reporting authorizations, the ability of USACE District Engineers to waive NWP limitations, and the lack of watershed-based tracking of the impact of all authorizations under the Clean Water Act. Every year, District Engineers make thousands of determinations on whether a particular authorization will have more than minimal adverse environmental impact individually or cumulatively, and yet the data the District Engineers need to make those determinations is incomplete and the basis for them is not apparent to the public or coordinating agencies.

NOAA Fisheries would like to see more extensive, regular, and transparent reporting of the impacts of these NWPs. For NWPs that require a PCN or have another reporting requirement, the USACE and district offices should regularly provide federal/state agencies (with which the USACE routinely coordinates) and the public with a list of activities authorized under those permits. The information provided should include the unique identifier assigned by the USACE, the specific NWP number, the geographic coordinates of the authorized activity, and the total authorized impact in acres and/or linear feet. For non-reporting NWPs, the USACE should provide a yearly estimate of the number of activities authorized and an explanation of how that estimate was made. Increased information on project locations and impact will allow NOAA Fisheries and other resource agencies to be a more effective partner in assessing cumulative impacts. The USACE Savannah District currently implements a reporting process that may serve as a model for other offices.

Throughout the proposed NWP draft rule it states that the District Engineer will make the determination regarding whether actions have minimal adverse effects on the aquatic environment, both individually and cumulatively. Based on our review of the draft rule, the USACE has failed to provide any quantitative method to account for aggregate effects from this draft rule on NOAA Fisheries' trust resources. As we pointed out in our 2012 and 2014 biological opinions, accounting for the aggregate effects of the NWPs is critical to understanding the draft rule's impact and how to avoid/minimize those impacts.

There were eight types of permits that NOAA Fisheries identified in the 2014 biological opinion which may result in permanent impervious surface cover. The aggregate impacts caused by the activities within these eight NWPs are not immediately apparent on an individual basis. It is important to track any increases in impervious cover at the watershed level, because of the difficulty in seeing the overall aggregate impacts on a case-by-case basis. The aggregate impacts of these activities are also not as predictable as the other NWPs.

- NWP 12: Utility Lines (Construction, maintenance or repair)
- NWP 13: Bank Stabilization
- NWP 14: Linear Transportation Projects
- NWP 29: Residential Developments
- NWP 31: Maintenance of existing flood control facilities
- NWP 33: Temporary construction activities, access and dewatering
- NWP 36: Boat ramps
- NWP 39 Commercial and institutional developments

In addition to the NWPs listed above, we believe that the implementation of NWP 3- maintenance (pile driving); NWP 6- survey activities (seismic); NWP 8- oil and gas structures (drilling); NWP 13- bank stabilization (pile driving); NWP 22- vessel removal (explosives); NWP 28- modification of existing marinas (pile driving); NWP 35- maintenance dredging existing basins; and NWP 36- boat ramps continue to have adverse effects to ESA-listed species and designated critical habitat. Furthermore, our Regional Offices indicated that they are also concerned about these particular NWPs as well. Thus, accounting for the aggregate effects of these and other NWPs is critical to understanding the long and short-term effects of the issuance of NWPs on NOAA Fisheries trust resources.

The approach that the USACE is currently proposing, by allowing the USACE Districts, and District Engineers to make decisions on the NWP implementation "independently" are not tracked for consistency across program implementation. In addition, the granting of waivers to various NWPs but not accounting for the additional acreage that is being impacted as a result of those waivers does not support understanding aggregate effects from these NWPs.

We understand that while the USACE agreed to the 1% impervious cover trigger as a quantitative method to track aggregate effects, they do not agree this trigger will effectively track effects from the NWPs as discussed in the 2014 biological opinion. Again, we thank the USACE for working with us in implementing portions of the 2014 biological opinion. We remain open to discussing alternative

methods to track aggregate effects. If the USACE wishes to propose an alternative method, then the USACE needs to work with NOAA Fisheries to develop a quantitative mechanism/threshold(s)/trigger(s) that can be used at the national, Regional, and District level to quantitatively account for the aggregate effects of this action and build that into the a national, programmatic biological opinion for the 2017 NWP. This quantitative mechanism/threshold(s)/ trigger(s) needs to account for important and measurable on-the-ground effects from the project, but can also monitor the effectiveness of these NWPs in avoiding and minimizing effects to MMPA and ESA-listed species, designated critical habitat, and EFH (e.g., permitting multiple actions in a watershed, underwater noise, dredging entrainment, amount/extent of rip-rap, etc.).

SUMMARY OF TOPIC: NOAA Fisheries is concerned that the USACE does not have a reliable process for tracking the aggregate effects of these NWPs and ensuring it is not having more than minimal adverse effect on NOAA trust resources.

RECOMMENDATION: NOAA Fisheries requests that the USACE work with NOAA Fisheries to develop a quantitative process to address aggregate effects of these NWPs.

Changes to Acreage Limitations and Waivers

With respect to the USACE proposal to alter the acreage limitations and pre-construction notification thresholds where they currently exist, NOAA Fisheries does not support reducing these requirements except where NOAA Fisheries agrees as part of a regional conditioning process. Removing acreage limitations or PCNs for NWPs 29 and 39 in particular (permits that authorize development activities) would make it even more difficult than it already is to control development in coastal areas and ensure the maintenance of the nation's aquatic resources. Similarly, NOAA Fisheries does not support allowing increased use of waivers. On the contrary, NOAA Fisheries believes waivers of the 300-ft stream bed impact limitations should not be unrestricted, as they currently are, but should allow only 150% of the original limitation (which in this case would allow up to 450 feet of stream bed impact). NOAA Fisheries supports continuing the requirement that the District Engineer make a written determination that the impact will not result in more than minimal impact individually and cumulatively.

If the USCAE does propose changing acreage limitations or waiver criteria, the USACE should provide more extensive information about the current use of waivers. The text currently states:

"For example, in 2012 and 2013, waivers of the 500 linear foot limit in paragraph (b) of NWP 13 were issued for 6% of the 4,718 verifications issued during those two years. While many of the waivers issued under the 2012 NWPs for losses of stream bed were for activities authorized by NWPs 29 and 39, it is important to understand that those two NWPs are the most frequently used NWPs of the 10 NWPs that allow waivers of that 300 linear foot limit." Six percent of 4,718 permits are 238 actions, which is not a discountable amount, particularly in light of the fact that all waivers are not tracked in the USACE's information system.

RECOMMENDATION: NOAA Fisheries recommends that the acreage limits remain unchanged, and that and waiver criteria include a limit of 150% of the original limitation. The USACE should also provide more detailed information about the current use of waivers.

Terminology

There are several places throughout these comments where we identify terms that warrant more detailed, specific definitions. Defining these terms at the national level would provide NOAA Fisheries with a better understanding of where ESA and EFH consultation is required.

RECOMMENDATION: Ensure that the NWP draft rule defines terms such as temporary, man-made obstruction, specific activities (NWP 38), new project area (NWP 48), substantial effects, minimal effects, and minor impacts to fish.

NOAA Fisheries requests that we discuss how to best define these terms as they relate back to our trust resources. For the word “temporary” we recommend that the USACE define the term as it is currently defined in NWP 12: three months with the potential for a waiver from the District Engineer to allow 180 days (six months). Defining these terms at the national level would provide NOAA Fisheries with a better understanding of where ESA and EFH consultation is required.

Specific Comments on Background Section

Page 3 - “All NWP require PCNs for any proposed activity undertaken by a non-federal entity that might affect ESA-listed species or designated critical habitat under the Endangered Species Act (see general condition 18 and 33 CFR 330.4(f)(2)) or any proposed activity undertaken by a non-federal entity that may have the potential to cause effects to historic properties listed, or eligible for listing in, the National Register of Historic Places (see general condition 20 and 33 CFR 330.4(g)(2)).”

Comment - Please clarify in the text how the USACE will ensure that a non-Federal entity is aware that its action may affect ESA-listed species, has looked at the effects of the action to ESA-listed species and designated critical habitat (and the outcome), and has taken the proper action to make sure s/he is in compliance with G.C. 18. Also, please explain in the text how this process will work for the 18 NWPs that do not require PCNs.

Page 4 – “Regional conditions may be imposed on the NWPs by division engineers to take into account regional differences in aquatic resource functions and services across the country and to restrict or prohibit the use of NWPs to protect those resources. Through regional conditions, a division engineer can modify an NWP to require submission of PCNs for certain activities. Regional conditions may also restrict or prohibit the use of an NWP in certain waters or geographic areas, if the use of that NWP in those waters or areas might result in more than minimal individual or cumulative adverse environmental effects.”

Comment- The implementation of the proposed draft needs to be consistent with the 2014 biological opinion, and the draft rule does not indicate whether the USACE has modified regional conditions or conducted any rulemaking to revise the NWPs since 2012. The proposed change indicates that a District Engineer “may impose activity- specific conditions.” However, the 2014 programmatic biological opinion (p. 357) required the USACE to modify NWPs to meet regional conditions, and that making such changes would require reinitiation of formal consultation.

Page 4 - “Pre-construction notification requirements give the USACE the opportunity to evaluate certain proposed NWP activities on a case-by-case basis to ensure that they will cause no more than minimal adverse environmental effects, individually and cumulatively.”

Page 7-9 – “Revisions to the Definition of Waters of the United States”

Comment - As it is currently written, there is no context for the rest of the section or the USACE’s request for comments on how the changes may affect the applicability and efficiency of the proposed NWPs. This section should include a brief summary of the revisions to the definition and how those changes affect the NWPs.

Page 10 - “In today’s proposal, the following NWPs have certain limits that can be waived with a written determination of a District Engineer after review of a PCN: NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, and 52. For all these NWPs, the District Engineer can only grant the waiver upon making a written determination that the NWP activity will result in only minimal adverse environmental effects. While the USACE’ automated information system does not specifically track waivers for NWP verifications, an

analysis of authorized impacts can provide some information on the use of waivers. That analysis indicated that waivers of limits are not issued frequently. For example, in 2012 and 2013, waivers of the 500 linear foot limit in paragraph (b) of NWP 13 were issued for 6% of the 4,718 verifications issued during those two years. While many of the waivers issued under the 2012 NWPs for losses of stream bed were for activities authorized by NWPs 29 and 39, it is important to understand that those two NWPs are the most frequently used NWPs of the 10 NWPs that allow waivers of that 300 linear foot limit.”

Comment – NOAA Fisheries requests that the USACE and our agency identify and jointly implement an appropriate quantitative mechanism/threshold(s)/trigger(s) that can be used to track the use of waivers on a national scale. This could include how acreages that will be affected during the waiver process be accounted for, how often are waivers used, and how many have been used and under what circumstances. Six percent of 4,718 permits are 238 actions, which is not a discountable amount, particularly in light of the fact that all waivers are not tracked in the USACE’s information system. This is an example of the kind of quantitative measure that could serve as a trigger and help the USACE track aggregate effects as discussed earlier in the document.

Comment – The USACE needs to define what a minimal adverse environmental effect is in relationship to ESA-listed species and designated critical habitat and what the criteria for finding minimal adverse environmental effect that waives the 300-linear foot limit for losses of stream bed will be.

Page 11 - “The NWP regulations at 33 CFR 330.4(f) and NWP general condition 18, endangered species ensure that all activities authorized by NWPs comply with Section 7 of the Endangered Species Act (ESA). Those regulations and general condition 18 require non-federal permittees to submit PCNs for any activity that might affect ESA-listed species or designated critical habitat.”

Comment - There are 18 NWPs that do not require PCNs. In those cases, how will the USACE let an applicant (in particular a non-Federal entity) know that they may need to address the requirements of these NWPs? How is a non-Federal applicant required to demonstrate that s/he checked for impacts from the activity to ESA-listed species, and thus, is able to be covered under a NWP?

Page 11 - “The “might affect” threshold in 33 CFR 330.4(f)(2) and paragraph (c) of general condition 18 is more stringent than the “may affect” threshold for section 7 consultation in the U.S. Fish and Wildlife Service’s (FWS) and National Marine Fisheries Service’s (NOAA FISHERIES) ESA Section 7 consultation regulations at 50 CFR part 402.”

Comment – The USACE should explain in the text how the “might affect” threshold is more stringent than “may affect” Might effect is not a term used pursuant to the ESA so we are unsure how the USACE is applying the “might effect” term to addressing effects to ESA-listed species and/or designated critical habitat. Note that the “may affect” threshold is very low. The *ESA Section 7 Handbook* defines “may affect” as “the appropriate conclusion when a proposed action may pose any effects on ESA-listed species or designated critical habitat.” The preamble to the NOAA Fisheries and US Fish and Wildlife Service’s 1986 revisions to the ESA section 7 regulations noted that “may affect” includes “any possible effect, whether beneficial, benign, adverse, or of an undetermined character.”

Page 11 - “When evaluating a PCN, the USACE will either make a “no effect” determination or a “may affect” determination. If the USACE makes a “may affect” determination, it will notify the non-federal applicant and the activity is not authorized by NWP until ESA Section 7 consultation has been completed. If the non-federal project proponent does not comply with 33 CFR 330.4(f)(2) and general condition 18, and does not submit the required PCN, then the activity is not authorized by NWP. In such situations, it is an unauthorized activity and the USACE district will determine an appropriate course of action to respond to the unauthorized activity.”

Comment – NOAA Fisheries requests that the USACE provide NOAA with information on how often these type of notifications happen and how they are tracked nationally. Understanding this type of compliance is critical to the consistent national application of these NWPs and the avoidance/minimization of effects to ESA-listed species, designated critical habitat, and EFH.

Page 11 - “Although the reissuance/issuance of the NWPs has no effect on ESA-listed species or their critical habitat and thus requires no ESA section 7 consultation, the terms and conditions of the NWPs, including general condition 18, and 33 CFR 330.4(f) ensure that ESA consultation will take place on an activity-specific basis wherever appropriate at the field level of the USACE, FWS, and NOAA Fisheries.”

Comment - The USACE should explain in the text how they track the field-level ESA section 7 consultations.

Page 12 - “The only activities that are immediately authorized by NWPs are “no effect” activities under Section 7 of the ESA and its implementing regulations at 50 CFR part 402. Therefore, the issuance or reissuance of NWPs does not require ESA Section 7 consultation because no activities authorized by any NWPs “may affect” ESA-listed species or critical habitat without first completing activity-specific ESA Section 7 consultations with the Services, as required by general condition 18 and 33 CFR 330.4(f).”

Comment - How does the USACE actually ensure that the activities authorized by NWPs are “no effect,” especially in an aggregate fashion across the country? Without a large-scale examination of the aggregate effects (per the discussion earlier in this document) of the activities authorized by NWPs, how can the USACE arrive at the conclusion that there is “no effect?” Gathering this type of information is critical to the consistent national application of these NWPs and the avoidance/minimization of effects to ESA-listed species, designated critical habitat, and EFH.

Page 13 - “In addition, paragraph (a) of general condition 18 states that no activity is authorized by 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” or “which will directly or indirectly destroy or adversely modify the critical habitat of such species.” Such activities would require District Engineers to exercise their discretionary authority and subject the proposed activity to the individual permit review process, because an activity that would jeopardize the continued existence of an ESA-listed species, or a species proposed for listing, or that would destroy or adversely modify the critical habitat of such species would not result in minimal adverse environmental effects and thus cannot be authorized by NWP. “

Comment –The USACE should explain at what point an applicant is informed that the activity is not covered under a NWP, and how designating that an action that has minimal adverse environmental effects relates to jeopardizing the continued existence of an ESA-listed species, or destroying or adversely modifying the critical habitat of such species. Does this happen before or after the activity has taken place? How does the USACE become aware of situations like this, especially if a PCN is not required?

Comment - The USACE needs to explain the relationship between designating that an action that has minimal adverse environmental effects in relationship to jeopardizing the continued existence of an ESA-listed species, or destroying or adversely modifying the critical habitat of such species.

Page 13 - “During the process for developing regional conditions, USACE Districts are encouraged to coordinate or consult with FWS and/or NOAA Fisheries regional or field offices to identify regional conditions that can provide additional assurance of compliance with general condition 18 and 33 CFR § 330.4(f)(2). Such regional conditions can add PCN requirements to one or more NWPs in areas inhabited by listed species or where critical habitat occurs.”

Comment – The ESA, Fish and Wildlife Coordination Act, and Magnuson-Stevens Act all require this coordination and consultation. We request that the USACE change “are encouraged to” to “are required to”.

Page 14 - “Essential Fish Habitat: The NWP Program’s compliance with the essential fish habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act will be achieved through EFH consultations between USACE Districts and NOAA Fisheries regional offices. This approach continues the EFH Conservation Recommendations provided by NOAA Fisheries Headquarters to USACE Headquarters in 1999 for the NWP program. USACE Districts that have EFH designated within their geographic areas of responsibility will coordinate with NOAA Fisheries regional offices, to the extent necessary, to develop NWP regional conditions that conserve EFH and are consistent the NOAA Fisheries regional EFH Conservation Recommendations. USACE districts will conduct consultations in accordance with the EFH consultation regulations at 50 CFR 600.920.”

Comment: Conducting consultations on a NOAA Fisheries Region/USACE District basis has been successful in some parts of the country. It is particularly effective when coordination begins early in the reissuance process and is done collaboratively with the USACE and other agencies.

Comment: In keeping consistency with structure of the document this section should be titled “Compliance with the Essential Fish Habitat Provisions of the Magnuson-Stevens Fishery Conservation and Management Act.”

Page 15 - “Under Section 404(e) of the Clean Water Act, NWPs can only be issued for those activities that result in no more than minimal individual and cumulative adverse environmental effects.”

Comment - In keeping with the 2014 biological opinion, the USACE needs to track cumulative effects at the regional and national level. Once again, gathering this type of information is critical to the consistent

national application of these NWP and the avoidance/minimization of effects to ESA-listed species, designated critical habitat, and EFH.

Page 19 - “General condition 18 requires non-federal permittees to submit PCNs for any proposed activity that might affect listed species or critical habitat, if listed species or critical habitat are in the vicinity of the proposed activity, or if the proposed activity is located in critical habitat.”

Comment - In keeping with the 2014 biological opinion, the USACE needs to ensure that the non-Federal permittee know that their activity might affect a listed species or critical habitat and are thus required to submit a PCN.

Comment - In keeping with 2014 biological opinion, the USACE must confirm that there is no effect from such actions. The designation of what is “no effect” significantly varies from USACE District to District and the USACE needs to correct this situation for a consistent application of the 2017 NWP draft rule.

Page 20 – “Except for NWPs 21, 49, and 50, and for proposed NWP activities that require Endangered Species Act Section 7 consultation and/or National Historic Preservation Act Section 106 consultation, if the project proponent has not received a reply from the Corps within 45 days, he or she may assume that the project is authorized, consistent with the information provided in the PCN.”

Comment: The need for EFH consultation should also be reflected in this section.

Comments on Modifications to Specific NWPs

Page 24- NWP 3 Maintenance

Comment—In cases where a NWP authorizes maintenance or construction of structures (e.g., NWP 3, 13), what is required when the property or structure transfers to another party? Does the USACE require removal of any structure at the end of its use if it is not to be transferred to another party? The structure cannot just be abandoned in place by the party owning the structure and left in the waters of the US. Or, does this change in the NWP 3 allow removal as well as construction of a given structure under the same authorization?

We request that the USACE clarify if this permit allows removal of structures.

Pages 24 – 25 - NWP 12 Utility Line Activities

“In response to a suggestion received during the period the 2012 NWPs were in effect, we are proposing to add a paragraph to NWP 12 to authorize, to the extent that DA authorization is required, discharges of dredged or fill material, and structures and work in navigable waters, necessary to remediate inadvertent returns of drilling muds (also known as “frac-outs”) that can occur during directional drilling operations to install utility lines below jurisdictional waters and wetlands.”

Comment - We agree with the USACE that language should be added to address the potential for a frac-out. How will this become a condition of the permit?

“Proposed Note 2 also points prospective permittees to 33 CFR 330.6(d), which addresses the use of NWP with individual permits, where components of a larger overall project that have independent utility might be eligible for NWP authorization while other components might require an individual permit because not all crossings of waters of the United States comply with the terms and conditions of the NWPs or regional general permits. For utility lines, section 330.6(d) applies in cases where one or more crossings for a stand-alone utility line are not eligible for NWP authorization, but the remaining crossings for the utility line could satisfy the NWP terms and conditions. A stand-alone utility line is utility line that has independent utility and can be operated on its own to transport materials or energy from the point of origin to the terminal point.”

Comment - The paragraph describing independent projects and NWP authorizations for where one or more crossings for a stand-alone utility line are not eligible for NWP authorization, but the remaining crossings for the utility line could satisfy the NWP terms and conditions needs to be clarified, and particularly how consultations with NOAA Fisheries would occur if some portions of the project were permitted under a NWP and other portions were permitted through an individual permit (or other method). Given that piece-mealing projects under the ESA is not appropriate, how will the USACE alert NOAA Fisheries if the scope of the project was being permitted with multiple authorizations?

Comment- In regards to linear utility (NWP 12) and transportation (NWP 14) projects, the document describes how each "individual crossing" of different waterbodies or in places distant from each other on the same waterbody are considered individual projects (and presumably require individual permits) by the USACE. How does this work with a potential section 7 consultation when NOAA Fisheries is required to look at the entire project and all of its impacts to habitat and ESA-listed species? It would seem that we could be faced with multiple "individual consultations" regarding the larger project based on the separate permits.

Page 26 - NWP 13 Bank Stabilization

Comment: To encourage the use of the new NWP for living shorelines, NOAA Fisheries recommends changes to NWP 13. These changes are intended to ensure that hard shoreline structures, e.g., bulkheads and rip rap, are authorized by these NWPs only where living shorelines or hybrid approaches are not feasible.

- In the recently released ‘Guidance for Considering the Use of Living Shorelines’ NOAA Fisheries states:

‘As sea levels continue to rise, coastal storm intensity increases, and coastal development continues within our coastal zone, coastal communities are threatened by increasingly severe infrastructure damage and loss of habitat from extreme storms (Melillo et al. 2014, NOAA 2015,

Sutton-Grier et al. 2015)². If coastal populations continue to increase and shoreline hardening in the US continues at the current rate of about 200 km/year, nearly one third of the contiguous US shoreline is expected to be hardened by 2100 (Gittman et al. 2015³). There is evidence that shorelines having intact natural coastal habitats (e.g., wetlands, dunes, mangroves, and coral reefs) experience less damage from severe storms and are more resilient than hardened shorelines (Arkema et al. 2013⁴, Gittman et al. 2014). Areas with natural coastal habitats also have higher populations of fish and other living organisms important for shorebirds and for recreation and commercial purposes (Peterson et al. 2000⁵, Scyphers et al. 2011, Sobocinski et al. 2008).

For these reasons, NOAA Fisheries supports alternative approaches to hardened shorelines and seeks innovative ways to increase coastal resilience to erosion and storm threats while conserving habitats for living marine resources. Living shorelines provide an innovative approach to reducing damage and erosion while simultaneously enhancing coastal community resilience by providing additional social, economic, and ecological benefits. NOAA Fisheries supports the use of living shorelines and/or bioengineered shorelines over hardened shorelines, where appropriate. We recognize living shorelines and bioengineered shorelines are not sustainable in some locations.,⁶

Recommendation:

- NWP 13 should be limited to areas where a living shoreline is not an option due to wave energy, water depth, or other site factors.

² Melillo, J.M., T.C. Richmond, and G.W. Yohe, Eds. (2014) *Climate Change Impacts in the United States: The Third National Climate Assessment*. U.S. Global Change Research Program, 841 pp.; National Oceanic and Atmospheric Administration (NOAA) (2015) *Billion Dollar Weather and Climate Disasters: Time Series*. Accessed 7/10/15 at <http://www.ncdc.noaa.gov/billions/time-series>; and Sutton-Grier, A.E., K. Wowk, and H. Bamford (2015) Future of our coasts: The potential for natural or hybrid infrastructure to enhance the resilience of our coastal communities, economies, and ecosystems. *Environmental Science & Policy* 51: 137-148.

³ Gittman, R. K., F.J. Fodrie, A.M. Popowich, D.A. Keller, J.F. Bruno, C.A. Currin, C.H. Peterson, and M.F. Peihler (2015) Engineering away our natural defenses: an analysis of shoreline hardening in the US. *Frontiers in Ecology and the Environment* 13(6): 301-307.

⁴ Arkema, K.K., G. Guannel, G. Verutes, S.A. Wood, A. Guerry, M. Ruckelshaus, P. Kareiva, M. Lacayo, and J.M. Silver (2013) Coastal habitats shield people and property from sea-level rise and storms. *Nature Climate Change*, published online July 14, 2013; and Gittman, R.K., A.M. Popowich, J.F. Bruno, and C.H. Peterson (2014) Marshes with and without sill protect estuarine shorelines from erosion better than bulkheads during a Category 1 hurricane. *Ocean & Coastal Management* 102: 94-102.

⁵ Peterson, M.S., B.H. Comyns, J.R. Hendon, P.J. Bond, and G.A. Duff (2000) Habitat use by early life-history stages of fishes and crustaceans along a changing estuarine landscape: differences between natural and altered shoreline sites. *Wetlands Ecology and Management* 8(2-3):209-219; Scyphers, S.B., S.P. Powers, K.L. Heck Jr., and D. Byron (2011) Oyster reefs as natural breakwaters mitigate shoreline loss and facilitate fisheries. *PLoS ONE* 6(8); and Sobocinski, K.L., J.R. Cordell, C.A. Simenstad (2010) Effects of shoreline modifications on supratidal

⁶ National Oceanic and Atmospheric Administration 2015. Guidance for considering the use of living shorelines, 35pp. Accessed at: http://www.habitat.noaa.gov/pdf/noaa_guidance_for_considering_the_use_of_living_shorelines_2015.pdf

- NOAA Fisheries encourages shoreline stabilization using the softest approach feasible, based on site conditions⁷. NOAA Fisheries recognizes that there are site-specific difference in factors such as wave energy, habitat types, and geologic setting in planning the appropriate bank stabilization technique. The cumulative effects of bulkheads have been found to have adverse impacts on public trust resources. For these reasons, NOAA Fisheries recommends adding preference language to NWP13 that notes that living shorelines should be considered before other bank stabilization techniques because of their added ecological benefits. NOAA Fisheries also recommends including a reference to the new proposed NWP-B for living shorelines in NWP-13 with a brief explanation of the difference between NWP-13 and NWP-B. NWP-B contains a definition of living shorelines which could be included here as well.
- NOAA Fisheries is particularly concerned about NWP13 authorizations of hard shoreline structures on banks that already support wetland vegetation. Studies have shown that hard structures placed landward of an existing marsh create a higher chance of accelerating marsh and seagrass loss through reflective energy⁸. For shorelines that currently support wetland vegetation, NOAA Fisheries recommends that living shorelines be the preferred shoreline stabilization approach and that a PCN be required before authorization of a hard structure under NWP 13.
- The cumulative impacts of shoreline hardening authorized under NWP 13 and other permits have been identified in numerous studies are a serious concern for the ecological integrity and resilience of coastal areas. For this reason, we request that a reporting requirement added to NWP 13 so that cumulative effects of shoreline hardening can be better understood and tracked on a national basis. From a cumulative impact standpoint, it is critical that the USACE (and other resource agencies) be able to effectively document and quantify all bank stabilization projects (past, present and reasonably foreseeable future). Use of a reporting requirement would require applicants to notify the USACE before starting construction. In turn, the USACE would have a record of such permitted activity, and the information would be input to their database. Later, the data could be retrieved for use in the analysis of cumulative impacts and/or impacts occurring adjacent to a specific waterbody. This type of data analysis is critical given the need to adequately determine the magnitude of shoreline armoring and the potential for loss in aquatic function over time.

NOAA Fisheries also suggests the following changes to NWP permit 13 language:

- Define temporary fills

⁷ National Oceanic and Atmospheric Administration 2015. Guidance for considering the use of living shorelines, 35pp. Accessed at: http://www.habitat.noaa.gov/pdf/noaa_guidance_for_considering_the_use_of_living_shorelines_2015.pdf

⁸ Patrick, C., D.E. Weller, X. Li and M. Ryder (2014) Effects of shoreline alteration and other stressors on submerged aquatic vegetation in subestuaries of Chesapeake Bay and the Mid-Atlantic Coastal Bays. *Estuaries and Coasts* 37: 1516-1531.

- Section (d) should include reference to not only special aquatic sites, but also state-designated critical resource areas and other similar places.
- The text 'Invasive plant species shall not be used for bioengineering or vegetative bank stabilization' should be changed to 'Native plants appropriate for current salinity and site conditions must be used for bioengineering or vegetative bank stabilization' to be consistent with the language in the SAGE Natural and Structural Measures for Shoreline Stabilization brochure and language we are suggesting for NWP B for living shorelines.
- To make this permit more complementary to the proposed new NWP B, and to acknowledge that bank stabilization techniques also require maintenance text should be added about maintenance of the structures permitted under NWP 13.:
 - (h) The activity must be properly maintained as designed, which may require repairing after severe storms or erosion events. This NWP authorizes those maintenance and repair activities.

Comment – We appreciate that the USACE is incorporating additional bank stabilization techniques such as bioengineering. NOAA Fisheries recommends that the NWP specify that projects that use bioengineering techniques will be given priority for permitting to the extent practicable.

Comment – The USACE also needs to clarify that fill materials can be placed into the waterbody and streambed and not just along the bank as part of the bank stabilization methods will require additional assessment of effects to the aquatic environment during the USACE's review process and the ESA consultation process.

Page 27 - NWP 14 Linear Transportation Projects

Comment - The paragraph describing independent projects and NWP authorizations for where one or more crossings for a stand-alone utility line are not eligible for NWP authorization, but the remaining crossings for the utility line could satisfy the NWP terms and conditions needs to be clarified, and particularly how consultations with NOAA Fisheries would occur if some portions of the project were permitted under a NWP and other portions were permitted through an individual permit (or other method). Given that piece-mealing projects under the ESA is not appropriate, how will the USACE alert NOAA Fisheries if the scope of the project was being permitted with multiple authorizations?

Comment – Define the word “temporary” as it is in NWP 12.

Page 27 - NWP 19 Minor Dredging Activities

Comment – We appreciate that the USACE is requiring dredge spoils from minor dredging activities to be disposed of in an upland area, separate from the waters of the U.S.

Pages 27-28 - NWP 33 Temporary Construction, Access, and Dewatering

Comment – The USACE needs to clarify if a PCN will be used if ESA-listed species or designated critical habitat occurs in the activity area.

Comment – The USACE needs to define the word “temporary” as it is in NWP 12 and clarify how the use of this word differs, or not, from that of NWP 12 and 14.

Page 28 - NWP 35 Maintenance Dredging of Existing Basins

Comment – We appreciate that the USACE is requiring dredge spoils from minor dredging activities to be disposed of in an upland area, separate from the waters of the U.S.

Page 30 – NWP 48 ~~Existing~~ Commercial Shellfish Aquaculture Activities

Comment: The NWP 48 is not limited to existing activities. Everywhere else in this document says “Commercial Shellfish Aquaculture Activities.” Please delete “Existing” here, as it is misleading and implies that new activities are not eligible for NWP 48.

“We are proposing ~~this~~ to modify this NWP to state that commercial shellfish aquaculture activities in new project areas are authorized as long as the project proponent obtains a state or local authorization, if such authorization is required.”

Comment: Technical correction.

Comment: We are proposing some changes in the text of NWP 48 that provide an alternative approach. See comments and proposed edits on pages 76-77.

Page 30

“In some areas of the country, state or local authorizations are not required for commercial shellfish aquaculture activities if the subtidal or intertidal lands are privately owned.”

Comment: Technical correction.

Page 30

“To streamline the DA authorization process for on-going commercial shellfish aquaculture operations that were previously verified as being authorized under the 2012 NWP 48, we are also proposing to modify this NWP to require reporting for those on-going activities instead of requiring new PCNs.”

Comment: NOAA Fisheries appreciates the USACE’s acknowledgement that commercial shellfish activities are ongoing activities, and we support the proposed change to require reporting rather than another PCN for activities authorized under the 2012 NWP 48. NOAA Fisheries would like to discuss the possibility of expanding this improvement to consider providing a mechanism for ongoing commercial shellfish activities authorized under another type of general permit or even an individual permit to transition to NWP 48 if they can meet the requirements. This is particularly of interest for any USACE Districts that may be considering adopting NWP 48 and discontinuing other types of general permits. For example, the Baltimore District’s Regional General Permit (RGP-1) is expiring in August 2016 and it is unclear to us as to whether that RGP-1 will continue to be available in the future or if growers will have to start all over under NWP 48 or an individual permit. If the Baltimore District decides to transition

from the RGP to NWP 48, it would be very helpful to provide a smooth transition for the many new shellfish operations that have been authorized in the Maryland portion of the Chesapeake Bay in the last several years.

Page 31

“Under the proposed reporting requirement, the project proponent who received an NWP verification under the 2012 NWP 48 would have to submit a letter or other document with: (1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the cultivated species; (3) the DA number for the NWP verification letter from the USACE, if pre-construction notification was required under the 2012 NWP 48 or the operator voluntarily submitted a verification request; and, if applicable, (4) identify the programmatic biological opinion, programmatic informal consultation concurrence, or any activity-specific biological opinion or informal consultation concurrence that was used to provide ESA section 7 coverage for the 2012 NWP 48 activity. The report must also describe any proposed changes to commercial shellfish aquaculture operation.”

Comment: Regarding item number 4: ESA consultations are between the USACE and NOAA Fisheries or U.S. Fish and Wildlife Service. The permit holder may not have this information. Unless the USACE included this information in the 2012 NWP 48 verification letter, documenting compliance with ESA should be the responsibility of the District Engineer, not the permit holder.

Page 31

“District engineers would have 30 days to review the report and determine, if the commercial shellfish aquaculture operation may affect listed species or critical habitat, whether additional ESA Section 7 compliance is necessary to comply with general condition 18.”

Comment: Per the previous comment, the USACE needs to add something in this paragraph regarding the need for the District Engineer to document how ESA compliance was obtained for the issuance of the 2012 NWP 48 verification letter.

Page 31

“If, after reviewing the report, the district engineer determines that the previous ESA Section 7 compliance no longer applies to the commercial shellfish aquaculture activity that requires DA authorization under the 2017 NWP 48, then he or she will notify the project proponent that the activity will require section 7 consultation in accordance with general condition 18. The district engineer may require additional information from the project proponent to initiate that section 7 consultation.”

Comment: Before reaching out to the project proponent, the District Engineer should first check to see if there are any new programmatic biological opinions or informal consultation concurrences completed after the date of the 2012 NWP 48 verification letter that can provide the needed information.

Pages 32 – 33 - NWP A: Removal of Low-Head Dams

The USACE proposes a new NWP to authorize structures and work in navigable waters of the U.S. as well as associated discharges of dredged or fill material into waters of the U.S. for the removal of low-head dams. The proposed definition of low-head dam is “a dam built to pass inflows from upstream over the entire width of the dam crest on a continual and uncontrolled basis.” While each USACE District will adjust this definition during development of District-level implementation conditions for the NWP, the definition is acceptable as national-level starting place. NOAA Fisheries supports the proposed NWP and will work with USACE Districts to tailor the NWP to reflect local environmental conditions.

Comment: In general, we support the removal of low-head dams, in the interests of public safety and species conservation. We also support the need for PCN for to ensure the ability to track where these dams are being removed. That information could then be made available to NOAA Fisheries to provide necessary information to address during each consultation, as well improving the ability to track aggregate effects to ESA-listed species, designated critical habitat, and EFH.

Comment: The USACE needs to develop the protocols, or use ones as appropriate that the USACE already uses to require applicants to conduct sediment testing of sediment that could be released as a result of dam removal with associated sediment removal as needed into upland disposal sites. The USACE also needs to develop/require appropriate sediment monitoring to understand and minimize effects to ESA-listed species, designated critical habitat, and EFH.

Pages 34-36 - NWP B: Living Shorelines

The USACE proposes a new NWP to authorize structures and work in navigable waters of the U.S. as well as associated discharges of dredged or fill material into waters of the U.S. for the construction and maintenance of living shorelines. For the purposes of this NWP, the term “living shoreline” is defined as “a shore erosion management system consisting of natural and man-made components (e.g., sand, coir logs, coir mats, native oyster shell, stone, wood, planted vegetation) to manage shore erosion while retaining or enhancing shoreline ecological processes. Living shorelines must have a substantial biological component, either tidal or lacustrine fringe wetlands or reef structures.”

Comment: NOAA Fisheries strongly supports the addition of this NWP, with the changes noted below.

Comment: NOAA Fisheries recommends adding the following to the definition:

“Living shorelines should maintain the natural continuity of the land-water interface.”

NOAA Fisheries does not support groins as an example of a living shoreline technique. The text in the preamble that states, “Another living shoreline approach is to construct low, short groins perpendicular to the shoreline, fill the areas between the low groins with sand, grade the sand to the proper slope to dissipate wave energy, and plant marsh vegetation in the sand to establish or improve a fringe marsh to reduce erosion.” should be deleted.

In addition, NOAA Fisheries recommends the following changes to the preamble and permit text concerning this permit:

In the preamble -

- NOAA Fisheries suggests adding language in the preamble to explain the additional ecosystem values associated with a living shoreline. We suggest adding the following language after the existing 2nd paragraph:
 - Living shorelines are designed for erosion control and also sustain habitat function along a shoreline, resulting in minimal environmental effects on a coastline. Living shorelines provide ecosystem services to society, shoreline stabilization, storm attenuation, food production, nutrient and sediment removal, water quality improvement and carbon sequestration⁹. The vegetation and fish utilization in constructed marsh sill can mirror that of nearby natural marshes in just a few growing seasons¹⁰. Even narrow marshes—like a frequent component of living shoreline designs—have been shown to slow waves and reduce shoreline erosion¹¹.
- Sills can be made of a variety of materials, including softer materials like oysters and oyster shell bags. For this reasons, we suggest that the second sentence on sills in the 6th paragraph be changed to state ‘Sills can be constructed with stone or other materials’.
- We support some limit to the placement of structures and fill allowed under this permit. The 500 foot length and 30 feet beyond ordinary high water mark be provided or mean high water results in a maximum footprint of .334 acres. Because the shoreline slopes vary greatly around the country, an acreage limitation might be more appropriate than a length and width limit.

In the Permit:

- NOAA Fisheries suggests consistency in the way this permit starts compared to NWP 13. We suggest changing ‘Structures and work’ to “Living shoreline bank stabilization activities in navigable waters...”

⁹ Barbier, E.B., S.D. Hacker, C. Kennedy, E.W. Kock, A.D. Stier, and B.R. Stillman (2011) The value of estuarine and coastal ecosystem services. *Ecological Monographs* 81(2): 169-193

¹⁰ (Currin et al. 2008 and Gittman et al. 2015b.) Currin, C.A., P.C. Delano, and L.M. Valdes-Weaver (2008) Utilization of a citizen monitoring protocol to assess the structure and function of natural and stabilized fringing salt marshes in North Carolina. *Wetlands Ecology and Management* 16: 97-118. And Gittman, R. K., C.H. Peterson, C.A. Currin, F.J. Fodrie, M.F. Piehler, and J.F. Bruno (2015b) Living shorelines can enhance the biogenic structure and nursery role of threatened estuarine habitats over time. *Ecological Applications* (In Press: preprint format available at <http://www.esajournals.org/doi/pdf/10.1890/14-0716.1>).

¹¹ Currin et al. 2015. Currin, C. A., J. Davis, L.C. Baron, A. Malhotra, and M. Fonseca (2015) Shoreline change in the New River Estuary, NC: rates and consequences. *Journal of Coastal Research* 31(5) 1069-1077.

- NOAA Fisheries suggests changing (d) to be consistent with the language we proposed for NWP 13 and with the language in the SAGE Natural and Structural Measures for Shoreline Stabilization brochure. We suggest changing (d) to read: “Native plans appropriate for current salinity and site conditions must be used for living shorelines tidal or lacustrine fringe wetlands.”
- NOAA Fisheries recommends the NWP require openings at regular intervals so aquatic organisms can easily access areas behind the structures. The size, design, and spacing of the openings would be determined during development of District-level implementation conditions.

Comment – The USACE needs to provide spatial information to NOAA Fisheries concerning where living shorelines are being installed. In addition, the requirement for a PCN would allow the USACE to track where living shorelines are being installed. This information is necessary to appropriately support the consultation process with NOAA Fisheries.

Specific Comments on the Proposed Modifications to NWP General Conditions

Pages 36-37 - GC 18: Endangered Species

Page 36 - “The federal agency is responsible for ensuring that its overall action, including any NWP activities that are components of that larger overall action, complies with ESA Section 7.”

Comment – It is important to understand that there are two Federal actions in play here: the Federal agency carrying out the NWP activity, and the USACE authorizing it. Both trigger an ESA section 7 consultation and the USACE needs to be mindful of both of these processes to ensure that they are successfully carried out.

Page 36 - “It is not the USACE’s responsibility to make sure that other federal agencies are fulfilling their obligations under Section 7 of the ESA.”

Comment – It is the USACE’s responsibility to make sure that it is fulfilling its own obligations under the ESA when it issues permits to non-Federal entities. Issuing a permit authorizes an activity, a Federal action that is a trigger for section 7 consultation.

Page 36 - “We are also proposing to modify paragraph (d) of this general condition to clarify that the District Engineer may add activity-specific conditions to an NWP authorization after conducting formal or informal ESA Section 7 consultation.”

Comment – NOAA Fisheries agrees with this clarification.

Page 37 - “We are also proposing to update the URLs for the web sites maintained by the FWS and NOAA Fisheries where information on endangered and threatened species and designated critical habitats can be obtained.”

Comment – NOAA Fisheries’ Alaska Region provided information on ESA implementation guidance and regional conditions to the USACE on September 1, 2015, and received no response despite repeated follow-up. Based on the USACE Alaska District’s website, none of the regional condition recommended by NOAA Fisheries’ Alaska Region were implemented. Nor have the finalized ESA implementation guidance for applicants been posted.

Pages 37-38 - GC 23: Mitigation

Page 37 –

“We are proposing to modify paragraph (d) to state that compensatory mitigation for stream losses should be provided through rehabilitation, enhancement, and preservation. This will make paragraph (d) consistent with 33 CFR 332.3(e)(3), which states that streams are difficult-to-replace resources. Compensatory mitigation projects for streams should focus on actions that improve or protect the ecological functions provided by existing streams.”

Comment: this text excludes reestablishment as a mitigation option, and it is unclear what the relationship is between the proposed change and streams being “difficult to replace resources”. Is the USACE saying that reestablishment of streams is difficult, and therefore permittees should not attempt it? If so, NOAA does not support this approach. Reestablishment replaces lost acreage whereas rehabilitation, enhancement, and preservation do not. The NWP will result in a net loss of streams if reestablishment is not allowed as a mitigation option.

Recommendation: Add “reestablishment” before “rehabilitation”.

“In paragraph (e), we are proposing to modify the first sentence to state that compensatory mitigation provided through riparian areas can be accomplished by restoration, enhancement, or preservation of those areas.”

Comment: NOAA Fisheries supports the emphasis being placed on restoring/enhancing/preserving riparian zones and using native species in their restoration.

Page 38 –

“We are proposing to modify paragraph (f)(1) to state that if the district engineer determines compensatory mitigation is required for the proposed NWP activity, the preferred mechanism for providing compensatory mitigation is either mitigation bank credits or in-lieu credits.”

Comment: NOAA Fisheries supports the use of mitigation banks and in-lieu-fee programs when they provide appropriate compensation for lost ecological function. Despite the number of mitigation banks and in-lieu-fee programs throughout the country, there are currently few such programs for marine or estuarine resources. When impacts to those resources are authorized under a NWP, District Engineers often do not require compensatory mitigation or allow compensation to occur in mitigation banks or in-lieu-fee programs with freshwater credits. This practice results in adverse impacts to EFH not being adequately offset through compensatory mitigation.

Recommendation: NOAA Fisheries recommends that text be added to this section and to the mitigation general condition that states “When impacts to coral reefs, SAV, and other marine and estuarine habitats are authorized under a NWP and require compensation, the preference for mitigation banks and in-lieu-fee programs should be waived if there are no in-kind credits available.”

Page 40 “The USACE district should be notified, through the compliance certification, when the required aquatic resources restoration, enhancement, establishment, or preservation activity has taken place. After the compensatory mitigation project has been implemented, the District Engineer will review monitoring reports to ensure that the required compensatory mitigation is fulfilling its objectives and offsetting the authorized impacts.”

Recommendation: - The USACE should make all monitoring reports available to NOAA Fisheries, other interested federal and state agencies, and the public.

Page 41 – “In addition, we are proposing to modify paragraph (b)(4) to require a description of mitigation measures the applicant intends to use to reduce adverse environmental effects caused by the proposed activity. Such mitigation measures can include on-site avoidance and minimization measures.”

Comment: The sentence “Such mitigation measures can include on-site avoidance and minimization measures.” makes it sound like avoidance and minimization are optional. Avoidance and minimization is not option under the Clean Water Act.

Recommendation: Replace “can” with “must” or delete the sentence entirely.

Page 87 - “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.”

Comment: There are several types of compensatory mitigation including creation, restoration-reestablishment, restoration-rehabilitation, enhancement and preservation. Typically, when a compensatory mitigation project does not increase the acreage of aquatic habitat - as in the case of rehabilitation and enhancement - the ratios used are greater than one-for-one. Higher ratios for creation and reestablishment are also sometimes greater than one to one to account for the risk of failure and the time lag between the loss of functions at the impact site and the creation, restoration or enhancement of functions at the mitigation site. For example, the mitigation for impacts to forested wetlands can be quite high since it can take decades to restore the functions of a mature forest.

Recommendation: This section should state that higher ratios may be required depending upon the nature of the impacts, the habitats affected, and the method of compensatory mitigation used.

Page 88 - "Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, restoration should be the first compensatory mitigation option considered."

Comment: The term "restoration" includes two categories, reestablishment and rehabilitation. Reestablishment increases wetland acreage by constructing a wetland where one once existed, but no longer does. Rehabilitation repairs degraded functions but does not increase wetland acreage. In coastal watersheds the lack of rehabilitation has been cited as one of the major reasons wetlands are being lost at rapid rate.

Recommendation: NOAA Fisheries recommends that the wording be changed from "restoration" to "restoration/reestablishment".

Page 39 "In addition, we are proposing to modify paragraph (i) to make it clear that compensatory mitigation to offset losses of specific functions of jurisdictional waters and wetlands should only be required by District Engineers when those losses are caused by regulated activities. For example, removing vegetation in a utility line right-of-way in jurisdictional wetlands by using techniques that do not result in a discharge of dredged or fill material into waters of the United States does not require DA authorization. Consistent with the USACE' mitigation policy at 33 CFR 320.4(r), compensatory mitigation should only be required for impacts directly related to the activity that requires DA authorization."

Comment – For purposes of the ESA, the USACE authorized the construction of the utility line and the impacts of the operation and maintenance for that line should be considered as indirect effects of the action. The operation and maintenance actions would not have occurred except for the presence of the utility line. Therefore, the paragraph describing how mitigation is only required for authorized regulated activities (see vegetation removal in an authorized right of way for a linear utility example) is problematic for ESA-listed species and designated critical habitat and needs to be corrected in consultation with NOAA Fisheries.

Page 40 "The USACE district should be notified, through the compliance certification, when the required aquatic resources restoration, enhancement, establishment, or preservation activity has taken place. After the compensatory mitigation project has been implemented, the District Engineer will review monitoring reports to ensure that the required compensatory mitigation is fulfilling its objectives and offsetting the authorized impacts."

Comment - The USACE needs to clarify that implementation of a mitigation plan does not mean it is successful at mitigating for the damages to the environment created by the authorized project. We request that the USACE share the monitoring reports with NOAA Fisheries to demonstrate compliance with mitigation actions, implementation of the mitigation actions, followed by the determination at some point in the future as to the success of meeting mitigation goals.

GC 32: Pre-Construction Notification page 41

Page 41 - “In addition, we are proposing to modify paragraph (b)(4) to require a description of mitigation measures the applicant intends to use to reduce adverse environmental effects caused by the proposed activity. Such mitigation measures can include on-site avoidance and minimization measures. Identifying these mitigation measures up-front in the PCN can help reduce the amount of time District Engineers take to reach decisions on whether to issue NWP verifications”

Comment – If a project is likely to generate in-air or in-water noise with the potential to expose marine mammals the PCN needs to include the anticipated noise propagation distances for each sound source starting at 190 dB re 1μPa rms and continuing down to 120 dB re 1μPa rms.

Comment - For any actions that may involve the take of threatened and endangered marine mammals, the applicants needs to apply for and receive the appropriate authorization under section 101(a)(5) of the MMPA.

Page 42 – “In paragraph (d)(2), we are also proposing to remove the requirement for agency coordination for all NWP 48 activities that require pre-construction notification.”

Comment: NOAA Fisheries does not agree that the requirement for agency coordination should be removed at this time. USACE should maintain the current requirement for agency coordination. We request that USACE coordinate with NOAA Fisheries at the headquarters level to discuss the need for agency coordination in permitting commercial shellfish aquaculture activities.

Administrative Requirements pages 44-49

On November 3, 2015, President Obama issued the Presidential Memorandum on Mitigating Impacts on Natural Resource from Development and Encouraging Related Private Investment. This should be added the section of the document that includes the various Executive Orders and other Acts.

In addition, NOAA Fisheries recommends adding Executive Order 13112, which covers invasive species.

Specific Comments on Proposed 2017 NWPsNWP 1 (Aids to Navigation)—page 53

Comment: This permit should be amended to state that Aids to Navigation should not be placed in special aquatic sites, particularly corals and submerged aquatic vegetation.

NWP 3 (Maintenance) page 53 – This permit authorizes activities that include pile driving. Pile driving can result in noise levels that cause behavioral disturbance, injury and mortality.

Comment: Limits on the size, number of and type of piles should be considered here, either generally or individually for each District. This should apply to any permit that authorizes pile driving.

NWP 4 (Fish and Wildlife Harvesting) page 54 – This permit authorizes a variety of fish and wildlife harvesting devices and activities including pound nets, crab traps, crab dredging, eel pots, lobster traps, duck blinds, clam and oyster digging, fish aggregating devices, and small fish attraction devices. These activities have the potential to take NOAA Fisheries ESA-listed species, designated critical habitat and EFH. Conditions requiring ESA coordination between the USACE and NOAA Fisheries for these activities (excluding shellfish digging and duck blinds in the Northeast) should be included in areas where NOAA Fisheries’ ESA-listed species, designated critical habitat and EFH are present.

NWP 6 (Survey Activities) page 55 – This permit authorizes “seismic exploratory operations.”

Comment: These types of activities can result in acoustic impacts to MMPA and ESA-listed species that can rise to the level of “take.” If this type of activity is to be authorized in areas where MMPA and ESA-listed species occur, conditions should be implemented that either restrict the type of equipment to operating at frequencies that cannot be heard by ESA-listed species in the area or should impose conditions for exclusion zones, etc. We also request that the USACE prohibit the use of “air guns” under this permit.

NWP 8 (Oil and Gas Structures on the Outer Continental Shelf) page 55– This permit authorizes structures for the exploration production and transportation of oil, gas, and minerals on the outer continental shelf.

Comment: Conditions requiring coordination under the ESA between the USACE/Bureau of Ocean Energy Management and NOAA Fisheries needs to be included in this permit.

NWP 15 (U.S. Coast Guard Approved Bridges) page 60– This permit authorizes discharges of dredged or fill material incidental to the construction of a bridge built across navigable waters of the United States approved by the US Coast Guard. Conditions requiring coordination under the ESA between the USACE/USCG and NOAA Fisheries needs to be included.

NWP 17 (Hydropower projects) page 60 – This permit authorizes discharges of dredged or fill material associated with hydropower projects having less than 5000 kW of total generating capacity and where a licensing exemption is granted by the Federal Energy Regulatory Commission.

Comment: Conditions requiring coordination under the ESA between the USACE/Federal Energy Regulatory Commission and NOAA Fisheries needs to be included.

NWP 19 (Minor Dredging) page 61 and NWP 35 (Maintenance Dredging of Existing Basins) page 70 – These permits authorize dredging.

Comment: These permits need to prohibit dredging activities (e.g., dredge windows) in places and times of year when ESA-listed species could be spawning, resting, feeding and/or migrating or be used as nursery habitat.

NWP 22 (Removal of Vessels) page 62 —These permits authorize the removal of wrecked, abandoned or disabled vessels.

Comment: The USACE needs to add language to clarify whether or not this permit applies to emergency situations (e.g., natural disasters). Furthermore, the text refers to "... vessels, or the removal of man-made obstructions to navigation..." The USACE needs to define what a man-made obstruction is to better understand how the NWP will be implemented.

NWP28 (Modifications of Existing Marinas) page 66— This permit authorizes the reconfiguration of existing docking facilities within an authorized marina area.

Comment: The USACE needs to clarify whether pile driving is authorized or not.

NWP 33 (Temporary Construction, Access and Dewatering) page 69—This permit authorizes temporary structures, work and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites.

Comment: The USACE should define "temporary." NOAA Fisheries regional staff have observed "temporary" fills left in place for two or more years, without any compensatory mitigation. This results in the temporal loss of aquatic resource functions. In NWP 12, temporary is considered three months with the potential for a waiver from the DE to allow 180 days (six months). This should be carried through in all instances where temporary impacts are authorized including this permit as well as NWP 14.

NWP 36 (Boat Ramps) page 70— This permit authorizes activities required for the construction of boat ramps.

Comment: The USACE needs to analyze the effects of shading from permitted boat docks.

NWP 38 Cleanup of Hazardous and Toxic Waste page 71—This permit authorizes 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.

Comment: The regulatory analysis table identifying the number of times NWP-38 was used and the impacts verses the mitigation show that on average, this NWP was used 80 per year and that 144.257 acres of aquatic habitat were lost yearly from 2012 to the present with only 26.384 acres of mitigation provided. As a result, for every acre of impact, only 0.18 acres of compensatory mitigation have been required on average annually. The permit should emphasize the need for compensatory mitigation and the USACE should require a more consistent application of General Condition 23 (c) requiring mitigation for impacts over 1/10 acres.

NWP 43 Stormwater and Wastewater Management Facilities page 73—This permit authorizes discharges of dredged or fill material into non-tidal waters of the U.S. for the construction of stormwater and wastewater management facilities.

Comment: A more clear definition of the facilities that can be constructed under this NWP should be provided, especially for wastewater management facilities.

NWP 48 (Commercial Shellfish Aquaculture Activities) page 76 – This permit authorizes aquaculture activities that include the deployment of gear, vertical lines, and may lead to an increase in vessel traffic during deployment and harvesting activities. See edits in red.

“Commercial Shellfish Aquaculture Activities. Discharges of dredged or fill material in 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 ~~currently~~ 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 ~~other~~ easement, lease, deed, ~~or~~ contract, or other legally binding agreement that ~~which~~ establishes an enforceable property interest for the operator.”

Technical Edits: Added “new and continuing”, removed “currently”, and added “...or other legally binding agreement.”

Comment: Originally, the 2007 NWP48 was limited to EXISTING commercial shellfish aquaculture activities, but the scope was expanded to include new activities in the 2012 NWP48. The distinction between existing and new is no longer necessary, except to specify that this NWP does not authorize “activities in new project areas that directly affect more than ½ acre of SAV [submerged aquatic vegetation] beds.”

These edits are to make it clear that the project area could be the area described in any one of the items in the list and to avoid confusion as to whether a permit provides “an enforceable property interest”. On Page 95, with respect to these NWPs, the USACE states that “NWPs do not grant any property rights or exclusive privileges.” It is also likely that some or all aquaculture permits issued by a state or local government agency include similar language.

Page 76

“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; ~~or,~~
- (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,

~~This NWP also authorizes commercial shellfish aquaculture activities in new project areas, provided the project proponent has obtained, if required, any applicable state or local authorization, such as a lease or permit issued by an appropriate state or local government agency, and the (d) Aa~~ activities in new project areas that directly affect more than 1/2-acre of submerged aquatic vegetation beds.”

Comment: This deleted sentence [part d] is not necessary, because NWP's are available for both ongoing commercial shellfish aquaculture and new projects. Deleting the term "new project area" will also remove the confusion that sometimes occurs regarding whether previously unused areas within the boundaries of a previously authorized project area are considered "new project areas" under NWP48. It is NOAA Fisheries position that they should not be considered "new project areas". However, expansion into new areas within a previously approved site may still be subject to additional scrutiny because the reporting requirements for permittees under the 2012 NWP48 will be required to "describe any proposed changes to the commercial shellfish aquaculture operation" and be subject to additional scrutiny if warranted.

Page 76

"Reporting: For continuing activities in a project area that ~~were~~ was authorized by the 2012 NWP 48, the permittee must submit a report to the district engineer. The report must include the following information: (1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the cultivated species; and (3) the DA number for the NWP verification letter from the USACE, if pre-construction notification was required under the 2012 NWP 48 or the operator voluntarily submitted a verification request; and, if applicable, (4) ~~programmatic biological opinion, programmatic informal consultation concurrence, or any activity-specific biological opinion or informal consultation concurrence that was used to provide ESA section 7 coverage for the 2012 NWP 48 activity. The report must also describe a description of~~ any proposed changes to the commercial shellfish aquaculture operation. The district engineer has 30 days to review the report, including compliance with general condition 18."

Comment: Regarding part 4: Remove text because documentation of ESA coverage should be the responsibility of the USACE, not the permittee.

Page 76

"If the USACE determines that the commercial shellfish aquaculture activities may affect listed species or designated critical habitat and are ~~no longer~~ not covered by a biological opinion or informal consultation concurrence, then the district engineer will notify the project proponent that pre-construction notification under general condition 18 is required."

Comment: This change would allow the District Engineer to consider potential coverage under any consultations completed after the date of the 2012 NWP 48 verification letter.

Page 76

Comment: Under "Notification", a PCN should be required for any project proposed in submerged aquatic vegetation habitat. Water depths in the project area should also be provided as part of the notification. Continued coordination allows NOAA Fisheries the ability to alert the USACE about concerns related to the possible introductions of invasive species with new/changing out of equipment if requirements to consult are not done. As noted in the general comments, NOAA Fisheries has aquaculture coordinators who can work with both the USACE and other regional Fisheries staff to

identify best practices, and we would like to work with the USACE to better define what is meant by the term “new project area” with respect to the Notification requirement.

Comment: The USACE should continue to coordinate with NOAA Fisheries on projects that occur where NOAA Fisheries’ ESA-listed species may be present.

NWP 52 (Water Based Renewable Energy Generation Projects) page 79 – This permit authorizes structures and work in navigable waters of the U.S and discharges of dredged or fill material into waters of the U.S. for the construction, expansion, modification, or removal of water-based wind, water-based solar, or hydrokinetic renewable energy generation projects.

Comment: The USACE proposes to revise this NWP to include floating solar energy generation facilities occupying up to 0.5 acre of open water. NWP 52 already prohibits its use for projects affecting coral reefs (any such project would require an individual permit). NOAA Fisheries recommends NWP 52 similarly prohibit its use for projects affecting seagrass habitat.

Comment: Conditions requiring ESA coordination between the USACE/Federal Energy Regulatory Commission and NOAA Fisheries should be included.

Comments on Nationwide Permit General Conditions

GC 3: Spawning Areas page 82- This condition states the following: *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.*

Comment: Migration corridors to and from spawning areas should be avoided when those areas are in use.

GC 13: Removal of Temporary Fills page 83 – “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.”

Comment: The USACE should define “temporary”.

GC 19: Migratory Birds and Bald and Golden Eagles page 84 - “The permittee is responsible for obtaining any “take” permits required under the U.S. Fish and Wildlife Service’s regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such “take” permits are required for a particular activity.”

Comment – The USACE is obligated to provide the same type/level of protection for marine mammals per the MMPA as they are requiring this level of protection for migratory birds and golden eagles under this general condition.

GC 23: Mitigation page 88- “(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.”

Comment - If an activity will permanently adversely affect functions and services of waters of the U.S., does it really qualify for a NWP? Given the fact that these type of effects can directly and indirectly affect ESA-listed species, designated critical habitat, and EFH, the USACE needs to reevaluate whether or not impacts like these should be qualify for a NWP.

GC 32: Pre-construction Notification page 91- “(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 water of the United States 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; 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.”

Comment: Under (4), the contents of the PCN should also include documentation of avoidance and minimization of impacts and alternatives considered.

Page 92- “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 USACE. 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 waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;”

Comment: Under (5), submerged aquatic vegetation should be specifically mentioned as having to be delineated in the PCN. Under (d) Agency Coordination (iii) NWP B should be included with NWP 13 for coordination with the agencies if over 500 lf or if the project extends more than 30 feet waterward of the mean high water line, or discharges fill into a special aquatic site.

Appendix 1: NOAA Fisheries’ Disagreement with the USACE’s “no effect” determination regarding its proposed reissuance/issuance of the 2017 NWP draft rule

NOAA Fisheries disagrees with the USACE’s determination on pages 11-14 of the draft proposed rule that the USACE’s proposed reissuance/issuance of Nationwide Permits (NWPs) will result in “no effect” on listed species or critical habitat under NOAA Fisheries’ jurisdiction. ESA section 7 requires each federal agency to ensure, through consultation with NOAA Fisheries and/or the U.S. Fish and Wildlife Service, that any action authorized, funded, or carried out by that agency is not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitat. 16 U.S.C. § 1536(a)(2). The ESA and its regulations support timing formal consultation to occur upon a determination that an activity “may affect” list species or designated critical habitat.¹² The USACE relies on general condition 18 and 33 C.F.R. § 330.4(f) for its “no effect” determination.¹³ This reliance is misplaced and belied by the statute, regulations, and history of the effects of the NWPs on ESA-listed species and their designated critical habitat.

As an initial matter, the premise behind the USACE’s “no effect” determination is flawed. General condition 18 and 33 C.F.R. § 330.4(f) apply to individual activities proceeding under the NWPs. Requiring that an activity-specific consultation occur before a specific activity may proceed under the NWPs does not support the assertion that the NWPs are “no effect.” Those individual activity-specific consultations examine specific effects of individual projects in particular watersheds and cannot substitute for a broad-scale consultation on the NWPs overall. The broad-scale consultation allows for an examination of the processes the NWPs put in place to ensure that overall the NWPs are not likely to jeopardize listed species or designated critical habitat. This is exactly the type of analysis NOAA Fisheries conducted in its 2012 and 2014 biological opinions on the NWPs. Those biological opinions reflect the importance of putting adequate processes in place to ensure that localized consultations on specific activities or batches of activities under the NWPs in fact occur and adequately conserve listed species and designated critical habitat.

The language and statutory purpose of ESA section 7 confirm that the USACE’s “no effect” determination for the NWPs is not supportable. This is aptly illustrated by NOAA Fisheries and U.S. Fish and Wildlife Service’s recent discussion in an ESA section 7 rulemaking of the purpose of consultation and biological opinions on programmatic actions:

Unlike the purposes of an incidental take statement, the analysis in a biological opinion is used to determine whether an agency action is likely to jeopardize a listed species or adversely modify designated critical habitat. [Citations omitted.] Conducting an effects analysis on a framework programmatic action that examines the potential effects of implementing the program is fully consistent with the purposes of a biological opinion. The analysis in a biological opinion allows for a broadscale examination of a program’s potential impacts on a listed species and its designated critical habitat—an examination that is not as readily conducted when the later, action specific consultation occurs on a subsequent action developed under the program framework.

¹² See 16 U.S.C. § 1536(a)(3); 50 C.F.R. § 402.14(a). A framework programmatic action such as this may affect listed species or designated critical habitat even if it does not require an incidental take statement. See 80 Fed. Reg. at 26835-26836 (May 11, 2015).

¹³ General condition 18 and 33 C.F.R. § 330.4(f) require, in part, that non-federal permittees submit a pre-construction notification for any activity that might affect a listed species or designated critical habitat.

80 Fed. Reg. 26832, 26836 (May 11, 2015). This rulemaking specifically identified the USACE NWP as the type of framework programmatic action that would fall under the terms of the rule. See *id.* at 26835. Thus, the USACE's effort to avoid consulting on the NWPs is contrary to the ESA.

Additionally, the inadequacy of the USACE's reliance on general condition 18 and 33 U.S.C. § 330.4(f) for its "no effect" determination is evidenced by the fact that listed species and critical habitat have in fact been adversely affected by the NWPs. NOAA Fisheries' 2014 Biological Opinion on the 2012 NWPs provides ample discussion of the historical effects of the NWP program, including aggregate impacts.¹⁴ While the USACE has agreed to modify its NWP program and implement additional protective measures,¹⁵ these modifications are not extensive enough to reach a "no effect" determination.

Rather than rely on a condition restricting individual activities in order to make a programmatic "no effect" determination, the USACE must assess information on its program as a whole in order to assess whether the NWP program "may affect" listed species or critical habitat. Programmatic effects may not be detectable at the level of the individual activity. Information on the effects of the USACE NWP program can be found in NOAA Fisheries' 2014 Biological Opinion.¹⁶ The logic of relying on general condition 18 and 33 C.F.R. § 330.4(f) simply does not stand up in the absence of an adequate fact-based inquiry into the programmatic effects of the NWPs.

An additional flaw in the USACE's reliance on general condition 18 and 33 C.F.R. § 330.4(f) is that the regulated public may lack information on the effects of their individual activities. For example, the builder of a bank stabilization project may not know the aggregate impacts of its activity. Similarly, the builder of a boat ramp, using impervious materials, may not know the impacts of those additional impervious materials on a watershed. Or, a landowner may lack information on sedimentation or habitat destruction. An adequate effects analysis would require, among other things, information on the status of listed resources, the environmental baseline, the pathways of effects on species or their critical habitat, and the effects of other activities.¹⁷ Thus, it is critical that the USACE assess its program as a whole. The USACE's consultation on the 2012 NWPs with NOAA Fisheries resulted in modifications to the NWPs that allow for more effective and informed local consultations that address the sorts of concerns identified above with implementation of general condition 18 and 33 C.F.R. § 330.4(f). These sorts of modifications are nationwide in scope and could not be addressed in an activity-specific consultation.

¹⁴ See 2014 NWP Biological Opinion at 283-333. <http://www.nmfs.noaa.gov/pr/consultation/opinions/usace-nwp404-reinitiated11242014.pdf>.

¹⁵ March 6, 2014, letter from Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works), to Dr. Kathryn Sullivan, Acting Administrator, NOAA; 2014 NWP Biological Opinion at 13-16.

¹⁶ See 2014 NWP Biological Opinion at 283-333.

¹⁷ While the USACE has agreed to provide additional information to the regulated public in order to help insure that its NWP program is adequately protective of listed species (*see* 2014 NWP Biological Opinion at 13-16), this information is not sufficient to reach a "no effect" determination.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

FEB 15 2012

PLAINTIFF'S
EXHIBIT**15**

Michael G. Ensich
Chief, Operations and Regulatory
Directorate of Civil Works
U.S. Army Corps of Engineers
441 G. Street, NW
Washington, DC 20314-1000

Mr. Ensich:

Enclosed is the National Marine Fisheries Service's (NMFS) Biological Opinion on the effects of discharges of dredged and fill material into waters of the United States and other navigable waters and other activities the U.S. Army Corps of Engineers' proposes to authorize using Nationwide Permits on endangered and threatened species under NMFS' jurisdiction and critical habitat that has been designated for these species. We have prepared this biological opinion pursuant to section 7(a)(2) of the Endangered Species Act, as amended (ESA; 16 U.S.C. 1536(a)(2)).

To conduct a formal analysis of the effects of the activities that would be authorized by the proposed Nationwide Permits on endangered and threatened species under NMFS' jurisdiction and critical habitat that has been designated for those species at a national scale, we applied a programmatic assessment framework that is described in detail in Chapter 2.0 of our Biological Opinion. Using that framework, we first examine the direct, indirect, and cumulative effects of activities authorized by Nationwide Permits since those permits were established in 1977, then we examine whether or to what degree the U.S. Army Corps of Engineers (USACE) has structured the proposed Nationwide Permits to insure that those activities comply with the requirements of section 7(a)(2) of the ESA.

Based on our assessment, we concluded that the USACE has not structured the proposed Nationwide Permits in a manner that insures that the direct, indirect, or cumulative effects of the activities that would be authorized by the proposed Nationwide Permits are not likely to jeopardize the continued existence of endangered or threatened species under NMFS' jurisdiction or result in the destruction or adverse modification of critical habitat that has been designate for those species. We have worked with USACE staff to develop reasonable and prudent alternatives that would insure that those activities comply with the requirements of section 7(a)(2) of the ESA.



Olson, David B HQ02

From: Olson, David B HQ02
Sent: Friday, January 17, 2014 9:14 AM
To: Gaffney-Smith, Margaret E HQ
Cc: Moyer, Jennifer A HQ02
Subject: RE: NWP (UNCLASSIFIED)



Classification: UNCLASSIFIED

Caveats: NONE

Meg,

If we complete consultation on the 2012 NWP, the biological opinion will be valid until those NWP expire. In the meantime, if modify any of those NWP at the national level, that would be a trigger for re-initiating consultation. So for the 2017 NWP, we would have to do a new consultation, starting with the proposal we'll publish in the federal register in late 2015 or early 2016. But my recommendation would be to make a "no effect" determination for the proposed and final 2017 NWP. We would explain our basis for the "no effect" determination in the preamble to the 2015/2016 proposal to reissue the NWP, and also explain the "no effect" determination in the final rule that will be published late 2016/early 2017. I also recommend that, during the reissuance process, we direct the districts to coordinate with their regional counterparts at FWS and NMFS to determine if any additional regional conditions or local procedures should be adopted to facilitate ESA Section 7 compliance. Requiring local coordination might make a national "no effect" determination more legally defensible.

We could continue to make the national "no effect" determination for each NWP reissuance until it is challenged in federal court and a judge rules against the Corps. If we lose in federal court, then we would start doing the national programmatic consultations again.

We cannot do a "no effect" determination until after the 2017 NWP expire because the current jeopardy biological opinion from NMFS is in effect until either: (a) NMFS withdraws or rescinds that biological opinion, or (b) NMFS issues a new biological opinion that replaces the February 15, 2012, biological opinion. If NMFS issues a new biological opinion, to be in compliance with the ESA we would have to implement the measures we agreed to for the non-jeopardy biological opinion.

Thanks,
David

David B. Olson
 U.S. Army Corps of Engineers
 Headquarters, Directorate of Civil Works
 Operations and Regulatory Community of Practice
 441 G Street, NW
 Washington, DC 20314-1000
 202-761-4922
 david.b.olson@usace.army.mil

-----Original Message-----

From: Gaffney-Smith, Margaret E HQ
 Sent: Thursday, January 16, 2014 8:32 PM
 To: Olson, David B HQ02
 Subject: NWP

David.

If we complete consultation on this round does this mean we'll need to consult every time we reissue? Or is NE possible even if we don't do everything NMFS is requiring this go round?

Classification: UNCLASSIFIED

Caveats: NONE



844-MVP-TALK | mail@mountainvalleypipeline.info | www.mountainvalleypipeline.info

NEWS RELEASE

MVP Prepares For Construction Completion

Full In-Service Targeted Early 2021

PLAINTIFF'S
EXHIBIT**17**

Canonsburg, PA (June 11, 2020) – Mountain Valley Pipeline, LLC (Mountain Valley), today, provided a schedule and timing update in preparation for completion of its 303-mile natural gas transmission line. Total project work is approximately 92% complete and full in-service is now expected in early 2021.

“First and foremost, we are confident in the ultimate completion of this important infrastructure project,” said Diana Charletta, president and chief operating officer, EQM Midstream Partners, LP, operator of MVP. “We appreciate the oversight of the various state and federal agencies that have helped guide our construction activities, and despite the unprecedented regulatory and development challenges, we have completed 92% of total project work. While the additional legal and regulatory reviews have caused schedule delays and cost adjustments, we look forward to MVP’s safe, successful start-up and to serving the growing demand for domestic natural gas in the mid-Atlantic and Southeast regions of the United States.”

For the last several months, Mountain Valley’s primary focus has been continued environmental stabilization and restoration work, and maintenance of existing erosion and sediment controls along the right-of-way. Forward construction is anticipated to resume when MVP receives its Biological Opinion and the Federal Energy Regulatory Commission lifts the project’s Stop Work Order.

MVP’s 2021 in-service date reflects changes to the previously planned construction schedule, which includes the continued timing uncertainty of permits for crossing the Jefferson National Forest and Appalachian Trail, roughly 3.7 miles; and waterbodies, which total approximately 10 miles of pipe.

In connection with the adjusted in-service date, total project costs for MVP may potentially increase roughly 5% above the project’s \$5.4 billion estimate, primarily due to the need to adapt to complex judicial decisions and regulatory changes – creating carrying costs and requiring supplemental crews to safely maintain the entire 303-mile route during the halt of construction and through the upcoming winter months.

MVP’s current construction statistics: the three compressor stations are 100% complete; the three original certificated interconnects are 100% complete and a fourth has been approved for construction in 2020; approximately 80% of the pipeline work is complete, which includes 264 miles of pipe welded and in-place; and approximately 50% of the right-of-way has been fully restored.

Since the onset of the project, Mountain Valley has retained five key stakeholder priorities: design a route with the least overall impact to landowners and communities; minimize impacts to sensitive species and preserve cultural, historical, and environmental resources; construct the pipeline in the safest manner possible; maintain high levels of environmental protection at all times; and ensure the safety of MVP’s landowners, communities, inspectors, employees, and contractors.

About Mountain Valley Pipeline

The Mountain Valley Pipeline (MVP) is a proposed underground, interstate natural gas pipeline system that spans approximately 303 miles from northwestern West Virginia to southern Virginia. Subject to approval and regulatory oversight by the Federal Energy Regulatory Commission, the MVP will be constructed and owned by Mountain Valley Pipeline, LLC – a joint venture of EQM Midstream Partners, LP; NextEra Capital Holdings, Inc.; Con Edison Transmission, Inc.; WGL Midstream, Inc.; and RGC Midstream, LLC. The MVP was designed to transport clean-burning natural gas from the prolific Marcellus and Utica shale regions to the growing demand markets in the Mid-Atlantic and Southeast areas of the United States. EQM Midstream Partners, LP (NYSE: EQM), primary interest owner, will operate the pipeline. From planning and development, to construction and in-service operation – MVP is dedicated to the safety of its communities, employees, and contractors; and to the preservation and protection of the environment.

Visit www.mountainvalleypipeline.info

Cautionary Statements

Disclosures in this news release contain certain forward-looking statements that do not relate strictly to historical or current facts and are forward-looking. Without limiting the generality of the foregoing, forward-looking statements contained in this news release specifically include the expectations of plans, strategies, objectives and growth, and anticipated financial and operational performance of Mountain Valley Pipeline, LLC, including guidance regarding the proposed Mountain Valley Pipeline (MVP); the potential cost and targeted in-service date of the MVP; the progress on construction of the MVP's facilities and pipelines and anticipated timing for resuming construction activities; the expected impact of, and outcomes for, litigation and regulatory proceedings on the project; and MVP's efforts related to safety and environmental protection. The forward-looking statements included in this news release are subject to risks and uncertainties that could cause actual results to differ materially from projected results. Accordingly, investors should not place undue reliance on forward-looking statements as a prediction of actual results. Mountain Valley Pipeline, LLC has based these forward-looking statements on current expectations and assumptions about future events. While Mountain Valley Pipeline, LLC considers these expectations and assumptions to be reasonable, they are inherently subject to significant business, economic, competitive, regulatory, and other risks and uncertainties, most of which are difficult to predict and are beyond its control. The risks and uncertainties that may affect the operations, performance, and results of Mountain Valley Pipeline, LLC and forward-looking statements include, but are not limited to:

The business, financial condition, results of operations and prospects could suffer if Mountain Valley Pipeline, LLC does not proceed with projects under development or is unable to complete the construction of, or capital improvements to, its facilities and pipelines on schedule or within budget.

The ability to complete construction of, and capital improvements to, facilities on schedule and within budget may be adversely affected by escalations in costs for materials and labor and regulatory compliance, inability to obtain or renew necessary licenses, rights-of-way, permits or other approvals on acceptable terms or on schedule, disputes involving contractors, labor organizations, land owners, governmental entities, environmental groups, Native American and aboriginal groups, and other third parties, negative publicity, transmission interconnection issues, adverse weather conditions and other factors. If any development project or construction or capital improvement project is not completed, is delayed or is subject to cost overruns, certain associated costs may not be approved for recovery or recoverable through regulatory mechanisms that may otherwise be available, and Mountain Valley Pipeline, LLC could become obligated to make delay or termination payments or become obligated for other damages under contracts, could experience the loss of tax credits or tax incentives, or delayed or diminished returns, and could be required to write-off all or a portion of its investment in the project. Any of these events could have a material adverse effect on Mountain Valley Pipeline, LLC's business, financial condition, results of operations and prospects. Mountain Valley Pipeline, LLC may face risks related to project siting, financing, construction, permitting, governmental approvals and the negotiation of project development agreements that may impede its development and operating activities.

Mountain Valley Pipeline, LLC must periodically apply for licenses and permits from various local, state, federal and other regulatory authorities and abide by their respective conditions. Should Mountain Valley Pipeline, LLC be unsuccessful in obtaining necessary licenses or permits on acceptable terms, should there be a delay in obtaining or renewing necessary licenses or permits or should regulatory authorities initiate any associated investigations or enforcement actions or impose related penalties or disallowances on Mountain Valley Pipeline, LLC, Mountain Valley Pipeline, LLC's business, financial condition, results of operations and prospects could be materially adversely affected. Any failure to negotiate successful project development agreements for new facilities with third parties could have similar results.

Mountain Valley Pipeline, LLC's gas infrastructure facilities and other facilities are subject to many operational risks. Operational risks could result in, among other things, lost revenues due to prolonged outages, increased expenses due to monetary penalties or fines for compliance failures, liability to third parties for property and personal injury damage, a failure to perform under applicable sales agreements and associated loss of revenues from terminated agreements or liability for liquidated damages under continuing agreements. The consequences of these risks could have a material adverse effect on Mountain Valley Pipeline, LLC's business, financial condition, results of operations and prospects.

Uncertainties and risks inherent in operating and maintaining Mountain Valley Pipeline, LLC's facilities include, but are not limited to, risks associated with facility start-up operations, such as whether the facilities will achieve projected operating performance on schedule and otherwise as planned.

Mountain Valley Pipeline, LLC's business, financial condition, results of operations and prospects can be materially adversely affected by weather conditions, including, but not limited to, the impact of severe weather.

Threats of terrorism and catastrophic events that could result from terrorism, cyber-attacks, or individuals and/or groups attempting to disrupt Mountain Valley Pipeline, LLC's business, or the businesses of third parties, may materially adversely affect Mountain Valley Pipeline, LLC's business, financial condition, results of operations and prospects.

Mountain Valley Pipeline media inquiries:

Natalie Cox

ncox@equitransmidstream.com

Source: Equitrans Midstream Corporation



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
ServiceU.S. Army
Corps of
EngineersU.S. Bureau of
Land
ManagementU.S.
Environmental
Protection
AgencyPipeline
Hazardous
Materials Safety
AdministrationU.S. Fish &
Wildlife Service
West Virginia
Field OfficeWest Virginia
Department of
Environmental
ProtectionWest Virginia
Division of
Natural
Resources

AR004815

Mountain Valley changed the proposed crossing methods for these waterbodies to dry open-cuts, using cofferdams.

A study conducted by the USGS (Moyer and Hyer, 2009) investigating the effects of dry open-cut waterbody crossings on downstream sediment loading found that short-term increases in turbidity downstream of construction did occur, but the magnitude of the increase was small and considered to be minimal compared to increased turbidity associated with natural runoff events. Other literature (e.g., Reid et. al., 2004) assessing the magnitude and timing of suspended sediment produced from open-cut dry crossing methods indicates the duration of increased sedimentation would be mostly short-term (i.e., less than 1-4 days) and remain near the crossing location (i.e., an approximate downstream distance of a few hundred feet).

The MVP would also involve installation of 166 culverts within waterbodies along permanent access roads, at ancillary facilities, and temporary bridge crossings. Culverts would be removed from the ancillary facilities and temporary bridge crossings; therefore any impacts associated with culverts in these areas would be short-term and temporary. Culverts used along permanent access roads would remain in place after the project is completed and would result in 1.0 acre of permanent fill impacts on affected waterbodies. The size and installation methods for the culverts would vary based upon waterbody classification and would generally vary between 12 and 36 inches in diameter. In addition, Mountain Valley is currently evaluating using permanent fill (i.e., culverts and/or clean rock/gravel) at 64 wetlands along permanent access roads. In June 2016, we requested site-specific justification for the use of permanent fill within waterbodies and wetlands for permanent access roads. According to Mountain Valley, the permanent fill along access roads would be necessary to provide workers safe access to the pipeline and associated facilities during construction, operation, and maintenance. No permanent fill would be placed in streams within the proposed yards or other ancillary facilities. Mountain Valley would account for all impacts associated with permanent fill in waterbodies and wetlands in its permit applications to the COE and VADEQ.

The Little Kanawha River would also be crossed with using a dry open-cut method (see section 2.4).

Equitrans Expansion Project

The EEP would cross 15 perennial waterbodies. Of these, one would be a major river more than 100-feet-wide (the Monongahela River). Equitrans would cross all waterbodies using either the dry open-cut or HDD crossing methods. Nine waterbody crossings would be completed by HDD: the Monongahela River, South Fork Tenmile Creek, and seven crossings of unnamed tributaries of South Fork Tenmile Creek that would be crossed at the same time as the South Fork Tenmile Creek HDD crossing (see appendix F).

As of May 11, 2017, Equitrans has not completed environmental surveys for the newly adopted New Cline Variation. Equitrans has agreed to file environmental surveys for this variation with the FERC as part of its implementation plan. However, since the results of these surveys have not yet been provided, **we recommend that:**

comparison of impacts between the HDD alignment and the original alignment, and an HDD Contingency Plan, for the review and approval of the Director of OEP.

Blasting – Mountain Valley would cross waterbodies using a dry open-cut method. During construction of the MVP, blasting may be required. 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 pose a threat to aquatic organisms. Chemical by-products from the blasting materials could also be released and could potentially contaminate the water. Mountain Valley would minimize or avoid impacts on surface water by implementation of the construction practices outlined in its *General Blasting Plan*, *Karst Mitigation Plan*, and *SPCCP*. As stated in its *General Blasting Plan*, streams with flow at the time of construction, blasting would only occur within the stream after the flow has been redirected around the crossing site using dam-and-pump methods. For streams with no flow at the time of construction, blasting would occur within the streambed, and the site would be restored to its original contours within the same day of disturbance. Licensed blasting contractors would conduct blasting activities in accordance with all applicable federal, state, and local regulations. Mountain Valley would obtain all necessary permits if blasting were required within streams.

Scour – Mountain Valley conducted a stream scour analysis to determine the maximum scour depth of waterbodies crossed by the MVP.⁴⁴ In response to a public comments regarding errors, data gaps, and inconsistencies in the analysis, we asked Mountain Valley to provide a revised analysis. Mountain Valley provided a partial response in April 2016⁴⁵ and a complete version in October 2016.⁴⁶ FERC requested additional information about the October 2016 version, and in response, Mountain Valley filed another revised version of its *Vertical Scour and Lateral Channel Erosion Analyses* in February 2017.⁴⁷

Vertical Scour - The *Mountain Valley Pipeline: Vertical Scour and Lateral Erosion Analyses* (revised February 2017) used design discharge; stream bed particle size; channel width, depth, and velocity; and depth to bedrock to estimate potential scour depth (i.e., vertical scour). Total potential vertical scour at a given location was estimated by two methods: general scour analysis; and component scour analysis. To be conservative, the analysis used the greater of the maximum values (greatest depth) produced by the two methods and added a 20 percent factor of safety to estimate the maximum vertical scour estimate at each proposed waterbody crossing. The maximum vertical scour estimates for major waterbody crossings ranged from 0.1 to 12.5 feet in depth, and estimates for intermediate waterbody crossings ranged from 0.4 to 22.3 feet in depth. These estimates assume that bedrock is not located near the ground's surface in these areas, as scour depth could not exceed bedrock depth. Shallow depth to bedrock (i.e., less than 7 feet below the ground's surface) underlying the project area is discussed in section 4.1.1. Mountain Valley would field-verify bedrock depths prior to placing the pipeline in the trench by performing

⁴⁴ See Mountain Valley's filing on April 21, 2016 (accession number 20160422-5012).

⁴⁵ See Mountain Valley's filing on April 22, 2016 (accession number 20160422-5012).

⁴⁶ See Mountain Valley's filing on October 14, 2016 (accession number 20161014-5022).

⁴⁷ See Mountain Valley's filing on February 9, 2017 (accession number 20170209-5249).

addition, to the greatest extent practicable, Mountain Valley would move construction equipment and materials out of the 100-year floodplain; check and stabilize all environmental controls, as necessary; and monitor environmental controls during the rain event. EIs would continue to monitor the area and Mountain Valley would repair and/or replace environmental controls as soon as practicable following the recession of the flood waters.

Greenbrier River Crossing – We also received comments about the non-perpendicular design of the proposed Greenbrier River crossing at MP 171.6 as well as the use of armor layers and revetment mats at the site to prevent scour. Mountain Valley’s proposed crossing of the Greenbrier would not be perpendicular to its banks, which increases the crossing’s length and thereby increases potential impacts on the waterbody. Mountain Valley has stated that the non-perpendicular crossing would be necessary to avoid impacts on a historical residence on the south side of the crossing that is eligible for listing on the NRHP.

Mountain Valley would primarily use concrete blocks to create revetment mats; other material could include wire cable, ropes to connect the blocks, and geotextiles or geogrids to serve as the mats’ base. If used, Mountain Valley would place the revetment mats on top of the pipe for the entire length of the crossing. The mats would be no wider than the width of the permanent right-of-way (i.e., 50 feet). Mountain Valley has stated that it may also install the mats for, “....a continuous distance upstream and downstream of the crossing.” The use of revetment mats could cause permanent impacts (i.e., decrease aquatic habitat and visual impacts) that would be limited to the area in which they are installed and require modifications to the COE Section 404 permit and the West Virginia Section 401 WQC.

Mountain Valley would adhere to COE requirements and use a minimum armor layer particle size of 24-inches for a 100-year peak discharge event at the Greenbrier River crossing. Mountain Valley does not anticipate using armor layers in areas with generally smooth streambeds.

Modification to the Procedures – As discussed in the draft EIS, Mountain Valley requested modification to our Procedures to accommodate construction at five locations where the pipeline route would parallel a waterbody within 15 feet. We have reviewed these and find them acceptable. However, we identified additional locations at which the project appeared to parallel waterbodies within 15 feet as well as some locations where the pipeline route appeared to travel within a waterbody channel. Therefore, in the draft EIS we recommended that Mountain Valley file with the Secretary a complete list of any locations not already found acceptable by FERC staff where the pipeline route or access road would parallel a waterbody within 15 feet or travels linearly within the waterbody channel.

In its October 2016 filing,⁴⁹ Mountain Valley provided a revised list of locations at which the project would parallel waterbodies within 15 feet and adjusted the alignment so that the pipeline route does not travel linearly within any waterbody channels (except to cross the waterbody). Table 4.3.2-11 identifies the twelve locations and provides Mountain Valley’s site-specific justifications for 11 of the modifications. We have reviewed these and find them acceptable (see table 2.3-1).

⁴⁹ See Mountain Valley’s filing on October 20, 2016 (accession number 20161020-5175).

APPENDIX F-1

Waterbodies Crossed by the Projects

Mountain Valley Project

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APPENDIX F1																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft) d/	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) f/	FERC Classification	Classification &l, h/	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
WEST VIRGINIA																		
Wetzel																		
S-J63	UNT to Mobley Run	0.0	Int	RPW	3.0	-	<0.1	-	-	Ancillary Site Temporary	MOBLEY IC LOD	TF	-	Minor	B, C	-	-	-
S-ST13	UNT to Mobley Run~	0.0	Int	RPW	3.0	-	<0.1	-	-	Ancillary Site Temporary	MOBLEY IC LOD	TF	-	Minor	B, C	-	-	-
S-ST13	UNT to Mobley Run	0.0	Int	RPW	3.0	-	0.0	-	-	Permanent Aboveground Facility	MOBLEY IC PAD	Fill / Culvert	-	Minor	B, C	-	-	-
S-ST14	UNT to Mobley Run~	0.0	Eph	NRPW	2.0	-	<0.1	-	-	Ancillary Site Temporary	MOBLEY IC LOD	TF	-	Minor	-	-	-	-
S-ST14	UNT to Mobley Run	0.0	Eph	NRPW	2.0	-	0.0	-	-	Permanent Aboveground Facility	MOBLEY IC PAD	Fill / Culvert	-	Minor	-	-	-	-
S-ST18	UNT to Mobley Run^	0.0	Int	RPW	10.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-001	Fill / Culvert	-	Minor	B, C	-	-	-
S-ST18	UNT to Mobley Run^~	0.0	Int	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-001	TF	-	Minor	B, C	-	-	-
S-ST10	UNT to Mobley Run	0.1	Int	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-000	Fill / Culvert	-	Minor	B, C	-	-	-
S-ST10	UNT to Mobley Run~	0.1	Int	RPW	4.0	-	<0.1	-	-	Ancillary Site Temporary	MOBLEY IC LOD	TF	-	Minor	B, C	-	-	-
S-WX2	Mobley Run	0.1	Per	RPW	8.0	-	<0.1	-	-	Ancillary Site Temporary	MVP-LY-024	TF	-	Minor	B, C	-	-	-
S-A1a	North Fork Fishing Creek**+	0.7	Per	RPW	35.0	37.2	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	A, B, C	WW, M	-	April 1 - June 30

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/l	Water Type c/l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/l	Pipeline Burial Depth (ft) ^{3 e/l}	FERC Classification	Classification f/l, g/l	Fishery Type h/l	Fish Species i/l	Time of Year Restriction j/l
S-A3a	UNT to North Fork Fishing Creek	0.8	Int	RPW	9.0	9.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-J65	UNT to North Fork Fishing Creek	1.3	Per	RPW	7.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-006	TF	-	Minor	B, C	-	-	-
S-J66	UNT to North Fork Fishing Creek	1.3	Int	RPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A5a	UNT to Fallen Timber Run*	2.3	Int	RPW	4.0	6.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A6a	Fallen Timber Run*+	2.3	Per	RPW	20.0	21.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6	Intermediate	B, C	-	-	-
S-AA9	UNT to Fallen Timber Run	2.7	Per	RPW	8.0	-	<0.1	-	-	Ancillary Site Temporary	MVP-RD-001	TF	-	Minor	B, C	-	-	-
S-BB11	UNT to Fallen Timber Run	2.7	Per	RPW	15.0	-	<0.1	-	-	Ancillary Site Temporary	MVP-RD-001	TF	-	Intermediate	B, C	-	-	-
S-KL11	Fallen Timber Run	2.7	Per	RPW	7.5	-	<0.1	-	-	Ancillary Site Temporary	MVP-RD-001	TF	-	Minor	B, C	-	-	-
S-AA3	UNT to Fallen Timber Run	2.8	Per	RPW	8.0	-	<0.1	-	-	Ancillary Site Temporary	MVP-RD-001	TF	-	Minor	B, C	-	-	-
S-A126	UNT to Price Run^	4.9	Eph	NRPW	3.0	-	<0.1	-	-	ATWS	MVP-ATWS-006	TF	-	Minor	-	-	-	-
S-A124	UNT to Price Run*	5.0	Int	RPW	12.0	13.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	B, C	-	-	-
S-A125	Price Run*+	5.0	Per	RPW	35.0	36.4	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing d/	Pipeline Burial Depth (ft) ³ e/	FERC Classification	Classification f/, g/	Fishery Type h/	Fish Species i/	Time of Year Restriction j/
S-A115	Price Run*+	5.4	Per	RPW	30.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-013	Fill / Culvert	-	Intermediate	B, C	-	-	-
S-A115	Price Run*+	5.4	Per	RPW	30.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-013	TF	-	Intermediate	B, C	-	-	-
S-A116	UNT to Price Run*	5.4	Int	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-013	Fill / Culvert	-	Minor	B, C	-	-	-
S-A116	UNT to Price Run~	5.4	Int	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-013	TF	-	Minor	B, C	-	-	-
S-A117	UNT to Price Run	5.5	Int	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-013	Fill / Culvert	-	Minor	B, C	-	-	-
S-A117	UNT to Price Run~	5.5	Int	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-013	TF	-	Minor	B, C	-	-	-
S-A118	UNT to Price Run	5.5	Int	RPW	6.0	6.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A120	Stout Run~	6.5	Int	RPW	6.0	8.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-KL10	UNT to Stout Run	6.5	Int	RPW	3.7	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-014.01	Fill / Culvert	-	Minor	B, C	-	-	-
S-KL10	UNT to Stout Run	6.5	Int	RPW	3.7	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-014.01	TF	-	Minor	B, C	-	-	-
S-A119	UNT to Stout Run	6.6	Int	RPW	5.0	8.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name at	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/	Pipeline Burial Depth (ft) e/	FERC Classification	Classification f/, g/	Fishery Type h/	Fish Species i/	Time of Year Restriction j/
S-A120	Stout Run	6.6	Int	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-014.02	Fill / Culvert	-	Minor	B, C	-	-	-
S-A120	Stout Run	6.6	Int	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-014.02	TF	-	Minor	B, C	-	-	-
S-A121	UNT to Stout Run	6.6	Int	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-014.02	Fill / Culvert	-	Minor	B, C	-	-	-
S-A121	UNT to Stout Run	6.6	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-014.02	TF	-	Minor	B, C	-	-	-
S-QR34	UNT to Stout Run	6.6	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-014.02	Fill / Culvert	-	Minor	-	-	-	-
S-QR34	UNT to Stout Run~	6.6	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-014.02	TF	-	Minor	-	-	-	-
S-A114	UNT to Sams Run	7.3	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-015	TF	-	Minor	-	-	-	-
S-A113	UNT to South Fork Fishing Creek	7.6	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-015	TF	-	Minor	B, C	-	-	-
S-A113	UNT to South Fork Fishing Creek	7.6	Int	RPW	2.0	-	<0.1	-	-	ATWS	MVP-ATWS-750	TF	-	Minor	B, C	-	-	-
S-J60	Sams Run*	7.9	Per	RPW	14.0	14.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6	Intermediate	B, C	-	-	-
S-J58	UNT to Manion Run	8.7	Per	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-016	Fill / Culvert	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-J59	UNT to Manion Run	8.7	Int	RPW	3.0	-	<0.1	-	0.0	Access Roads Work Space Permanent	MVP-WE-016	Fill / Culvert	-	Minor	B, C	-	-	-
S-J59	UNT to Manion Run~	8.7	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-016	TF	-	Minor	B, C	-	-	-
S-J56	Manion Run	8.8	Per	RPW	10.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WE-016	Fill / Culvert	-	Minor	B, C	-	-	-
S-J56	Manion Run	8.8	Per	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-016	TF	-	Minor	B, C	-	-	-
S-J56	Manion Run~	8.8	Per	RPW	10.0	10.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-J61	UNT to Manion Run	8.8	Eph	NRPW	2.0	-	<0.1	-	0.0	Access Roads Work Space Permanent	MVP-WE-016	Fill / Culvert	-	Minor	-	-	-	-
S-J61	UNT to Manion Run	8.8	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WE-016	TF	-	Minor	-	-	-	-
Harrison	Right Fork Big Elk Creek	11.2	Per	RPW	8.0	8.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
										Permanent Easement / Temporary Workspace	-							
S-B75 / F49	UNT to Goose Run	12.0	Int	RPW	6.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-B74	Goose Run	12.1	Int	RPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-1477	TF	-	Minor	B, C	-	-	-
S-B74	Goose Run	12.1	Int	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)												
Waterbodies Crossed by the Mountain Valley Project												
Waterbody ID	Waterbody Name & Location	Milepost	Flow Regime & Direction	Water Type & Class	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method & Details
S-A10a	Little Rockcamp Run**	17.8	Per	RPW	12.0	12.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-A130	UNT to Rockcamp Run	18.7	Int	RPW	5.5	-	<0.1	-	-	ATWS	MVP-ATWS-758	TF
S-B2a	UNT to Rockcamp Run	18.7	Eph	NRPW	8.0	8.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-B3a	Rockcamp Run	18.7	Per	RPW	20.0	26.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-A128	Rockcamp Run**	18.8	Per	RPW	48.0	-	<0.1	-	<0.1	Access Roads Work Space	MVP-HA-026	Fill / Culvert
S-RR22	UNT to Grass Run*	20.8	Per	RPW	12.0	12.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-ST20	UNT to Grass Run	21.5	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space	MVP-HA-028.01	TF
S-A11a	Grass Run*	21.6	Per	RPW	12.0	13.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-A11a-Braid-1	Grass Run*	21.6	Int	RPW	6.0	-	<0.1	-	-	Temporary Workspace	-	TF
S-A11a-Braid-2	Grass Run*	21.6	Int	RPW	6.0	12.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-F55	UNT to Indian Run^~	22.3	Int	RPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space	MVP-HA-029	Fill / Culvert

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-K73	Coburn Fork+	31.2	Per	RPW	5.0	6.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K74	UNT to Coburn Fork	31.2	Eph	NRPW	2.5	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-K75	UNT to Coburn Fork	31.3	Int	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K80	UNT to Turtletree Fork	32.7	Int	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-2	UNT to Turtletree Fork	32.8	Eph	NRPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
TTWV-S-K81	Turtletree Fork	32.9	Per	RPW	32.9	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	-	-	-	-
TTWV-S-4	UNT to Turtletree Fork	33.0	Int	RPW	3.0	-	<0.1	-	-	ATWS	MVP-ATWS-052	TF	-	Minor	B, C	-	-	-
TTWV-S-4	UNT to Turtletree Fork	33.0	Int	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A108	UNT to Kincheloe Creek^	37.8	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-HA-050	TF	-	Minor	-	-	-	-
S-A108	UNT to Kincheloe Creek^	37.8	Eph	NRPW	2.0	-	<0.1	-	-	ATWS	MVP-ATWS-1063	TF	-	Minor	-	-	-	-
S-A105	UNT to Kincheloe Creek	37.9	Eph	NRPW	4.0	4.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) at	FERC Classification	Classification at, gL	Fishery Type below	Fish Species below	Time of Year Restriction below
S-A106	UNT to Kincheloe Creek^	Eph	NRPW	2.5	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-K82	UNT to Kincheloe Creek*	Per	RPW	17.5	6.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	B, C	-	-	-
Doddridge	S-IJ42	Int	RPW	2.0	-	<0.1	-	-	Ancillary Site Temporary	MVP-LY-013	TF	-	Minor	B, C	-	-	-
	S-K77	Int	RPW	4.0	4.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K78	UNT to Traugh Fork^	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K69 / K70	UNT to Big Issac Creek^	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-DO-044	TF	-	Minor	-	-	-	-
S-K69 / K70	UNT to Big Issac Creek^	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-DO-044	TF	-	Minor	B, C	-	-	-
S-K67	UNT to Big Issac Creek*	Int	RPW	10.0	10.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K63	UNT to Big Issac Creek^	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K65	UNT to Big Issac Creek	Int	RPW	8.0	8.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K54	UNT to Big Issac Creek*	Int	RPW	7.0	7.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, g/l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-K55	UNT to Big Issac Creek*	34.3	Eph	NRPW	5.0	-	<0.1	0.0	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-K71	UNT to Big Issac Creek	34.4	Int	RPW	9.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-DO-046	TF	-	Minor	B, C	-	-	-
S-K58	UNT to Big Issac Creek*	34.5	Eph	NRPW	2.5	2.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-K72	UNT to Big Issac Creek*	34.5	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-DO-047	TF	-	Minor	B, C	-	-	-
S-K59	UNT to Big Issac Creek*^	34.6	Eph	NRPW	2.5	2.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-K60	UNT to Big Issac Creek*^	34.6	Eph	NRPW	4.0	4.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A110 / K62	UNT to Laurel Run~	34.7	Int	RPW	7.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
S-A109	UNT to Laurel Run*	34.8	Int	RPW	8.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
S-A110 / K62	UNT to Laurel Run*	34.8	Int	RPW	1.0	-	<0.1	-	-	ATWS	MVP-ATWS-053	TF	-	Minor	B, C	-	-	-
S-A110 / K62	UNT to Laurel Run*	34.8	Int	RPW	1.0	1.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A111	Laurel Run*	34.8	Per	RPW	14.0	14.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	B, C	-	-	-
Lewis S-K94	Kincheloe Creek*	38.0	Per	RPW	20.0	20.7	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-K95	UNT to Kincheloe Creek*	38.0	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-HA-051	TF	-	Minor	B, C	-	-	-
S-K92	UNT to Smoke Camp Run	39.7	Int	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-054	Fill / Culvert	-	Minor	B, C	-	-	-
S-K92	UNT to Smoke Camp Run	39.7	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-054	TF	-	Minor	B, C	-	-	-
S-K91	UNT to Smoke Camp Run	39.9	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-054	Fill / Culvert	-	Minor	-	-	-	-
S-K93	UNT to Smoke Camp Run	39.9	Int	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-054	Fill / Culvert	-	Minor	B, C	-	-	-
S-I67	Smoke Camp Run	41.2	Per	RPW	8.0	8.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-VV7	UNT to Smoke Camp Run	41.2	Int	RPW	10.0	-	<0.1	-	-	ATWS	MVP-ATWS-059	TF	-	Minor	B, C	-	-	-
S-VV25	UNT Smoke Camp Run^	41.7	Eph	NRPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-055	TF	-	Minor	-	-	-	-
S-I68	UNT to Smoke Camp Run	41.8	Per	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-055	TF	-	Minor	B, C	-	-	-
S-I69	Smoke Camp Run	41.8	Per	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-055	TF	-	Minor	B, C	-	-	-
S-LL2	UNT to Smoke Camp Run^	41.8	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-055	TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)												
Waterbodies Crossed by the Mountain Valley Project												
Waterbody ID	Waterbody Name & Location	Milepost	Flow Regime & Direction	Water Type & Class	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method & Details
S-LL2	UNT to Smoke Camp Run^	41.8	Int	RPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-836	TF
S-J43	Right Fork Freemans Creek*	42.5	Per	RPW	25.0	25.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-J44	UNT to Right Fork Freemans Creek	43.1	Per	RPW	5.0	5.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-UV8	UNT to Right Fork Freemans Creek	43.3	Eph	NRPW	1.0	-	0.0	-	0.0	Access Roads Work Space Permanent	MVP-LE-057.03	Fill / Culvert
S-UV8	UNT to Right Fork Freemans Creek	43.3	Eph	NRPW	1.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-057.01	TF
S-UV8	UNT to Right Fork Freemans Creek^	43.3	Eph	NRPW	1.0	-	<0.1	-	-	ATWS	MVP-ATWS-839	TF
S-UV9	UNT to Right Fork Freemans Creek^	43.3	Int	RPW	1.0	-	<0.1	-	-	ATWS	MVP-ATWS-839	TF
S-PP7	UNT to Fink Creek^	44.4	Eph	NRPW	2.0	-	<0.1	-	-	ATWS	MVP-ATWS-851	TF
S-K51	Fink Creek+	44.6	Per	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-062	TF
S-J46	Fink Creek+	44.7	Per	RPW	15.0	15.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-J47b	UNT to Fink Creek	44.8	Int	RPW	3.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, &l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-K52	UNT to Fink Creek	44.8	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-061	TF	-	Minor	-	-	-	-
S-K53	UNT to Fink Creek	44.8	Per	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-061	TF	4	Intermediate	B, C	-	-	-
S-J49	UNT to Left Fork Freemans Creek^	45.5	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-063	TF	-	Minor	-	-	-	-
S-B67	Left Fork Freemans Creek*	45.8	Per	RPW	12.0	12.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	B, C	-	-	-
S-K46	UNT to Left Fork Freemans Creek*^	45.8	Eph	NRPW	2.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-B68	UNT to Left Fork Freemans Creek	45.9	Int	RPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-065	TF	-	Minor	B, C	-	-	-
S-B71	UNT to Left Fork Freemans Creek	45.9	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-065	TF	-	Minor	-	-	-	-
S-B69	UNT to Left Fork Freemans Creek^	46.0	Eph	NRPW	1.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-065	TF	-	Minor	-	-	-	-
S-B70	UNT to Left Fork Freemans Creek^	46.0	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-065	TF	-	Minor	-	-	-	-
S-B72	UNT to Left Fork Freemans Creek^	46.2	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-066.02	Fill / Culvert	-	Minor	-	-	-	-
S-H183	UNT to Left Fork Freemans Creek*^	46.6	Eph	NRPW	5.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{g/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{3 e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-H184	UNT to Left Fork Freemans Creek ^{*^}	46.6	Eph	NRPW	10.0	10.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H184a	UNT to Left Fork Freemans Creek ^{*^}	46.6	Eph	NRPW	10.0	10.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H180	UNT to Left Fork Freemans Creek ^{*^}	46.7	Int	RPW	13.0	13.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	B, C	-	-	-
S-H172	UNT to Leading Creek [^]	47.6	Eph	NRPW	5.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H170	UNT to Leading Creek [^]	47.9	Eph	NRPW	3.0	-	<0.1	-	-	ATWS	MVP-ATWS-1384	TF	-	Minor	-	-	-	-
S-H170	UNT to Leading Creek [^]	47.9	Eph	NRPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-164	Leading Creek	47.9	Per	RPW	4.0	4.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW, TE	Snuffbox	April 1 - June 30
TTWV-S-217	UNT to Leading Creek	47.9	Int	RPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-075	TF	-	Minor	B, C	WW, TE	Snuffbox	April 1 - June 30
S-KK3a	UNT to Laurel Run [^]	51.0	Eph	NRPW	2.0	2.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-KK5	UNT to Laurel Run	51.1	Int	RPW	3.0	3.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-KK6	UNT Laurel Run	51.1	Int	RPW	3.0	5.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/} , ^{g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-KK7	Laurel Run	51.1	Per	RPW	6.0	8.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L81	UNT to Cove Lick	51.8	Int	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-070	Fill / Culvert	-	Minor	B, C	-	-	-
S-L81	UNT to Cove Lick	51.8	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-070	TF	-	Minor	B, C	-	-	-
S-K43	Cove Lick+	52.3	Per	RPW	7.0	11.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K45	UNT to Cove Lick [^]	52.3	Eph	NRPW	1.0	-	<0.1	-	-	ATWS	MVP-ATWS-079	TF	-	Minor	-	-	-	-
S-K38	UNT to Rock Run ^{*^}	53.1	Eph	NRPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-L78	UNT to Rock Run	54.0	Per	RPW	12.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-072	TF	-	Intermediate	B, C	WW	-	-
S-L79	Rock Run	54.0	Per	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-072	TF	-	Minor	B, C	WW	-	-
S-I63	Sand Fork+	55.1	Per	RPW	20.0	-	0.0	-	-	Anode Bed Permanent Workspace	-	Fill / Culvert	3 or 4	Intermediate	B, C	WW, M	-	April 1 - June 30
S-I63	Sand Fork+	55.1	Per	RPW	20.0	20.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	WW, M	-	April 1 - June 30
S-H159	UNT to Indian Fork ^{*^}	58.5	Eph	NRPW	3.0	-	<0.1	-	-	ATWS	MVP-ATWS-1435	TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, g&l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-H160	Indian Fork**	58.5	Per	RPW	23.0	23.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	A, B, C	-	-	-
S-H158 / H161	UNT to Indian Fork^	58.6	Int	RPW	4.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L76	Indian Fork+	58.9	Per	RPW	15.0	-	<0.1	-	<0.1	Access Roads Work Space	MVP-LE-074	Fill / Culvert	-	Intermediate	A, B, C	-	-	-
S-H152	UNT to Sugar Camp Run**^	59.4	Eph	NRPW	3.0	-	<0.1	-	-	Permanent Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-H153	UNT to Sugar Camp Run*	59.4	Per	RPW	15.0	15.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	WW	-	-
S-H145	UNT to Indian Fork*	59.9	Per	RPW	15.0	18.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-
S-H165	UNT to Indian Fork**^	59.9	Eph	NRPW	6.0	8.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H166	UNT to Indian Fork**^	59.9	Eph	NRPW	7.0	-	<0.1	-	-	Permanent Easement / Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-L73	Indian Fork**	59.9	Per	RPW	15.0	-	<0.1	-	<0.1	Access Roads Work Space	MVP-LE-076	Fill / Culvert	3 or 4	Intermediate	A, B, C	-	-	-
S-L73	Indian Fork**	59.9	Per	RPW	15.0	-	<0.1	-	-	Access Roads Work Space	MVP-LE-076	TF	3 or 4	Intermediate	A, B, C	-	-	-
S-H144	UNT to Threelick Run	60.1	Eph	NRPW	6.0	6.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-H163	UNT to Indian Fork	60.1	Int	RPW	6.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-208	Threelick Run*	60.3	Per	RPW	9.0	13.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-209	UNT to Threelick Run*	60.3	Int	RPW	5.0	5.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-216	UNT to Threelick Run*	60.3	Eph	NRPW	3.0	-	<0.1	-	-	ATWS	MVP-ATWS-479	TF	-	Minor	-	-	-	-
TTWV-S-216	UNT to Threelick Run*	60.3	Eph	NRPW	3.0	3.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-VV15	UNT to Second Big Run	61.1	Eph	NRPW	3.0	-	0.0	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-CD16	UNT to Second Big Run^	61.2	Int	RPW	3.5	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-VV13	Second Big Run	61.2	Per	RPW	15.0	20.3	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Alternate Mitigation	Intermediate	B, C	-	-	-
S-VV11	UNT to Second Big Run	61.3	Eph	NRPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-796	TF	-	Minor	-	-	-	-
S-VV11	UNT to Second Big Run	61.3	Eph	NRPW	4.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-VV12	UNT to Second Big Run	61.3	Per	RPW	12.0	12.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Alternate Mitigation	Intermediate	B, C	-	-	-
S-VV13d	Second Big Run	61.3	Per	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-077.02	TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-VV17	UNT to Second Big Run	61.8	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-077.02	TF	-	Minor	-	-	-	-
S-CD20	UNT to Second Big Run [^]	61.9	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-077.02	TF	-	Minor	B, C	-	-	-
S-CD21	UNT to Second Big Run [^]	61.9	Int	RPW	0.8	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-077.02	TF	-	Minor	B, C	-	-	-
S-CD21-Braid	UNT to Second Big Run [^]	61.9	Int	RPW	0.8	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-077.02	TF	-	Minor	-	-	-	-
S-VV13a	Second Big Run	61.9	Per	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-077.02	TF	-	Minor	B, C	-	-	-
S-UV11	Oil Creek+	62.2	Per	RPW	15.0	15.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	-	-	-	-
S-VV21	UNT to Oil Creek ^{^~}	62.4	Eph	NRPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-077.03	Fill / Culvert	-	Minor	-	-	-	-
S-VV21	UNT to Oil Creek [^]	62.4	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-077.03	TF	-	Minor	-	-	-	-
S-VV22	UNT to Oil Creek ^{^~}	62.5	Eph	NRPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-077.03	Fill / Culvert	-	Minor	-	-	-	-
S-VV22	UNT to Oil Creek [^]	62.5	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-077.03	TF	-	Minor	-	-	-	-
S-L61	Crooked Run	63.0	Int	RPW	10.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-083	Fill / Culvert	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, g&l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-L61	Crooked Run	63.0	Int	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-083	TF	-	Minor	-	-	-	-
S-L63	UNT to Crooked Run	63.0	Int	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-083	Fill / Culvert	-	Minor	-	-	-	-
S-L63	UNT to Crooked Run	63.0	Int	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-083	TF	-	Minor	-	-	-	-
S-L64	UNT to Crooked Run	63.0	Int	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-LE-083	Fill / Culvert	-	Minor	B, C	-	-	-
S-L64	UNT to Crooked Run	63.0	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-083	TF	-	Minor	B, C	-	-	-
S-UU7	UNT to Clover Fork	65.1	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-LE-084	TF	-	Minor	-	-	-	-
TTWV-S-132	UNT to Clover Fork	65.3	Int	RPW	8.0	-	<0.1	-	-	ATWS	MVP-ATWS-435	TF	-	Minor	-	-	-	-
S-VV9	UNT to Clover Fork	65.4	Per	RPW	10.0	10.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
Braxton S-VV2	Clover Fork	65.4	Per	RPW	20.0	22.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-
S-VV3	UNT to Clover Fork	65.5	Eph	NRPW	8.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-OP4	UNT to Barbecue Run^~	67.1	Int	RPW	1.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-BR-086.01	Fill / Culvert	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-OP4	UNT to Barbecue Run [^]	67.1	Int	RPW	1.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-086.01	TF	-	Minor	B, C	-	-	-
S-OP3	UNT to Barbecue Run	67.2	Per	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-BR-086.01	Fill / Culvert	-	Minor	B, C	-	-	-
S-OP3	UNT to Barbecue Run	67.2	Per	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-086.01	TF	-	Minor	B, C	-	-	-
S-J37	UNT to Barbecue Run ^{*^}	67.4	Int	RPW	3.0	3.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L51	Barbecue Run [*]	67.4	Per	RPW	20.0	23.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-
S-L57	UNT to Barbecue Run	68.4	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-088	TF	-	Minor	-	-	-	-
S-L57	UNT to Barbecue Run	68.4	Eph	NRPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-886	TF	-	Minor	-	-	-	-
S-L58	Barbecue Run	68.4	Per	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-088	TF	-	Intermediate	B, C	-	-	-
S-L58	Barbecue Run	68.4	Per	RPW	15.0	-	<0.1	-	-	ATWS	MVP-ATWS-888	TF	-	Intermediate	B, C	-	-	-
S-L60	Left Fork Knawl Creek ^{*^}	68.7	Per	RPW	30.0	30.1	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-
S-LL1	Knawl Creek [*]	68.7	Per	RPW	30.0	35.7	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	WW, M	-	April 1 - June 30

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-IJ28	UNT to Little Knawl Creek~	69.9	Int	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-BR-090.02	Fill / Culvert	-	Minor	B, C	-	-	-
S-IJ28	UNT to Little Knawl Creek	69.9	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-090.02	TF	-	Minor	B, C	-	-	-
S-IJ28	UNT to Little Knawl Creek	69.9	Int	RPW	5.0	-	<0.1	-	-	ATWS	MVP-ATWS-1395	TF	-	Minor	B, C	-	-	-
S-IJ31	UNT to Little Knawl Creek~	69.9	Int	RPW	5.5	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-BR-090.02	Fill / Culvert	-	Minor	B, C	-	-	-
S-IJ31	UNT to Little Knawl Creek	69.9	Int	RPW	5.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-090.02	TF	-	Minor	B, C	-	-	-
S-IJ31-Braid	UNT to Little Knawl Creek~	69.9	Eph	NRPW	2.5	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-BR-090.02	Fill / Culvert	-	Minor	-	-	-	-
S-IJ31-Braid	UNT to Little Knawl Creek	69.9	Eph	NRPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-090.02	TF	-	Minor	-	-	-	-
S-IJ32	UNT to Little Knawl Creek~	69.9	Eph	NRPW	1.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-BR-090.02	Fill / Culvert	-	Minor	-	-	-	-
S-IJ32	UNT to Little Knawl Creek	69.9	Eph	NRPW	1.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-090.02	TF	-	Minor	-	-	-	-
S-IJ27	Little Knawl Creek~	70.0	Per	RPW	20.0	-	0.2	-	0.2	Access Roads Work Space Permanent	MVP-BR-090.02	Fill / Culvert	-	Intermediate	B, C	-	-	-
S-IJ27	Little Knawl Creek	70.0	Per	RPW	20.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-BR-090.02	TF	-	Intermediate	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name <u>at</u>	Milepost	Flow Regime <u>below</u>	Water Type <u>Classification</u>	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method <u>and</u>	Pipeline Burial Depth (ft) <u>at</u>	FERC Classification	Classification <u>by</u> <u>type</u> , <u>grade</u>	Fishery Type <u>below</u>	Fish Species <u>below</u>	Time of Year Restriction <u>by</u>
S-IJ30	UNT to Little Knawl Creek	70.0	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-090.02	TF	-	Minor	-	-	-	-
S-QR30	UNT to Little Knawl Creek	70.0	Per	RPW	7.0	7.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-JJ1	UNT to Keith Run	71.6	Per	RPW	14.0	16.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	B, C	-	-	-
S-I60	UNT to Falls Run	72.2	Int	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-J74	UNT to Falls Run	72.2	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-095.01	TF	-	Minor	B, C	-	-	-
S-J74	UNT to Falls Run	72.2	Int	RPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-897	TF	-	Minor	B, C	-	-	-
S-I59	UNT to Falls Run	72.4	Int	RPW	5.0	-	0.0	-	-	ATWS	MVP-ATWS-111	TF	4	Minor	B, C	-	-	-
S-J70	Falls Run	72.4	Per	RPW	30.0	30.3	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	B, C	-	-	-
S-K33	UNT to Hemp Patch Run	73.5	Eph	NRPW	2.0	-	<0.1	-	-	ATWS	MVP-ATWS-116	TF	-	Minor	-	-	-	-
S-K33	UNT to Hemp Patch Run	73.5	Eph	NRPW	2.0	4.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-K34	Hemp Patch Run	73.5	Int	RPW	5.0	5.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) below	FERC Classification	Classification below, g/L	Fishery Type below	Fish Species below	Time of Year Restriction below
S-H122	UNT to Elliott Run^	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-100	TF	-	Minor	B, C	-	-	-
S-H124	UNT to Elliott Run	Per	RPW	6.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
S-H123	UNT to Elliott Run	Per	RPW	6.0	6.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-H127	UNT to Elliott Run*	Int	RPW	4.0	4.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L50	UNT to Little Kanawha River	Int	RPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-908	TF	-	Minor	B, C	WW	-	-
S-L50	UNT to Little Kanawha River	Int	RPW	4.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	WW	-	-
S-H132	Little Kanawha River	Per	RPW	120.0	-	<0.1	-	-	ATWS	MVP-ATWS-119	TF	5	Major	A, B, C	WW, TE	Snuffbox	April 1 - June 30
S-H132	Little Kanawha River	Per	RPW	120.0	121.1	0.6	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Major	A, B, C	WW, TE	Snuffbox	April 1 - June 30
S-L49	Elliott Run	Per	RPW	15.0	-	<0.1	-	-	Temporary Workspace	-	TF	5	Intermediate	B, C	-	-	-
S-H129	UNT to Little Kanawha River	Eph	NRPW	2.0	2.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H131	UNT to Little Kanawha River	Eph	NRPW	2.0	2.1	<0.1	<0.1	-	Permanent Easement	-	OCDD	-	Minor	-	-	-	-
S-L48	Coplin Run	Per	RPW	20.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-103	TF	-	Intermediate	B, C	WW	-	-
S-H130	UNT to Little Kanawha River^	Eph	NRPW	2.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name <u>at</u>	Milepost	Flow Regime <u>below</u>	Water Type <u>classification</u>	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing <u>Method</u>	Pipeline Burial Depth (ft) <u>estimated</u>	FERC Classification	Classification <u>fishery</u> , <u>quality</u>	Fishery Type <u>below</u>	Fish Species <u>below</u>	Time of Year Restriction <u>below</u>
S-H132b	Little Kanawha River	75.3	Per	RPW	90.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-BR-103.01	TF	-	Intermediate	A, B, C	WW, TE	Snuffbox	April 1 - June 30
S-H132b-Braid	Little Kanawha River	75.3	Eph	NRPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-103.01	TF	-	Minor	-	-	-	-
S-QR23	UNT to Little Kanawha River	75.3	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-103.01	TF	-	Minor	B, C	WW	-	-
S-QR24	UNT to Little Kanawha River [^]	75.3	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-103.01	TF	-	Minor	B, C	WW	-	-
S-QR25	UNT to Little Kanawha River	75.3	Eph	NRPW	3.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-103.01	TF	-	Minor	-	-	-	-
S-QR26	UNT to Little Kanawha River	75.3	Per	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-BR-103.01	TF	-	Minor	B, C	WW	-	-
S-UV13	UNT to Granny Creek	75.3	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-ANC-001	TF	-	Minor	-	-	-	-
S-L47	Little Kanawha River	75.6	Per	RPW	75.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-BR-103	TF	-	Intermediate	A, B, C	WW, TE	Snuffbox	April 1 - June 30
S-H116	UNT to England Run [^]	76.2	Eph	NRPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-BR-104	Fill / Culvert	-	Minor	-	-	-	-
S-ST30	UNT to Granny Creek	76.2	Eph	NRPW	1.0	-	<0.1	-	-	Ancillary Site Temporary	MVP-LY-021	TF	-	Minor	-	-	-	-
S-H117	Stonecoal Run [*]	76.7	Per	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	-	TF	3 or 4	Intermediate	B, C	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) or greater	FERC Classification	Classification below, greater	Fishery Type below	Fish Species below	Time of Year Restriction below
S-H117	Stonecoal Run*	Per	RPW	15.0	16.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-
S-AA15	UNT to Laurel Run^~	Int	RPW	2.5	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-BR-105.03	Fill / Culvert	-	Minor	B, C	WW	-	-
S-AA15	UNT to Laurel Run^	Int	RPW	2.5	-	<0.1	-	-	Ancillary Site Temporary	HARRIS CS LOD	TF	-	Minor	B, C	WW	-	-
S-L46	UNT to Laurel Run*	Per	RPW	15.0	15.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	WW	-	-
S-L44	UNT to Laurel Run	Per	RPW	10.0	10.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-
S-I53	UNT to Laurel Run^	Eph	NRPW	2.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-I57	Mudlick Run	Per	RPW	30.0	30.2	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-
S-PP09	UNT to Coon Creek	Eph	NRPW	2.0	-	<0.1	-	-	Ancillary Site Temporary	MVP-LY-004	TF	-	Minor	-	-	-	-
S-PP10	UNT to Coon Creek	Eph	NRPW	2.0	-	<0.1	-	-	Ancillary Site Temporary	MVP-LY-004	TF	-	Minor	-	-	-	-
Webster S-A96 / A103	UNT to Left Fork Holly River*	Eph	NRPW	5.0	5.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A97	UNT to Left Fork Holly River*	Int	RPW	8.0	13.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A98	UNT to Left Fork Holly River^	Int	RPW	7.0	12.9	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A99	UNT to Left Fork Holly River*	Eph	NRPW	5.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-A101	UNT to Mudlick Run^	80.9	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-110.01	TF	-	Minor	-	-	-	-
S-A102	UNT to Mudlick Run^	81.0	Eph	NRPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-110.01	TF	-	Minor	-	-	-	-
S-E83	UNT to Left Fork Holly River	81.5	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-111	TF	-	Minor	B, C	-	-	-
S-A100	Left Fork Holly River*	81.6	Per	RPW	80.0	80.5	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	B, C	CW, B2	-	September 15 - March 31
S-E78 / E82 / R1	UNT to Left Fork Holly River*	81.6	Per	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-111	TF	-	Minor	B, C	-	-	-
S-E78 / E82 / R1	UNT to Left Fork Holly River*	81.6	Per	RPW	8.0	15.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-E83a	UNT to Left Fork Holly River*	81.6	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-111	TF	-	Minor	B, C	-	-	-
S-E76	UNT to Left Fork Holly River^	81.7	Eph	NRPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-E74	UNT to Left Fork Holly River	81.8	Per	RPW	4.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-KK1	UNT to Left Fork Holly River**^	81.9	Eph	NRPW	2.5	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-KK2	UNT to Left Fork Holly River**^	81.9	Eph	NRPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-KK3b	UNT to Left Fork Holly River**^	82.0	Eph	NRPW	3.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-KK4b	UNT to Left Fork Holly River**^	82.0	Eph	NRPW	3.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-E72	UNT to Oldlick Creek	82.2	Per	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-114.01	TF	-	Minor	B, C	-	-	-
S-E72-Braid	UNT to Oldlick Creek	82.2	Per	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-114.01	TF	-	Minor	B, C	-	-	-
S-S1	UNT to Oldlick Creek^	82.3	Eph	NRPW	2.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-S2	UNT to Oldlick Creek^	82.3	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-114	TF	-	Minor	B, C	-	-	-
S-F40	Oldlick Creek	82.4	Per	RPW	25.0	29.0	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3.3	Intermediate	B, C	-	-	-
S-S3	UNT to Oldlick Creek^	82.5	Eph	NRPW	1.5	-	0.0	-	-	Access Roads Work Space Temporary	MVP-WB-114	TF	-	Minor	-	-	-	-
S-S4	UNT to Oldlick Creek^	82.5	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-114	TF	-	Minor	-	-	-	-
S-F43	UNT to Oldlick Creek	82.6	Per	RPW	10.0	13.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-B67a	Right Fork Holly River*	84.0	Per	RPW	30.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	5	Intermediate	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name <u>at</u>	Milepost	Flow Regime <u>below</u>	Water Type <u>Classification</u>	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing <u>Method</u>	Pipeline Burial Depth (ft) <u>at</u>	FERC Classification	Classification <u>below</u> , <u>at</u>	Fishery Type <u>below</u>	Fish Species <u>below</u>	Time of Year Restriction <u>below</u>
S-B67a	Right Fork Holly River*	84.0	Per	RPW	30.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-119	TF	5	Intermediate	B, C	-	-	-
S-E67	Right Fork Holly Creek*	84.1	Per	RPW	85.0	92.4	0.2	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	B, C	-	-	-
S-R4	UNT to Right Fork Holly Creek	84.2	Eph	NRPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-117	Fill / Culvert	-	Minor	-	-	-	-
S-R4	UNT to Right Fork Holly Creek	84.2	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-117	TF	-	Minor	-	-	-	-
S-R5	UNT to Right Fork Holly Creek	84.2	Per	RPW	10.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-117	Fill / Culvert	-	Minor	B, C	-	-	-
S-R5	UNT to Right Fork Holly Creek	84.2	Per	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-117	TF	-	Minor	B, C	-	-	-
S-R5	UNT to Right Fork Holly Creek	84.2	Per	RPW	10.0	-	<0.1	-	-	ATWS	MVP-ATWS-922	TF	-	Minor	B, C	-	-	-
S-B62	Narrows Run	84.5	Per	RPW	30.0	-	0.1	-	0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Intermediate	B, C	-	-	-
S-B62	Narrows Run	84.5	Per	RPW	30.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-WB-119	TF	-	Intermediate	B, C	-	-	-
S-B66	UNT to Narrows Run	84.5	Int	RPW	15.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Intermediate	B, C	-	-	-
S-B63	UNT to Narrows Run	84.6	Eph	NRPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-B49	UNT to Narrows Run [^]	86.3	Eph	NRPW	7.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Minor	-	-	-	-
S-B49	UNT to Narrows Run [^]	86.3	Eph	NRPW	7.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-119	TF	-	Minor	-	-	-	-
S-B50	UNT to Narrows Run [^]	86.4	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Minor	-	-	-	-
S-B50	UNT to Narrows Run [^]	86.4	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-119	TF	-	Minor	-	-	-	-
S-B54	UNT to Narrows Run [^]	86.4	Eph	NRPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Minor	-	-	-	-
S-B54	UNT to Narrows Run [^]	86.4	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-119	TF	-	Minor	-	-	-	-
S-B55	UNT to Narrows Run	86.4	Int	RPW	7.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Minor	B, C	-	-	-
S-B55	UNT to Narrows Run	86.4	Int	RPW	7.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-119	TF	-	Minor	B, C	-	-	-
S-B55	UNT to Narrows Run	86.4	Int	RPW	7.0	-	<0.1	-	-	ATWS	MVP-ATWS-930	TF	-	Minor	B, C	-	-	-
S-B56	UNT to Narrows Run	86.4	Int	RPW	15.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Intermediate	B, C	-	-	-
S-B56	UNT to Narrows Run	86.4	Int	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-119	TF	-	Intermediate	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name a/	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing d/	Pipeline Burial Depth (ft) e/	FERC Classification	Classification f/, g/	Fishery Type h/	Fish Species i/	Time of Year Restriction j/
S-B51	UNT to Narrows Run^	86.5	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Minor	-	-	-	-
S-B53	UNT to Narrows Run^	86.5	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Minor	-	-	-	-
S-B53	UNT to Narrows Run^	86.5	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-119	TF	-	Minor	-	-	-	-
S-B52	UNT to Narrows Run^	86.6	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-WB-119	Fill / Culvert	-	Minor	-	-	-	-
S-B52	UNT to Narrows Run^	86.6	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-119	TF	-	Minor	-	-	-	-
S-E68	Elk River*	87.3	Per	TNW	150.0	186.6	0.3	0.2	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Major	A, B, C	B2, CW, M, TE	Clubshell	September 15 - March 31
S-E71	UNT to Elk River^	87.4	Int	RPW	2.0	2.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-H111	UNT to Elk River	87.5	Int	RPW	4.0	9.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-H112	UNT to Elk River^	87.5	Int	RPW	3.0	3.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-H113	UNT to Elk River	87.5	Per	RPW	12.0	13.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	B, C	-	-	-
S-H114	UNT to Elk River^	87.5	Eph	NRPW	2.0	3.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, g&l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-YZ2	Gulf Run	87.7	Per	RPW	18.0	-	0.2	-	-	ATWS	MVP-ATWS-1460	TF	-	Intermediate	B, C	-	-	-
S-T16a	UNT to Houston Run*^	88.4	Int	RPW	7.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-121	TF	-	Minor	B, C	-	-	-
S-T17	UNT to Houston Run*	88.4	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-121	TF	-	Minor	B, C	-	-	-
S-T18	UNT to Houston Run*^	88.4	Eph	NRPW	1.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-121	TF	-	Minor	-	-	-	-
S-T19	UNT to Houston Run*	88.4	Per	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-121	TF	-	Minor	B, C	-	-	-
TTWV-S-214	Houston Run*	88.4	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-121	TF	-	Minor	B, C	-	-	-
S-H110	UNT to Houston Run^	89.6	Eph	NRPW	3.0	18.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-T21	UNT to Houston Run^	90.1	Eph	NRPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-121	TF	-	Minor	-	-	-	-
S-T22	UNT to Bear Run^	90.1	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-121	TF	-	Minor	-	-	-	-
S-T24	UNT to Houston Run	90.1	Eph	NRPW	20.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-121	TF	-	Intermediate	-	-	-	-
S-T25	UNT to Houston Run	90.1	Int	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-121	TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)												
Waterbodies Crossed by the Mountain Valley Project												
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/l	Water Type c/l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing d/l Method
							Pipeline Burial Depth (ft) ³ e/l	FERC Classification	Classification f/l, g/l	Fishery Type h/l	Fish Species i/l	Time of Year Restriction j/l
S-T27	UNT to Houston Run	90.1	Int	RPW	6.5	-	<0.1	-	-	Minor	B, C	-
S-T34	UNT to Houston Run	90.1	Int	RPW	10.0	-	<0.1	-	-	Minor	B, C	-
S-T20	UNT to Houston Run	90.2	Int	RPW	3.0	-	<0.1	-	-	Minor	B, C	-
S-T23	UNT to Houston Run^	90.2	Int	RPW	5.0	-	<0.1	-	-	Minor	B, C	-
S-T28	UNT to Houston Run	90.4	Per	RPW	15.0	-	<0.1	-	-	Intermediate	B, C	-
S-T29	Houston Run	90.6	Per	RPW	30.0	-	<0.1	-	-	Intermediate	B, C	-
S-T29	Houston Run*	90.6	Per	RPW	30.0	30.8	0.1	<0.1	-	Intermediate	B, C	-
S-T33	UNT to Houston Run**^	90.6	Int	RPW	4.0	-	<0.1	-	-	Minor	B, C	-
S-T30	UNT to Houston Run	90.7	Per	RPW	12.0	-	<0.1	-	-	Intermediate	B, C	-
S-T32	UNT to Houston Run^	90.7	Int	RPW	4.0	-	<0.1	-	-	Minor	B, C	-
S-A83 / A91	UNT to Camp Creek*	92.4	Per	NRPW	30.0	-	0.1	-	-	Intermediate	B, C	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-A83 / A91	UNT to Camp Creek*	92.4	Per	NRPW	30.0	-	<0.1	-	-	ATWS	MVP-ATWS-158A	TF	6.7	Intermediate	B, C	-	-	-
S-A83 / A91	UNT to Camp Creek*	92.4	Per	RPW	25.0	25.1	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	B, C	-	-	-
S-A85	UNT to Camp Creek*	92.4	Eph	NRPW	4.0	-	0.0	-	-	Access Roads Work Space Temporary	MVP-WB-124	TF	-	Minor	-	-	-	-
S-A86 / A87	UNT to Camp Creek*	92.4	Int	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-124	TF	-	Minor	B, C	-	-	-
S-A88	UNT to Camp Creek*	92.4	Int	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-124	TF	-	Minor	B, C	-	-	-
S-A89	UNT to Camp Creek*	92.4	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-124	TF	-	Minor	B, C	-	-	-
S-A90	UNT to Camp Creek*	92.4	Int	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-124	TF	-	Minor	B, C	-	-	-
S-A92	UNT to Camp Creek*	92.4	Eph	NRPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A93	UNT to Camp Creek*	92.4	Eph	NRPW	8.0	10.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H105	UNT to Camp Creek*	93.0	Per	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	-	TF	-	Minor	B, C	-	-	-
S-H105	UNT to Camp Creek*	93.0	Per	RPW	3.0	6.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, &l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-H108	Lower Laurel Fork*	93.0	Per	RPW	14.0	14.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	7	Intermediate	B, C	-	-	-
S-H102	UNT to Camp Creek	93.1	Per	RPW	15.0	-	<0.1	-	-	Temporary Workspace	-	TF	3 or 4	Intermediate	B, C	-	-	-
S-H104	Camp Creek	93.1	Per	RPW	15.0	15.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	7	Intermediate	B, C	-	-	-
S-H107	UNT to Camp Creek^~	93.1	Int	RPW	1.5	2.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-H103	UNT to Camp Creek^	93.4	Int	RPW	4.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-B48	UNT to Amos Run^	97.6	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space	MVP-WB-127	TF	-	Minor	-	-	-	-
S-B34	Amos Run	97.7	Per	RPW	30.0	30.8	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-
S-B35	UNT to Amos Run*	97.7	Int	RPW	2.0	2.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-B36	UNT to Amos Run*	97.7	Eph	NRPW	2.0	2.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-B37	UNT to Amos Run*	97.7	Int	RPW	2.0	3.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-B38	UNT to Amos Run*	97.7	Eph	NRPW	2.0	5.7	<0.1	<0.1	-	Permanent Easement	-	OCDD	-	Minor	-	-	-	-
S-B39a / B46	UNT to Amos Run*	97.7	Eph	NRPW	3.0	4.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-B39a / B46	UNT to Amos Run*	97.7	Int	RPW	5.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
S-B39b	UNT to Amos Run*	97.7	Eph	NRPW	3.0	4.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-B42	UNT to Amos Run*	97.7	Eph	NRPW	2.0	2.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-B45	UNT to Amos Run*	97.7	Eph	NRPW	3.0	5.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-B43	UNT to Amos Run^	97.8	Eph	NRPW	1.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-O4	Lost Run*	98.6	Per	RPW	18.0	23.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	B, C	WW	-	-
S-O5	UNT to Laurel Creek	98.7	Eph	NRPW	2.0	2.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A79	Laurel Creek*	98.8	Per	RPW	55.0	55.4	0.2	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6	Intermediate	B, C	CW, M	-	September 15 - March 31
S-A80	UNT to Laurel Creek**^	98.8	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-129	TF	-	Minor	B, C	-	-	-
S-A81	UNT to Laurel Creek**^	98.8	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-129	TF	-	Minor	-	-	-	-
S-E58	Little Glade Run*	102.3	Per	RPW	4.0	13.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)													
Waterbodies Crossed by the Mountain Valley Project													
Waterbody ID	Waterbody Name at Milepost	Flow Regime b/l	Water Type c/l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing d/l Method	Pipeline Burial Depth (ft) ³ e/l	FERC Classification
S-E62	UNT to Little Glade Run*	Per	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-12	Fill / Culvert	-	Minor
													B, C
S-E55	UNT to Laurel Creek**^	Eph	NRPW	2.0	2.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor
													-
S-F22	UNT to Williams Branch	Per	RPW	6.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor
													B, C
S-F23	UNT to Williams Branch^	Int	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor
													B, C
S-F32	UNT to Williams Branch	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor
													B, C
S-F25 / F26	UNT to Williams Branch^	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor
													B, C
S-F25 / F26	UNT to Williams Branch^	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor
													-
S-F27 / F29	UNT to Williams Branch	Int	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor
													B, C
S-F27 / F29	UNT to Williams Branch	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor
													B, C
S-F28	UNT to Williams Branch	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor
													B, C
S-F30	UNT to Williams Branch	Per	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor
													B, C
													-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, &l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-F31	UNT to Williams Branch	103.5	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor	B, C	-	-	-
S-F33	UNT to Williams Branch	103.5	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-131	TF	-	Minor	-	-	-	-
S-F34	UNT to Birch River*	104.3	Per	RPW	5.0	5.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-F35	UNT to Birch River*	104.3	Per	RPW	5.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
S-F36a	UNT to Birch River	104.7	Per	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-132.01	TF	-	Minor	B, C	-	-	-
S-F36a	UNT to Birch River	104.7	Per	RPW	5.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-WB-132	TF	-	Minor	B, C	-	-	-
S-F38	UNT to Birch River	104.7	Per	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-132.01	TF	-	Minor	B, C	-	-	-
S-F36b	UNT to Birch River	104.9	Per	RPW	20.0	20.2	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Alternate Mitigation	Intermediate	B, C	-	-	-
S-F37	UNT to Birch River	104.9	Per	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-WB-132.01	TF	-	Minor	B, C	-	-	-
S-C49	UNT to Birch River^	105.0	Eph	NRPW	3.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-B33	UNT to Meadow Fork^	106.1	Int	RPW	10.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-B32	UNT to Meadow Fork	106.3	Per	RPW	7.0	9.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)												
Waterbodies Crossed by the Mountain Valley Project												
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/l	Water Type c/l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing d/l Method &l
S-B32-Braid	UNT to Meadow Fork	106.3	Per	RPW	7.0	-	<0.1	-	-	Temporary Workspace	-	TF
S-B29	Meadow Fork	107.0	Per	RPW	7.0	7.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-B30	UNT to Meadow Fork^	107.0	Eph	NRPW	4.0	-	0.0	-	-	Anode Bed Permanent Workspace	MVP-CPGB-12	Fill / Culvert
S-EF40	UNT to Meadow Fork	107.0	Int	RPW	3.0	-	0.0	-	-	Anode Bed Permanent Workspace	MVP-CPGB-12	Fill / Culvert
S-EF40	UNT to Meadow Fork	107.0	Int	RPW	3.0	-	<0.1	-	-	Anode Bed Temporary Work Space	-	TF
S-E50	UNT to Gauley River*	109.5	Per	RPW	4.0	5.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-E52	UNT to Gauley River*^	109.5	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-E54	UNT to Gauley River*	109.7	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space	MVP-WB-134	TF
S-E46	Strouds Creek*	110.1	Per	RPW	30.0	31.4	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
Nicholas	UNT to Gauley River*^	109.8	Eph	NRPW	1.0	1.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
		111.3	Per	RPW	10.0	10.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF
S-F21	Barn Run	111.3	Per	RPW	4.0	-	<0.1	-	-	Temporary Workspace	-	TF

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-IJ57	UNT to Barn Run*	111.6	Per	RPW	3.5	3.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-QQ5	UNT to Barn Run	111.8	Int	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-139	Fill / Culvert	-	Minor	B, C	-	-	-
S-QQ5	UNT to Barn Run	111.8	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-139	TF	-	Minor	B, C	-	-	-
S-IJ59	UNT to Barn Run^	112.1	Eph	NRPW	2.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-IJ60	UNT to Rockcamp Run*	112.6	Per	RPW	5.5	5.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-IJ62	UNT to Cherry Run*	112.7	Int	RPW	2.5	2.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-B28	Cherry Run	113.3	Per	RPW	10.0	10.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-B26	UNT to Cherry Run	113.6	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-141.01	TF	-	Minor	B, C	-	-	-
S-J32	Big Beaver Creek**+	114.4	Per	RPW	35.0	35.8	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	A,B,C	-	-	-
S-A76	UNT to Big Beaver Creek*	114.6	Per	RPW	10.0	6.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A74	UNT to Big Beaver Creek*	114.8	Eph	NRPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, &l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-A75	UNT to Big Beaver Creek*	114.8	Per	RPW	10.0	10.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A73	UNT to Big Beaver Creek*	115.0	Int	RPW	6.0	6.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A71	UNT to Big Beaver Creek*	115.1	Per	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A71-Braid	UNT to Big Beaver Creek*	115.1	Int	RPW	8.0	8.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A72	UNT to Big Beaver Creek**^	115.1	Eph	NRPW	4.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A67	UNT to Big Beaver Creek*	115.4	Per	RPW	7.0	7.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-A69	UNT to Big Beaver Creek*	115.5	Int	RPW	6.0	7.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-H100	UNT to Big Beaver Creek*	115.8	Per	RPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-H99	UNT to Big Beaver Creek*	115.8	Per	RPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-H96	UNT to Big Beaver Creek	116.0	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-146	TF	-	Minor	B, C	-	-	-
S-H95	UNT to Big Beaver Creek	116.1	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-146	TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type at Crossing	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) at	FERC Classification	Classification at, below	Fishery Type below	Fish Species below	Time of Year Restriction below
S-A65	Big Beaver Creek**	Per	RPW	70.0	72.0	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6	Intermediate	A, B, C	-	-	-
S-A64	UNT to Granny Run**^	Eph	NRPW	7.0	7.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-N15	UNT to Granny Run**^	Int	RPW	12.0	12.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	B, C	-	-	-
S-N14	Granny Run	Per	RPW	8.0	9.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-ST27	UNT to Granny Run*	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-147	TF	-	Minor	B, C	-	-	-
S-ST28	Granny Run*	Int	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-147	TF	-	Minor	B, C	-	-	-
S-I43	UNT to Big Run*	Int	RPW	10.0	10.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-
S-I44	Big Run	Per	RPW	8.0	8.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	A, B, C	WW	-	-
S-I45	UNT to Big Run	Per	RPW	6.0	6.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-
S-I47	UNT to Gauley River*	Int	RPW	2.0	2.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-
S-I48	UNT to Gauley River	Per	RPW	10.0	10.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) ³ or 4	FERC Classification	Classification at ft, gL	Fishery Type below	Fish Species below	Time of Year Restriction below
S-J29	Gauley River*	Per	TNW	300.0	313.0	0.5	0.4	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Major	A, B, C	WW, M	-	April 1 - June 30
S-EF29	UNT to Little Laurel Creek	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-151.01	Fill / Culvert	-	Minor	-	-	-	-
S-EF29	UNT to Little Laurel Creek^	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-153.01	TF	-	Minor	-	-	-	-
S-EF28	UNT to Gauley River	Int	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-151.01	Fill / Culvert	-	Minor	B, C	-	-	-
S-J26	Little Laurel Creek~	Per	RPW	30.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-151.01	Fill / Culvert	-	Intermediate	B, C	WW	-	-
S-J26	Little Laurel Creek	Per	RPW	30.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-153.01	TF	-	Intermediate	B, C	WW	-	-
S-MN7	UNT to Little Laurel Creek^	Int	RPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-151.01	Fill / Culvert	-	Minor	B, C	-	-	-
S-MN7	UNT to Little Laurel Creek^	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-153.01	TF	-	Minor	B, C	-	-	-
S-EF27	UNT to Gauley River*	Int	RPW	2.5	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-151.01	Fill / Culvert	-	Minor	B, C	-	-	-
S-EF27	UNT to Gauley River*	Int	RPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-153.01	TF	-	Minor	B, C	-	-	-
S-J27	UNT to Panther Creek	Int	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-151.01	Fill / Culvert	-	Minor	B, C	WW	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing ^{d/} Method	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-R10	UNT to Little Laurel Creek	120.7	Int	RPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-14	Fill / Culvert	-	Minor	B, C	-	-	-
S-R14	UNT to Little Laurel Creek	120.8	Int	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-14	Fill / Culvert	-	Minor	B, C	-	-	-
S-R15	UNT to Little Laurel Creek	120.8	Int	RPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-14	Fill / Culvert	-	Minor	B, C	-	-	-
S-R16	UNT to Little Laurel Creek	120.8	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-14	Fill / Culvert	-	Minor	-	-	-	-
S-X1	Little Laurel Creek+	120.9	Per	RPW	12.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-14	Fill / Culvert	-	Intermediate	B, C	WW	-	-
S-X1	Little Laurel Creek+	120.9	Per	RPW	12.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MLV-AR-14	TF	-	Intermediate	B, C	WW	-	-
S-X2	UNT to Little Laurel Creek	121.2	Int	RPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-14	Fill / Culvert	-	Minor	B, C	-	-	-
S-X3	UNT to Little Laurel Creek	121.2	Int	RPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-14	Fill / Culvert	-	Minor	B, C	-	-	-
S-X3	UNT to Little Laurel Creek	121.2	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MLV-AR-14	TF	-	Minor	B, C	-	-	-
S-U11	UNT to Little Laurel Creek	121.4	Int	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-14	Fill / Culvert	-	Minor	B, C	-	-	-
S-U11	UNT to Little Laurel Creek	121.4	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MLV-AR-14	TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{g/}	Milepost	Flow Regime ^{h/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing ^{d/} Method	Pipeline Burial Depth (ft) ^{3 e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-U4	UNT to Little Laurel Creek	122.0	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MLV-AR-14	TF	-	Minor	B, C	-	-	-
S-U5	UNT to Little Laurel Creek [^]	122.0	Int	RPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MLV-AR-14	Fill / Culvert	-	Minor	B, C	-	-	-
S-U5	UNT to Little Laurel Creek [^]	122.0	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MLV-AR-14	TF	-	Minor	B, C	-	-	-
S-WX4	UNT to Morris Fork	122.0	Per	RPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MLV-AR-14	TF	-	Minor	-	-	-	-
S-J23-EPH	UNT to Little Laurel Creek [^]	122.2	Eph	NRPW	1.0	1.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-J22	UNT to Little Laurel Creek	122.3	Int	RPW	3.0	3.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-N10	Skelt Run	122.5	Per	RPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-N10-Braid	Skelt Run	122.5	Int	RPW	3.0	5.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-EE1	UNT to Skelt Run [*]	122.7	Eph	NRPW	4.0	4.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-N13	UNT to Skelt Run [^]	122.9	Int	RPW	2.0	2.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-N13-Braid	UNT to Skelt Run [^]	122.9	Int	RPW	6.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing ^{d/} Method	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/} , ^{g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-I38	UNT to Hominy Creek	125.5	Int	RPW	5.0	5.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	B2	-	-
S-I39	UNT to Hominy Creek	125.5	Int	RPW	7.0	7.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	B2	-	-
S-N19	UNT to Hominy Creek	125.6	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-160.01	TF	-	Minor	B, C	B2	-	-
S-I40	UNT to Hominy Creek	126.0	Int	RPW	7.0	7.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	B2	-	-
S-M20	UNT to Brushy Meadow Creek	126.2	Per	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-159	Fill / Culvert	-	Minor	B, C	-	-	-
S-M20	UNT to Brushy Meadow Creek	126.2	Per	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-159	TF	-	Minor	B, C	-	-	-
S-M21	UNT to Brushy Meadow Creek	126.2	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-159	Fill / Culvert	-	Minor	-	-	-	-
S-M21	UNT to Brushy Meadow Creek [^]	126.2	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-160.01	TF	-	Minor	-	-	-	-
S-M22	UNT to Bowen Run [^]	126.2	Int	RPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-159	Fill / Culvert	-	Minor	B, C	-	-	-
S-M22	UNT to Bowen Run [^]	126.2	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-159	TF	-	Minor	B, C	-	-	-
S-M23	UNT to Bowen Run [^]	126.2	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-160.01	Fill / Culvert	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-M23	UNT to Bowen Run [^]	126.2	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-160.01	TF	-	Minor	-	-	-	-
S-M24	Bowen Run	126.2	Per	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-159	Fill / Culvert	-	Minor	B, C	-	-	-
S-M24	Bowen Run	126.2	Per	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-159	TF	-	Minor	B, C	-	-	-
S-M27	UNT to Hominy Creek [^]	126.2	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-159	Fill / Culvert	-	Minor	-	-	-	-
S-M27	UNT to Hominy Creek [^]	126.2	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-159	TF	-	Minor	-	-	-	-
S-M28	UNT to Hominy Creek	126.2	Per	RPW	15.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-159	Fill / Culvert	-	Intermediate	B, C	B2	-	-
S-M28	UNT to Hominy Creek	126.2	Per	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-159	TF	-	Intermediate	B, C	B2	-	-
S-O6	UNT to Hominy Creek	126.3	Per	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-160	TF	-	Minor	B, C	B2	-	-
S-EF42	UNT to Hominy Creek	126.5	Int	RPW	12.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-160.01	Fill / Culvert	-	Intermediate	B, C	B2	-	-
S-EF42	UNT to Hominy Creek	126.5	Int	RPW	12.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-160.01	TF	-	Intermediate	B, C	B2	-	-
S-M29	UNT to Hominy Creek [^]	126.5	Eph	NRPW	1.5	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-159	Fill / Culvert	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name a/	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing d/	Pipeline Burial Depth (ft) e/	FERC Classification	Classification f/, g/	Fishery Type h/	Fish Species i/	Time of Year Restriction j/
S-M29	UNT to Hominy Creek^	126.5	Eph	NRPW	1.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-159	TF	-	Minor	-	-	-	-
S-I41	UNT to Hominy Creek^	126.8	Int	RPW	8.0	8.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	B2	-	-
S-I36	Hominy Creek**+	126.9	Per	RPW	55.0	56.7	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	7	Intermediate	B, C	CW, B2, M	-	September 15 - March 31
S-U12	UNT to Hominy Creek	127.1	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-159	Fill / Culvert	-	Minor	-	-	-	-
S-U13	UNT to Hominy Creek	127.3	Int	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-161	Fill / Culvert	-	Minor	B, C	B2	-	-
S-U14	UNT to Hominy Creek	127.3	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-161	Fill / Culvert	-	Minor	-	-	-	-
S-U16	UNT to Hominy Creek	127.3	Per	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-161	Fill / Culvert	-	Minor	B, C	B2	-	-
S-U16	UNT to Hominy Creek	127.3	Per	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-161	TF	-	Minor	B, C	B2	-	-
S-M25	UNT to Bowen Run^	127.5	Int	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-159	Fill / Culvert	-	Minor	B, C	-	-	-
S-M25	UNT to Bowen Run^	127.5	Int	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-159	TF	-	Minor	B, C	-	-	-
S-M26	UNT to Brushy Meadow Creek^	127.5	Int	RPW	2.5	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-161	Fill / Culvert	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/} , ^{g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-M26	UNT to Brushy Meadow Creek [^]	127.5	Int	RPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-161	TF	-	Minor	B, C	-	-	-
S-U17	UNT to Hominy Creek	127.5	Int	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-161	Fill / Culvert	-	Minor	B, C	B2	-	-
S-U18	UNT to Hominy Creek [^]	127.5	Int	NRPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-161	Fill / Culvert	-	Minor	B, C	B2	-	-
S-U18	UNT to Hominy Creek [^]	127.5	Int	NRPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-161	TF	-	Minor	B, C	B2	-	-
S-U19	Hominy Creek	127.5	Per	RPW	65.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-161	Fill / Culvert	-	Intermediate	B, C	CW, B2, M	-	September 15 - March 31
S-X10	UNT to Hominy Creek	127.5	Eph	NRPW	3.0	-	0.0	-	0.0	Access Roads Work Space Permanent	MVP-NI-161	Fill / Culvert	-	Minor	-	-	-	-
S-X10	UNT to Hominy Creek	127.5	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-161	TF	-	Minor	-	-	-	-
S-X11 / X12	UNT to Hominy Creek	127.5	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-161	TF	-	Minor	-	-	-	-
S-X14	UNT to Hominy Creek [^]	127.5	Int	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-NI-161	Fill / Culvert	-	Minor	B, C	B2	-	-
S-X14	UNT to Hominy Creek [^]	127.5	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-161	TF	-	Minor	B, C	B2	-	-
S-X9	UNT to Hominy Creek [^]	127.5	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-161	TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name <u>at</u>	Milepost	Flow Regime <u>below</u>	Water Type <u>classified</u>	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing <u>Method</u> <u>and</u>	Pipeline Burial Depth (ft) <u>estimated</u>	FERC Classification	Classification <u>by</u> <u>type</u> , <u>and</u> <u>quality</u>	Fishery Type <u>below</u>	Fish Species <u>below</u>	Time of Year Restriction <u>below</u>
S-131	UNT to Hominy Creek**^	128.1	Eph	NRPW	2.0	2.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-N8a	UNT to Hominy Creek	128.3	Per	RPW	10.0	11.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	B2	-	-
S-N8	UNT to Hominy Creek	128.4	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-163	TF	-	Minor	B, C	B2	-	-
S-VV1	UNT to Hominy Creek	128.4	Int	RPW	4.0	4.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	B2	-	-
S-H88	Sugar Branch	130.4	Per	RPW	40.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-NI-166	TF	4	Intermediate	A,B,C	-	-	-
S-H88	Sugar Branch	130.4	Per	RPW	40.0	40.3	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	A,B,C	-	-	-
S-H90	UNT to Sugar Branch	130.4	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-166	TF	-	Minor	B, C	-	-	-
S-H91	UNT to Sugar Branch	130.4	Per	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-166	TF	-	Minor	B, C	-	-	-
S-H92	UNT to Sugar Branch	130.4	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-166	TF	-	Minor	B, C	-	-	-
S-H93	UNT to Sugar Branch	130.4	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-166	TF	-	Minor	B, C	-	-	-
S-H94	UNT to Sugar Branch	130.4	Per	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-NI-166	TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)													
Waterbodies Crossed by the Mountain Valley Project													
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/l	Water Type c/l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing d/l Method	Pipeline Burial Depth (ft) ³ e/l
										FERC Classification	Classification f/l, g/l	Fishery Type h/l	Fish Species i/l
													Time of Year Restriction j/l
S-EF41	UNT to Hominy Creek*^	133.0	Int	RPW	1.5	1.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-
Greenbrier S-QR7	UNT to Meadow Creek	137.4	Int	RPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-174.03	TF	-
										Access Roads Work Space Temporary	MVP-GB-174.03	TF	-
S-QR9	UNT to Meadow Creek^	137.4	Int	RPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-174.03	TF	-
S-QR6	UNT to Meadow Creek^	137.7	Eph	NRPW	3.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-174.03	TF	-
S-PP11	UNT to Meadow Creek	138.4	Eph	NRPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-178	Fill / Culvert	-
S-PP11	UNT to Meadow Creek	138.4	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-178.01	TF	-
S-J30	UNT to Meadow Creek	139.1	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-178	TF	-
S-J31	UNT to Meadow Creek^	139.1	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-178	TF	-
S-KL45	UNT to Meadow Creek	139.6	Int	RPW	1.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-179.01	TF	-
S-KL46	UNT to Meadow Creek	139.7	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-179.01	TF	-
S-KL47	UNT to Meadow Creek	139.7	Per	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-179.01	TF	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{g/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-I27	UNT to Meadow Creek* [^]	141.2	Int	RPW	5.0	5.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	B2	-	-
S-M9	UNT to Meadow River	143.2	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-182	TF	-	Minor	B, C	WW	-	-
S-M10	UNT to Meadow River	143.6	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-182	TF	-	Minor	B, C	WW	-	-
S-M8	UNT to Meadow River	143.6	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-182	TF	-	Minor	B, C	WW	-	-
S-M7	UNT to Meadow River	143.7	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-182	TF	-	Minor	-	-	-	-
S-I28	Meadow River+	144.0	Per	TNW	50.0	50.0	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	B, C	WW, M	-	April 1 - June 30
S-I29	UNT to Meadow River [^]	144.0	Int	RPW	15.0	-	<0.1	-	-	ATWS	MVP-ATWS-1426	TF	-	Intermediate	B, C	WW	-	-
S-L26	UNT to Meadow River	144.1	Per	RPW	3.0	3.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-
S-L23	UNT to Little Sewell Creek [^]	145.7	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-184	TF	-	Minor	B, C	-	-	-
S-EF38	UNT to Little Sewell Creek	146.1	Int	RPW	2.0	2.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L24	UNT to Little Sewell Creek [^]	146.1	Int	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) at	FERC Classification	Classification at, gL	Fishery Type below	Fish Species below	Time of Year Restriction below
S-L27	UNT to Little Sewell Creek	Per	RPW	2.0	2.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L22	Little Sewell Creek**+	Per	RPW	30.0	30.0	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	B, C	-	-	-
S-L30	UNT to Little Sewell Creek*	Int	RPW	3.0	7.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L31	UNT to Little Sewell Creek*	Per	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-185	Fill / Culvert	-	Minor	B, C	-	-	-
S-L31	UNT to Little Sewell Creek*	Per	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-185	TF	-	Minor	B, C	-	-	-
S-L20	UNT to Little Sewell Creek*	Per	RPW	5.0	5.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L10	UNT to Boggs Creek*	Per	RPW	3.0	6.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L11	UNT to Boggs Creek*	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L18	UNT to Little Sewell Creek	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-187.03	TF	-	Minor	B, C	-	-	-
S-L19	UNT to Little Sewell Creek	Int	RPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-187.01	Fill / Culvert	-	Minor	B, C	-	-	-
S-L19	UNT to Little Sewell Creek	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-187.03	TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-L13	UNT to Little Sewell Creek ^{^~}	148.7	Int	RPW	1.5	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-187.01	Fill / Culvert	-	Minor	B, C	-	-	-
S-L13	UNT to Little Sewell Creek [^]	148.7	Int	RPW	1.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-187.03	TF	-	Minor	B, C	-	-	-
S-QR1	UNT to Little Sewell Creek [^]	149.0	Eph	NRPW	2.0	-	<0.1	-	0.0	Access Roads Work Space Permanent	MVP-GB-187.01	Fill / Culvert	-	Minor	-	-	-	-
S-QR1	UNT to Little Sewell Creek [^]	149.0	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-187.03	TF	-	Minor	-	-	-	-
S-EF39	UNT to Boggs Creek [^]	149.5	Eph	NRPW	3.5	-	0.0	-	-	Anode Bed Permanent Workspace	MVP-CPGB-16	Fill / Culvert	-	Minor	-	-	-	-
S-I21	UNT to Boggs Creek	149.9	Per	RPW	5.0	5.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-I21	UNT to Boggs Creek	149.9	Per	RPW	5.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-I22	UNT to Boggs Creek	149.9	Int	RPW	2.0	2.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-I23a	UNT to Boggs Creek [~]	149.9	Int	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-189	Fill / Culvert	-	Minor	B, C	-	-	-
S-IJ53	UNT to Boggs Creek	149.9	Per	RPW	9.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-189	Fill / Culvert	-	Minor	B, C	-	-	-
S-IJ53	UNT to Boggs Creek	149.9	Per	RPW	9.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-189	TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/	Pipeline Burial Depth (ft) ³ e/	FERC Classification	Classification f/, g/	Fishery Type h/	Fish Species i/	Time of Year Restriction j/
S-IJ54	UNT to Boggs Creek^	149.9	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-189	Fill / Culvert	-	Minor	-	-	-	-
S-IJ54	UNT to Boggs Creek~	149.9	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-189	TF	-	Minor	-	-	-	-
S-W22	UNT to Meadow River^~	150.5	Eph	NRPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-190	TF	-	Minor	-	-	-	-
S-W23	UNT to Meadow River^	150.5	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-190	TF	-	Minor	B, C	WW	-	-
S-K17	Buffalo Creek*	154.9	Per	RPW	20.0	20.0	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-
S-K19	UNT to Buffalo Creek	155.0	Int	RPW	3.0	3.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K21	UNT to Buffalo Creek	155.2	Per	RPW	10.0	11.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-K22	UNT to Buffalo Creek	155.2	Per	RPW	7.0	7.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-UV6	UNT to Morris Fork*	155.5	Per	RPW	6.0	7.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-UV2	UNT to Morris Fork^	155.8	Per	RPW	14.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-193	Fill / Culvert	-	Intermediate	B, C	-	-	-
S-UV2	UNT to Morris Fork^	155.8	Per	RPW	14.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-193	TF	-	Intermediate	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/l	Water Type c/l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/l	Pipeline Burial Depth (ft) ³ e/l	FERC Classification	Classification f/l, g/l	Fishery Type h/l	Fish Species i/l	Time of Year Restriction j/l
S-UV2	UNT to Morris Fork^	155.8	Per	RPW	14.0	14.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	B, C	-	-	-
S-UV3	UNT to Morris Fork	155.8	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-193.01	TF	-	Minor	B, C	-	-	-
S-U22	UNT to Meadow River*	156.8	Int	RPW	12.0	13.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	B, C	WW	-	-
S-FF1	UNT to Meadow River^	157.0	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GB-196	TF	-	Minor	-	-	-	-
Fayette S-K30	UNT to Buffalo Creek^	154.2	Int	RPW	3.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
S-A104	UNT to Buffalo Creek^~	154.4	Eph	NRPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-190.01	Fill / Culvert	-	Minor	-	-	-	-
S-A104	UNT to Buffalo Creek^	154.4	Eph	NRPW	8.0	-	<0.1	-	-	Ancillary Site Temporary	STALLW ORTH CS LOD	TF	-	Minor	-	-	-	-
S-F45b	UNT to Buffalo Creek^	154.4	Eph	NRPW	4.0	-	<0.1	-	-	Ancillary Site Temporary	STALLW ORTH CS LOD	TF	-	Minor	-	-	-	-
S-K26	UNT to Buffalo Creek^	154.6	Int	RPW	3.0	3.4	<0.1	<0.1	-	Permanent Easement	-	OCDD	-	Minor	B, C	-	-	-
S-K27	UNT to Buffalo Creek**^	154.6	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-QR4	UNT to Buffalo Creek**^~	154.6	Int	RPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GB-190.01	Fill / Culvert	-	Minor	B, C	-	-	-
S-QR4	UNT to Buffalo Creek**^	154.6	Int	RPW	3.0	-	<0.1	-	-	Ancillary Site Temporary	STALLW ORTH CS LOD	TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) at	FERC Classification	Classification at, below	Fishery Type below	Fish Species below	Time of Year Restriction below
Summers																	
S-EE4	UNT to Red Spring Branch*	Int	RPW	2.5	3.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-M6	UNT to Red Spring Branch*	Int	NRPW	4.0	4.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-J13	UNT to Patterson Creek**^	Eph	NRPW	4.0	4.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-M5	Red Spring Branch*	Eph	NRPW	6.0	7.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-J12	UNT to Lick Creek	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-198	TF	-	Minor	-	-	-	-
S-M4	UNT to Red Spring Branch	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-198	TF	-	Minor	-	-	-	-
S-I13	UNT to Lick Creek*	Int	RPW	15.0	17.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	B, C	WW	-	-
S-I14	UNT to Lick Creek*	Int	RPW	7.0	9.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-
S-I12	Lick Creek**+~	Int	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-SU-199	Fill / Culvert	-	Minor	B, C	WW	-	-
S-I15	UNT to Lick Creek*	Int	RPW	10.0	10.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-
S-I16	UNT to Lick Creek*	Int	RPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
TTWV-S-51	Lick Creek	163.1	Per	RPW	25.0	-	0.3	-	-	Access Roads Work Space Temporary	MVP-SU-200	TF	-	Intermediate	B, C	WW	-	-
TTWV-S-52	UNT to Lick Creek	163.1	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-200	TF	-	Minor	B, C	-	-	-
S-QQ10	UNT to Hungard Creek [^]	165.1	Eph	NRPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-1176	TF	-	Minor	-	-	-	-
S-J10	UNT to Hungard Creek	165.5	Eph	NRPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-201	TF	-	Minor	-	-	-	-
S-J8	UNT to Hungard Creek	165.5	Eph	NRPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-201	TF	-	Minor	-	-	-	-
S-J9	UNT to Hungard Creek	165.5	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-201	TF	-	Minor	-	-	-	-
S-L6	UNT to Hungard Creek [^]	165.5	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-201	TF	-	Minor	B, C	-	-	-
S-L7	UNT to Hungard Creek	165.5	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-201	TF	-	Minor	B, C	-	-	-
S-L8	UNT to Hungard Creek	165.5	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-201	TF	-	Minor	B, C	-	-	-
S-J7	UNT to Hungard Creek	165.6	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-201	TF	-	Minor	B, C	-	-	-
TTWV-S-54	UNT to Stonelick Branch~	166.0	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-202	TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/l	Water Type c/l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/l	Pipeline Burial Depth (ft) ^{3 e/l}	FERC Classification	Classification f/l, g/l	Fishery Type h/l	Fish Species i/l	Time of Year Restriction j/l
TTWV-S-56	UNT to Stonelick Branch~	166.0	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-202	TF	-	Minor	-	-	-	-
TTWV-S-57	UNT to Stonelick Branch~	166.0	Eph	NRPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-202	TF	-	Minor	-	-	-	-
TTWV-S-202	Stonelick Branch~	166.1	Int	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-202	TF	-	Intermediate	B, C	WW	-	-
TTWV-S-59	UNT to Stonelick Branch~	166.4	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-202	TF	-	Minor	-	-	-	-
TTWV-S-60	UNT to Stonelick Branch^~	166.4	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-202	TF	-	Minor	-	-	-	-
S-N5	UNT to Hungard Creek*	168.9	Per	RPW	2.0	2.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	WW	-	-
S-K14	UNT to Righthand Fork Hungard Creek	169.5	Eph	NRPW	4.0	5.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-N3	UNT to Hungard Creek^	169.7	Eph	NRPW	5.0	6.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-CD23	UNT to Hungard Creek**^	169.8	Eph	NRPW	2.5	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-N2	Hungard Creek**+	169.8	Per	RPW	20.0	21.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	A,B,C	-	-	-
S-N4	UNT to Hungard Creek*	169.8	Eph	RPW	3.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/} , ^{g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-M3	Hungard Creek	169.9	Per	RPW	8.0	8.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-KL29	Right Fork Hungard Creek*	170.0	Per	RPW	44.0	44.0	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	-	-	-
S-ST34	UNT to Greenbrier River	171.1	Eph	NRPW	3.0	-	<0.1	-	-	ATWS	MVP-ATWS-557	TF	-	Minor	-	-	-	-
S-EF53	UNT to Greenbrier River [^]	171.3	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-205	TF	-	Minor	B, C	-	-	-
S-EF53	UNT to Greenbrier River [^]	171.3	Int	RPW	5.0	-	<0.1	-	-	ATWS	MVP-ATWS-558	TF	-	Minor	B, C	-	-	-
S-l8	Greenbrier River ⁺⁺	171.6	Per	TNW	270.0	403.6	0.7	0.5	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.6	Major	A, B, C	WW, M	-	April 1 - June 30
S-l9	UNT to Greenbrier River [^]	171.7	Int	RPW	7.0	17.3	<0.1	<0.1	-	Permanent Easement	-	OCDD	-	Minor	B, C	-	-	-
S-K10	UNT to Greenbrier River ^{^~}	171.7	Int	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-SU-207	Fill / Culvert	-	Minor	B, C	-	-	-
S-K10	UNT to Greenbrier River [^]	171.7	Int	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-SU-207	TF	-	Minor	B, C	-	-	-
S-L4	UNT to Greenbrier River*	172.0	Per	RPW	10.0	10.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-L2	UNT to Greenbrier River*	172.1	Int	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, g&l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-Q19	UNT to Blue Lick~	176.9	Per	RPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MO-213	Fill / Culvert	-	Minor	B, C	-	-	-
S-PP13	UNT to Wind Creek	177.1	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-212	TF	-	Minor	-	-	-	-
S-PP13	UNT to Wind Creek	177.1	Eph	NRPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-1082	TF	-	Minor	-	-	-	-
S-H61	UNT to Stony Creek*	177.4	Per	RPW	25.0	25.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3.3	Intermediate	B, C	-	-	-
S-H61a	UNT to Stony Creek*	177.4	Per	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-214	TF	3.3	Intermediate	B, C	-	-	-
S-H62	UNT to Stony Creek	178.0	Int	NRPW	1.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-215	TF	-	Minor	B, C	-	-	-
S-H63	UNT to Stony Creek	178.1	Int	NRPW	1.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-215	TF	-	Minor	B, C	-	-	-
S-OP1	Stony Creek	179.1	Per	RPW	3.0	3.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-IJ64	UNT to Little Stony Creek*	179.8	Per	NRPW	2.5	2.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-IJ65	UNT to Little Stony Creek*^	179.8	Eph	NRPW	1.5	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-A63	Slate Run	182.3	Per	RPW	10.0	10.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, g/l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-A61	UNT to Slate Run*~	182.4	Eph	NRPW	7.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	-	Fill / Culvert	-	Minor	-	-	-	-
S-A61	UNT to Slate Run *	182.4	Eph	NRPW	7.0	-	<0.1	-	-	Access Roads Work Space Temporary	-	TF	-	Minor	-	-	-	-
S-A61	UNT to Slate Run*	182.4	Eph	NRPW	7.0	7.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A60	Slate Run	182.5	Per	RPW	18.0	19.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	B, C	-	-	-
TTWV-S-203	UNT to Slate Run~	182.6	Int	RPW	7.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MO-218	Fill / Culvert	-	Minor	B, C	-	-	-
TTWV-S-203	UNT to Slate Run	182.6	Int	RPW	7.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-218	TF	-	Minor	B, C	-	-	-
S-D31	Indian Creek*	182.8	Per	RPW	65.0	-	<0.1	-	-	ATWS	MVP-ATWS-332	TF	3 or 4	Intermediate	B, C	WW, M	-	April 1 - June 30
S-D31	Indian Creek*	182.8	Per	RPW	65.0	100.1	0.2	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	B, C	WW, M	-	April 1 - June 30
S-D29	UNT to Hans Creek^	183.3	Int	RPW	4.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
TTWV-S-102	UNT to Hans Creek~	184.0	Int	RPW	7.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MO-220	Fill / Culvert	-	Minor	B, C	-	-	-
S-D25	UNT to Hans Creek	184.1	Int	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name a/	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/	Pipeline Burial Depth (ft) e/	FERC Classification	Classification f/, g/	Fishery Type h/	Fish Species i/	Time of Year Restriction j/
TTWV-S-101	UNT to Hans Creek~	184.1	Eph	NRPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MO-220	Fill / Culvert	-	Minor	-	-	-	-
S-F18	UNT to Hans Creek*	184.2	Per	RPW	18.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MO-220	Fill / Culvert	-	Minor	B, C	-	-	-
S-F18	UNT to Hans Creek*	184.2	Per	RPW	18.0	30.3	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	B, C	-	-	-
S-Z4	UNT to Hans Creek*	185.3	Eph	NRPW	2.5	2.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-Z5	UNT to Hans Creek*	185.3	Eph	NRPW	2.0	2.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-AB28	UNT to Hans Creek	185.7	Eph	NRPW	1.5	-	<0.1	-	-	ATWS	MVP-ATWS-1107	TF	-	Minor	-	-	-	-
S-MN2	UNT to Hans Creek	185.7	Per	RPW	7.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
TTWV-S-201	UNT to Hans Creek^	185.7	Int	RPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-1107	TF	-	Minor	B, C	-	-	-
TTWV-S-201	UNT to Hans Creek^	185.7	Int	RPW	4.0	2.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-MN2	UNT to Hans Creek	185.7	Per	RPW	6.0	3.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-H60	UNT to Hans Creek	187.2	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-225	TF	-	Minor	B, C	-	-	-
TTWV-S-108	Hans Creek**+	187.7	Per	RPW	16.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-226	TF	7	Intermediate	B, C	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/} , ^{g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
TTWV-S-108	Hans Creek*+	187.7	Per	RPW	16.0	17.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	7	Intermediate	B, C	-	-	-
TTWV-S-109	UNT to Hans Creek	187.7	Per	RPW	8.0	-	<0.1	-	-	Access Roads Work Space	MVP-MO-226	TF	-	Minor	B, C	-	-	-
TTWV-S-145	UNT to Hans Creek^	187.9	Eph	NRPW	3.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
TTWV-S-146	UNT to Blue Lick Creek^	188.4	Int	RPW	8.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
TTWV-S-147	UNT to Blue Lick Creek^	188.5	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space	MVP-MO-227	TF	-	Minor	-	-	-	-
TTWV-S-111	UNT to Blue Lick Creek*	188.8	Int	RPW	8.0	9.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-112	UNT to Blue Lick Creek*	188.8	Int	RPW	8.0	8.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-212	UNT to Hans Creek^	189.5	Eph	NRPW	3.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-G43	UNT to Hans Creek*	189.9	Eph	NRPW	5.0	5.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G44	UNT to Hans Creek*	189.9	Eph	NRPW	4.0	4.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G42	UNT to Hans Creek	190.0	Int	RPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-MN4	UNT to Hans Creek	190.1	Eph	NRPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space	MVP-MO-227.01	Fill / Culvert	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-MN4	UNT to Hans Creek^	190.1	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-227.01	TF	-	Minor	-	-	-	-
TTWV-S-120	UNT to Blue Lick Creek*	190.9	Int	RPW	8.0	8.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-121	Blue Lick Creek	190.9	Per	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-122	UNT to Hans Creek	191.0	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-228	TF	-	Minor	-	-	-	-
TTWV-S-123	UNT to Hans Creek	191.0	Per	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-228	TF	-	Minor	B, C	-	-	-
TTWV-S-126	UNT to Hans Creek	191.0	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-228	TF	-	Minor	-	-	-	-
TTWV-S-127	UNT to Hans Creek	191.0	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-228	TF	-	Minor	-	-	-	-
TTWV-S-124	UNT to Hans Creek	191.1	Per	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-228	TF	-	Minor	B, C	-	-	-
TTWV-S-125	UNT to Hans Creek	191.1	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-228	TF	-	Minor	B, C	-	-	-
S-E43	UNT to Dry Creek*	191.7	Eph	RPW	7.0	7.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-E45	UNT to Dry Creek*^	191.7	Eph	NRPW	3.0	4.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-E40	Dry Creek**	192.0	Per	RPW	12.0	12.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	A, B, C	-	-	-
S-E41	UNT to Dry Creek*	192.0	Int	RPW	2.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	B, C	-	-	-
S-C38	UNT to Painter Run^	194.5	Int	RPW	7.0	7.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-C39	Painter Run**	194.6	Per	RPW	5.0	5.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
S-C40	UNT to Painter Run*	194.6	Per	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MO-231.01	TF	-	Minor	B, C	-	-	-
S-C41	UNT to Painter Run*	194.6	Int	RPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-131	UNT to Painter Run*	194.6	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
TTWV-S-200	UNT to Painter Run	195.1	Int	RPW	5.0	-	<0.1	-	-	ATWS	MVP-ATWS-1060	TF	-	Minor	B, C	-	-	-
TTWV-S-200	UNT to Painter Run	195.1	Int	RPW	5.0	5.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	B, C	-	-	-
Virginia Giles																		
S-SS3	UNT to Kimballton Branch^	196.7	Eph	NRPW	3.5	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-PP14	Kimballton Branch~	196.7	Per	RPW	14.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GI-232	Fill / Culvert	-	Intermediate	AL	CW, WT	-	October 1 - June 30

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-PP14	Kimballton Branch	196.7	Per	RPW	14.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-232	TF	-	Intermediate	-	-	-	-
S-PP15	UNT to Kimballton Branch	197.2	Per	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GI-232	Fill / Culvert	-	Minor	-	-	-	-
S-PP15	UNT to Kimballton Branch	197.2	Per	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-232	TF	-	Minor	-	-	-	-
S-HH11	UNT to Clendennin Creek	197.8	Eph	NRPW	4.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GI-232	Fill / Culvert	-	Minor	-	-	-	-
S-HH11	UNT to Clendennin Creek	197.8	Eph	NRPW	4.0	-	0.0	-	-	Access Roads Work Space Temporary	MVP-GI-232	TF	-	Minor	-	-	-	-
S-HH12	UNT to Clendennin Creek	197.8	Eph	NRPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GI-232	Fill / Culvert	-	Minor	-	-	-	-
S-HH13	UNT to Clendennin Creek	197.8	Per	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GI-232	Fill / Culvert	-	Minor	-	-	-	-
S-HH13	UNT to Clendennin Creek	197.8	Per	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-232	TF	-	Minor	-	-	-	-
S-HH14	UNT to Clendennin Creek	197.8	Eph	NRPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GI-232	Fill / Culvert	-	Minor	-	-	-	-
S-HH14	UNT to Clendennin Creek	197.8	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-232	TF	-	Minor	-	-	-	-
S-HH15	UNT to Clendennin Creek	197.8	Per	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GI-232	Fill / Culvert	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/} , ^{g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-Q13	Kimballton Branch	198.9	Per	RPW	15.0	20.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	AL	CW, WT	-	October 1 - June 30
S-Q14	Kimballton Branch	198.9	Int	RPW	12.0	-	<0.1	-	<0.1	Access Roads Work Space	MVP-GI-234	Fill / Culvert	-	Intermediate	AL	CW, WT	-	October 1 - June 30
S-P6	UNT to Stony Creek	200.1	Eph	NRPW	6.0	6.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-S5	Stony Creek+	200.3	Per	RPW	40.0	41.7	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Alternate Mitigation	Intermediate	AL	CW, WT, ST, TE	Green floater, Candy darter, pistolgrip	August 15 - July 31
S-S5-Braid-1	Stony Creek+	200.3	Eph	NRPW	4.0	4.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-S5-Braid-2	Stony Creek+	200.3	Eph	NRPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G29	UNT to Dry Branch	201.9	Eph	NRPW	4.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G30	UNT to Dry Branch*	202.0	Eph	NRPW	8.0	8.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G32	Dry Branch	202.3	Int	RPW	6.0	8.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G32	Dry Branch	202.4	Int	RPW	7.0	-	<0.1	-	-	Access Roads Work Space	MVP-GI-241.04	TF	-	Minor	-	-	-	-
S-AB13	UNT to Dry Branch*^	202.6	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space	MVP-GI-241.04	TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, g&l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-Z13	Little Stony Creek	204.3	Per	RPW	25.0	26.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	AL	CW, WT, ST	-	October 1 - June 30
S-Z15	UNT to Little Stony Creek*^	204.3	Eph	NRPW	2.0	2.7	<0.1	<0.1	-	Permanent Easement	-	OCDD	-	Minor	-	-	-	-
S-Z14	UNT to Little Stony Creek*	204.4	Int	RPW	4.0	4.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
S-YZ1	UNT to Doe Creek^	204.7	Eph	NRPW	10.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-GI-241.03	TF	-	Minor	-	-	-	-
S-A33	UNT to Doe Creek*	205.3	Eph	NRPW	7.0	10.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A34	UNT to Doe Creek*	205.3	Eph	NRPW	7.0	8.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A32	UNT to Doe Creek*	205.8	Per	RPW	16.0	16.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	-	-	-	-
S-Y2	Doe Creek*	206.7	Per	RPW	25.0	26.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	-	-	-	-
S-Y3	UNT to Doe Creek	206.7	Eph	NRPW	10.0	10.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-E24	UNT to Sinking Creek*	207.8	Per	RPW	20.0	20.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	AL	CW, WT	-	October 1 - June 30
S-E25-Downstream	UNT to Sinking Creek*	207.8	Per	RPW	8.0	8.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT	-	October 1 - June 30

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-MN11-Downstream	UNT to Sinking Creek* ^a	207.8	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-242.01	TF	-	Minor	-	-	-	-
S-MN11-Upstream	UNT to Sinking Creek* ^a	207.8	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-242.01	TF	-	Minor	-	-	-	-
S-E25-Upstream	UNT to Sinking Creek	207.9	Per	RPW	10.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT	-	October 1 - June 30
S-RR4	UNT to Sinking Creek	208.3	Per	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-243.01	TF	-	Minor	AL	CW, WT	-	October 1 - June 30
S-RR5	UNT to Sinking Creek	208.3	Per	RPW	10.0	11.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT	-	October 1 - June 30
S-RR3	UNT to Sinking Creek ^a	208.4	Eph	NRPW	7.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-243.01	TF	-	Minor	-	-	-	-
S-IJ18	UNT to Sinking Creek ^a	208.5	Int	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-244	TF	-	Minor	AL	-	-	-
S-IJ19	UNT to Sinking Creek ^a	208.5	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-244	TF	-	Minor	-	-	-	-
S-IJ19	UNT to Sinking Creek ^a	208.5	Eph	NRPW	2.0	-	<0.1	-	-	ATWS	MVP-ATWS-1146	TF	-	Minor	-	-	-	-
S-IJ16-b	UNT to Sinking Creek	209.0	Eph	NRPW	5.0	5.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-IJ17	UNT to Sinking Creek	209.0	Eph	NRPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name at	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/	Pipeline Burial Depth (ft) e/	FERC Classification	Classification f/, g/	Fishery Type h/	Fish Species i/	Time of Year Restriction j/
S-IJ16-a	UNT to Sinking Creek	209.3	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-245.01	TF	-	Minor	-	-	-	-
S-QQ3	UNT to Sinking Creek	209.9	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-245.02A	TF	-	Minor	-	-	-	-
S-QQ3-b	UNT to Sinking Creek	209.9	Eph	NRPW	4.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-245.02A	TF	-	Minor	-	-	-	-
S-NN17	Sinking Creek*+	211.0	Per	RPW	55.0	56.7	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	AL	CW, WT	-	October 1 - June 30
TTVA-S-R22 / S-OO19	UNT to Grass Run	212.9	Per	RPW	8.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT	-	October 1 - June 30
TTVA-S-RR1 / S-EF24	UNT to Greenbriar Branch	212.9	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
S-MM17	UNT to Sinking Creek	213.6	Per	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-253.02	TF	-	Minor	AL	CW, WT	-	October 1 - June 30
S-MM18	UNT to Sinking Creek	213.6	Eph	NRPW	5.0	5.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-MM17	UNT to Sinking Creek	213.7	Per	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-253.02	TF	-	Minor	AL	CW, WT	-	October 1 - June 30
S-NN12	UNT to Sinking Creek	214.2	Eph	NRPW	2.0	2.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-NN13	UNT to Sinking Creek	214.6	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-256.02	TF	-	Minor	AL	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-NN11	UNT to Sinking Creek	214.7	Int	RPW	5.0	5.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
S-NN14	UNT to Sinking Creek	214.7	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-256.02	TF	-	Minor	AL	-	-	-
S-NN9	UNT to Sinking Creek	214.8	Per	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-GI-256	Fill / Culvert	-	Minor	AL	CW, WT	-	October 1 - June 30
S-NN9	UNT to Sinking Creek	214.8	Per	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-GI-256	TF	-	Minor	AL	CW, WT	-	October 1 - June 30
S-KL43	UNT to Sinking Creek	214.9	Per	RPW	8.0	8.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT	-	October 1 - June 30
S-OO14	UNT to Sinking Creek	216.5	Per	RPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT	-	October 1 - June 30
S-OO12	UNT to Sinking Creek	216.6	Eph	NRPW	2.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-OO13	UNT to Sinking Creek*	216.6	Per	RPW	20.0	20.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	AL	CW, WT	-	October 1 - June 30
Craig S-CD14	UNT to Sinking Creek	216.9	Eph	NRPW	1.5	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-PP1	UNT to Sinking Creek	217.3	Int	RPW	3.0	3.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
S-PP3	UNT to Sinking Creek	217.7	Per	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT	-	October 1 - June 30

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name	Milepost	Flow Regime	Water Type	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft)	FERC Classification	Classification	Fishery Type	Fish Species	Time of Year Restriction
S-QQ2	Sinking Creek	217.7	Per	RPW	35.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-CR-258.02	TF	-	Intermediate	AL	CW, WT	-	October 1 - June 30
S-PP4	UNT to Sinking Creek	217.9	Int	RPW	2.0	2.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
Montgomery	S-PP22	218.8	Int	RPW	2.5	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
	S-PP21	219.1	Eph	NRPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
	S-PP20	219.2	Int	RPW	6.0	7.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
	S-OO6	219.5	Per	RPW	35.0	35.2	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	AL	CW, TE	James spiny mussel , Atlantic pigtoe	March 1 - July 31
S-RR13	Craig Creek*	219.7	Per	RPW	35.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-258.05	TF	6.7	Intermediate	AL	CW, TE	James spiny mussel , Atlantic pigtoe	March 1 - July 31
S-RR14	UNT to Craig Creek*	219.7	Eph	NRPW	7.0	7.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-HH18	UNT to Craig Creek*	219.9	Per	RPW	6.0	6.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, TE	James spiny mussel , Atlantic pigtoe	March 1 - July 31
S-ST1	UNT to Mill Creek*	221.3	Per	RPW	5.0	5.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{g/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/} , ^{g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-ST3	UNT to Mill Creek*	221.3	Per	RPW	8.0	8.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
TTVA-S-200	UNT to Mill Creek	221.9	Per	RPW	8.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
TTVA-S-201	Mill Creek*	222.4	Per	RPW	14.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	AL	CW, TE, WT	Orangefin madtom	October 1 - June 30
TTVA-S-202	UNT to Mill Creek	222.4	Per	RPW	14.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	-	-	-	-
TTVA-S-203	UNT to Mill Creek	222.4	Int	RPW	14.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Intermediate	-	-	-	-
S-IJ52	UNT to Mill Creek*	222.8	Per	RPW	7.0	8.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-EF49	Dry Run	225.3	Per	RPW	4.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-266.02	TF	-	Minor	-	-	-	-
S-EF49	Dry Run	225.3	Per	RPW	4.5	-	<0.1	-	-	ATWS	MVP-ATWS-1458	TF	-	Minor	-	-	-	-
TTVA-S-204	UNT to Dry Run	225.5	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-266.03	TF	-	Minor	-	-	-	-
S-EF21	UNT to North Fork Roanoke River	226.6	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-266	TF	-	Minor	-	-	-	-
S-EF22	UNT to North Fork Roanoke River^	226.6	Eph	NRPW	4.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-MN-266	TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) at	FERC Classification	Classification at, below	Fishery Type below	Fish Species below	Time of Year Restriction below
S-G36	North Fork Roanoke River~	Per	RPW	20.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MN-268	Fill / Culvert	4	Intermediate	AL,FC, R, W	CW, TE, WT	Roanoke logperch, Orangefin madtom	October 1 - June 30
S-G36	North Fork Roanoke River	Per	RPW	20.0	25.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	AL,FC, R, W	CW, TE, WT	Roanoke logperch, Orangefin madtom	October 1 - June 30
S-NN8b	UNT to North Fork Roanoke River*	Eph	NRPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MN-268	Fill / Culvert	-	Minor	-	-	-	-
S-NN8b	UNT to North Fork Roanoke River*	Eph	NRPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-268	TF	-	Minor	-	-	-	-
S-NN8b	UNT to North Fork Roanoke River*	Eph	NRPW	5.0	-	<0.1	-	-	ATWS	MVP-ATWS-1160	TF	-	Minor	-	-	-	-
S-G38	UNT to North Fork Roanoke River	Eph	NRPW	3.0	3.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G39	UNT to North Fork Roanoke River*	Int	RPW	6.0	6.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G40	UNT to North Fork Roanoke River	Per	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-PP23	UNT to North Fork Roanoke River	Eph	NRPW	2.5	3.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-MM15	UNT to Flatwoods Branch	Int	RPW	6.0	6.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-MM14	UNT to Flatwoods Branch	Eph	NRPW	7.0	9.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)													
Waterbodies Crossed by the Mountain Valley Project													
Waterbody ID	Waterbody Name & Location	Milepost	Flow Regime & Direction	Water Type & Depth	Top of Bank (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method & Depth (ft) ³ @	FERC Classification
S-KL6	UNT to Flatwoods Branch	229.1	Per	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-270	TF	Minor
S-MM13	UNT to Flatwoods Branch**^	229.1	Eph	NRPW	5.0	5.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Minor
S-MM11	UNT to Flatwoods Branch*	229.2	Eph	NRPW	8.0	8.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Minor
S-F15	UNT to Flatwoods Branch*	229.3	Int	RPW	6.0	13.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Minor
S-F16a / F16b	UNT to Flatwoods Branch	229.4	Eph	NRPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Minor
S-C33	UNT to Flatwoods Branch*	229.6	Per	RPW	6.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Minor
S-C36	UNT to Flatwoods Branch**^	229.6	Int	RPW	3.0	3.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Minor
S-MM31	UNT to Flatwoods Branch**^	229.6	Eph	NRPW	2.0	4.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Minor
S-KL5	Flatwoods Branch	229.7	Int	RPW	4.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-272	TF	Minor
S-C29	Flatwoods Branch	229.8	Eph	NRPW	1.2	1.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Minor
S-C25	UNT to Bradshaw Creek*	230.3	Int	RPW	3.0	4.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Minor

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft)³ or less	FERC Classification	Classification of Fishery, Wetland, or Aquatic Life	Fish Species Impacted	Time of Year Restriction	
S-C24	UNT to Bradshaw Creek*	Int	RPW	3.0	5.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	
S-C21	Bradshaw Creek**+	Per	RPW	25.0	30.1	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	AL	Roanoke logperch, Orangefin madtom	October 1 - June 30	
S-OO11	UNT to Bradshaw Creek	Eph	NRPW	2.0	2.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	
S-OO10	Bradshaw Creek	Per	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-276.01	TF	-	Intermediate	AL	Roanoke logperch, Orangefin madtom	October 1 - June 30	
S-OO9	UNT to Bradshaw Creek	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-276.01	TF	-	Minor	-	-	-	
S-GH16	North Fork Roanoke River	Per	RPW	70.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-MN-276.03	TF	-	Intermediate	AL, FC, R, W	Roanoke logperch, Orangefin madtom	October 1 - June 30	
S-GH20	UNT to Bradshaw Creek	Eph	NRPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-276.01	TF	-	Minor	-	-	-	
TTVA-S-205	UNT to Roanoke River	Int	RPW	11.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MN-277.02	Fill / Culvert	-	Intermediate	-	-	-	
TTVA-S-205	UNT to Roanoke River	Int	RPW	11.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-277.02	TF	-	Intermediate	-	-	-	
S-OO16	UNT to Roanoke River	Per	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	
S-NN19	UNT to Roanoke River	Int	RPW	3.5	3.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-NN16	Roanoke River*+	235.6	Per	TNW	70.0	79.6	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	AL	VW, TE	Roanoke logperch, Orangefin madtom	March 15 - July 15
S-AB16	UNT to Roanoke River	235.7	Int	RPW	5.0	5.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
S-I1	UNT to Roanoke River	235.8	Int	RPW	14.0	14.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	AL	-	-	-
TTVA-S-CD12	UNT to South Fork Roanoke River	236.0	Per	RPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MN-279.01	Fill / Culvert	-	Minor	-	-	-	-
S-CD12	UNT to South Fork Roanoke River*~	236.1	Per	RPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-EF19	UNT to Indian Run*^	237.1	Eph	NRPW	1.0	1.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-EF20a	UNT to Roanoke River	237.6	Per	RPW	5.0	6.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-EF54	UNT to Roanoke River	237.6	Eph	NRPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-278.01	TF	-	Minor	-	-	-	-
Franklin S-EF31	UNT to Flatwoods Branch^	229.4	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-270.01	TF	-	Minor	-	-	-	-
S-G24	UNT to Green Creek*	246.6	Per	RPW	8.0	8.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G25	UNT to Green Creek*	246.6	Int	RPW	7.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{g/}	Milepost	Flow Regime ^{h/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{3 e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-H1	Green Creek*	246.9	Per	RPW	10.0	11.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT, TE	Orangefin madtom	October 1 - June 30
S-RR16	Green Creek*	246.9	Per	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-FR-289	Fill / Culvert	-	Minor	AL	CW, WT, TE	Orangefin madtom	October 1 - June 30
S-RR17 / RR18	UNT to Green Creek ^{^~}	247.2	Int	RPW	2.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-FR-289	Fill / Culvert	-	Minor	AL	-	-	-
S-G26	UNT to Green Creek*	247.3	Int	RPW	7.0	7.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G27	UNT to Green Creek*	247.3	Per	RPW	7.0	7.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-EF17	UNT to Green Creek [^]	248.3	Int	RPW	1.5	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-FR-291	Fill / Culvert	-	Minor	-	-	-	-
S-EF18	UNT to Green Creek	248.3	Int	RPW	2.0	-	<0.1	-	-	ATWS	MVP-ATWS-1249	TF	-	Minor	-	-	-	-
S-D17	UNT to North Fork Blackwater River [~]	248.7	Int	RPW	7.0	12.0	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-D12	UNT to North Fork Blackwater River	248.9	Int	RPW	6.0	6.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-D13	UNT to North Fork Blackwater River	248.9	Int	RPW	4.0	6.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
TTVA-S-D11	UNT to North Fork Blackwater River	249.0	Per	RPW	10.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/l	Water Type c/l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing d/l Method	Pipeline Burial Depth (ft) ^{3 e/l}	FERC Classification	Classification f/l, g/l	Fishery Type h/l	Fish Species i/l	Time of Year Restriction j/l
TTVA-S-311	UNT to North Fork Blackwater River	249.7	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-292.01	TF	-	Minor	-	-	-	-
S-D10	UNT to North Fork Blackwater River	249.8	Int	RPW	8.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-FR-292.01	Fill / Culvert	-	Minor	-	-	-	-
S-D10	UNT to North Fork Blackwater River*	249.8	Int	RPW	8.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-292.01	TF	-	Minor	-	-	-	-
S-D8	North Fork Blackwater River**+	249.8	Per	RPW	18.0	18.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	AL, FC, R, W	CW, TE, WT	Roanoke logperch	October 1 - June 30
S-Il4	UNT to North Fork Blackwater River*	251.0	Per	RPW	15.0	15.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Alternate Mitigati on	Intermediate	-	-	-	-
S-MM27	UNT to North Fork Blackwater River~	251.1	Per	RPW	7.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-FR-293.01	Fill / Culvert	Alternate Mitigati on	Minor	-	-	-	-
TTVA-S-GH7	UNT to North Fork Blackwater River	251.9	Per	RPW	9.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-GH7	UNT to North Fork Blackwater River	252.0	Per	RPW	9.0	26.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-GH15	UNT to North Fork Blackwater River**^	252.2	Int	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-GH14	UNT to North Fork Blackwater River*	252.3	Per	RPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-GH11	UNT to North Fork Blackwater River*	252.4	Int	RPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, g&l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-GH9	UNT to North Fork Blackwater River*	252.5	Per	RPW	4.0	4.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-RR08	UNT to North Fork Blackwater River	252.7	Eph	NRPW	7.0	7.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-RR09	UNT to North Fork Blackwater River*	252.8	Eph	NRPW	9.0	9.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-RR11	UNT to North Fork Blackwater River*	252.9	Eph	NRPW	7.0	7.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-IJ1	UNT to North Fork Blackwater River*	253.9	Per	RPW	12.0	12.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	-	-	-	-
S-IJ2	UNT to North Fork Blackwater River*	253.9	Int	RPW	2.5	2.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-IJ3	UNT to North Fork Blackwater River**^	253.9	Int	RPW	5.0	5.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-IJ4	UNT to North Fork Blackwater River**^	254.1	Per	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-IJ8	UNT to Little Creek^	254.5	Eph	NRPW	1.5	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-IJ10	Little Creek	255.5	Per	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-KL1	UNT to Little Creek	256.0	Per	RPW	4.5	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name a/	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/	Pipeline Burial Depth (ft) e/	FERC Classification	Classification f/, g/	Fishery Type h/	Fish Species i/	Time of Year Restriction j/
S-KL2	UNT to Little Creek	256.0	Per	RPW	3.7	3.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-KL3	UNT to Little Creek	256.1	Int	RPW	2.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-294	TF	-	Minor	-	-	-	-
S-II8	UNT to Little Creek	256.2	Int	RPW	2.0	2.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL, FC, R, W	-	-	-
S-II7	UNT to Little Creek*	256.3	Int	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL, FC, R, W	-	-	-
S-II9	UNT to Little Creek	256.4	Per	RPW	20.0	21.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	AL, FC, R, W	-	-	-
S-II11	UNT to Little Creek	256.5	Per	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL, FC, R, W	-	-	-
S-II12	UNT to Little Creek	256.5	Int	RPW	2.0	2.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL, FC, R, W	-	-	-
S-GH6	UNT to Little Creek	256.8	Per	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL, FC, R, W	-	-	-
S-II6	UNT to Little Creek*	257.1	Int	RPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL, FC, R, W	-	-	-
S-E28	Teels Creek**+	258.3	Per	RPW	12.0	15.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Alternat ive Mitigati on	Intermediate	AL, FC, R, W	TE	Roanoke Logperch	March 15 - June 30
S-GH5	UNT to Teels Creek*	258.3	Int	RPW	4.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-EF7	UNT to Teels Creek	260.3	Eph	NRPW	2.0	2.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-MM42	UNT to Teels Creek	260.7	Eph	NRPW	2.0	2.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-RR15	UNT to Teels Creek*	260.9	Per	RPW	14.0	17.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	7	Intermediate	-	-	-	-
S-D22	UNT to Teels Creek*	261.1	Int	RPW	8.0	9.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-D23	UNT to Teels Creek*	261.1	Per	RPW	20.0	24.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	AL, FC, R, W	TE	Roanoke Logperch	March 15 - June 30
S-D20	UNT to Teels Creek*	261.3	Int	RPW	8.0	8.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-D18	UNT to Teels Creek	261.4	Eph	NRPW	2.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-EF13	UNT to Teels Creek^	261.7	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-302	TF	-	Minor	-	-	-	-
S-C14	Teels Creek**+	262.0	Per	RPW	50.0	59.5	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	AL, FC, R, W	TE	Roanoke Logperch	March 15 - June 30
S-C16	UNT to Teels Creek*	262.1	Per	RPW	15.0	15.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	-	-	-	-
S-C17	Teels Creek**+	262.4	Per	RPW	30.0	41.0	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	AL, FC, R, W	TE	Roanoke Logperch	March 15 - June 30

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-CD6	Little Creek**+	262.7	Per	RPW	56.0	57.1	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	AL, FC, R, W	TE	Roanoke Logperch	March 15 - June 30
S-II2	Little Creek**+	263.4	Per	RPW	60.0	60.4	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	AL, FC, R, W	TE	Roanoke Logperch	March 15 - June 30
S-CD1	UNT to Blackwater River	264.1	Per	RPW	3.5	3.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-KL35	UNT to Blackwater River	264.9	Per	RPW	2.5	4.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-KL36	UNT to Blackwater River	265.0	Per	RPW	7.5	8.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-KL38	UNT to Blackwater River*	265.2	Per	RPW	7.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-306.03	TF	-	Minor	-	-	-	-
S-KL38	UNT to Blackwater River*	265.2	Per	RPW	7.0	7.2	<0.1	<0.1	-	Permanent Easement	-	OCDD	-	Minor	-	-	-	-
S-KL39	UNT to Blackwater River	265.7	Per	RPW	6.5	6.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-YZ5	UNT to Blackwater River	265.9	Eph	NRPW	4.0	4.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-LK36	UNT to Blackwater River*	266.0	Per	RPW	8.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-306.02	TF	-	Minor	-	-	-	-
S-YZ4	UNT to Blackwater River*	266.0	Eph	NRPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, g&l	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-EF48	UNT to Blackwater River**^	266.3	Int	RPW	2.0	2.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-KL41	UNT to Blackwater River*	267.0	Per	RPW	12.0	12.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	-	-	-	-
S-C8	UNT to Blackwater River	267.7	Int	RPW	5.0	5.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-F4	UNT to Blackwater River^	267.7	Eph	NRPW	10.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
TTVA-S-310	UNT to Blackwater River	268.0	Per	RPW	8.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
TTVA-S-307	UNT to Maggotdee Creek	268.6	Per	RPW	20.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	-	-	-	-
TTVA-S-308	UNT to Maggotdee Creek	268.6	Int	RPW	4.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
TTVA-S-309	UNT to Maggotdee Creek	268.6	Int	RPW	8.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-S11	UNT to Maggotdee Creek	268.9	Per	RPW	11.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-310	TF	-	Intermediate	-	-	-	-
S-F8	UNT to Maggotdee Creek*	269.0	Per	RPW	30.0	32.3	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6	Intermediate	-	-	-	-
S-HH4	UNT to Maggotdee Creek**^	269.1	Int	RPW	9.0	9.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-C20	UNT to Maggodee Creek	269.2	Eph	NRPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-311	TF	-	Minor	-	-	-	-
S-C20	UNT to Maggodee Creek [^]	269.2	Eph	NRPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-C19	Maggodee Creek ⁺⁺	269.5	Per	RPW	45.0	45.0	0.1	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	AL	TE	Roanoke Logperch	March 15 - June 30
S-F11	Blackwater River [*]	269.8	Per	TNW	90.0	91.0	0.2	0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6.7	Intermediate	AL, FC, R, W, PWS	TE	Roanoke Logperch	March 15 - June 30
S-MM23	Maple Branch	270.2	Per	RPW	20.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-313	TF	-	Intermediate	-	-	-	-
S-MM29	UNT to Maple Branch	270.2	Per	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-FR-313	TF	-	Intermediate	-	-	-	-
S-F9b	UNT to Blackwater River [*]	270.3	Per	NRPW	15.0	15.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	Alternative Mitigation	Intermediate	-	-	-	-
S-F10	UNT to Blackwater River [^]	270.5	Eph	NRPW	9.0	11.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-F9a	UNT to Blackwater River [^]	270.6	Int	RPW	15.0	12.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	-	-	-	-
S-GG4	UNT to Blackwater River	271.0	Eph	NRPW	5.0	5.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A36	UNT to Foul Ground Creek [^]	271.4	Eph	NRPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)														
Waterbodies Crossed by the Mountain Valley Project														
Waterbody ID	Waterbody Name at Milepost	Flow Regime b/l	Water Type c/l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/l	Pipeline Burial Depth (ft) e/l	FERC Classification	Classification f/l, g/l
S-A38	UNT to Foul Ground Creek^	Int	RPW	9.0	56.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-
S-A40	UNT to Foul Ground Creek^	Int	RPW	5.8	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-
S-A41	Foul Ground Creek*+	Per	RPW	12.0	12.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	-
S-GH36	UNT to Foul Ground Creek^	Int	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-
S-GH37	UNT to Foul Ground Creek^	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-
S-GH38	UNT to Foul Ground Creek^	Int	RPW	3.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-
S-GH39	UNT to Foul Ground Creek	Int	RPW	4.0	11.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-
S-KL17	UNT to Foul Ground Creek	Int	RPW	5.0	7.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-
S-GH40	UNT to Foul Ground Creek^	Eph	NRPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-
S-GH44	UNT to Foul Ground Creek	Per	RPW	6.0	8.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-
S-IJ47	UNT to Foul Ground Creek	Eph	NRPW	2.0	-	<0.1	0.0	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-G22	UNT to Poplar Camp Creek*	274.2	Per	RPW	12.0	12.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	7	Intermediate	-	-	-	-
S-G21	UNT to Poplar Camp Creek^	274.3	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G23	UNT to Poplar Camp Creek^	274.3	Int	RPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G20	Poplar Camp Creek	274.4	Per	RPW	10.0	10.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL, FC, R, W, PWS	-	-	-
S-G18	UNT to Blackwater River	275.1	Int	RPW	2.0	2.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G17	UNT to Blackwater River	275.4	Eph	NRPW	5.0	5.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-E18	UNT to Blackwater River	275.8	Per	RPW	7.0	7.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-E17	UNT to Blackwater River	276.1	Per	RPW	8.0	9.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-E14	UNT to Blackwater River*	276.6	Per	RPW	20.0	21.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	-	-	-	-
S-H38	UNT to Jacks Creek*	277.5	Per	RPW	12.0	13.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	7	Intermediate	-	-	-	-
S-H37	UNT to Jacks Creek	277.8	Eph	NRPW	6.0	6.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-H36	UNT to Jacks Creek*	277.9	Per	RPW	3.0	31.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H34	UNT to Jacks Creek*	278.1	Per	RPW	3.0	3.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H32	UNT to Jacks Creek*	278.3	Per	RPW	10.0	10.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	TE	Orangefin madtom	March 15 - May 31
S-H30	UNT to Jacks Creek^	278.6	Int	RPW	1.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	AL	-	-	-
S-A18	UNT to Jacks Creek^	278.7	Int	RPW	2.6	3.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A19 / H26	UNT to Jacks Creek*	278.8	Int	RPW	7.0	24.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A20	UNT to Jacks Creek*	278.8	Per	RPW	7.0	11.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	TE	Orangefin madtom	March 15 - May 31
S-H27	UNT to Jacks Creek	279.2	Eph	NRPW	10.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H28	UNT to Jacks Creek	279.2	Eph	NRPW	6.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-A22	UNT to Jacks Creek*	279.3	Int	RPW	8.0	9.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-MM44	UNT to Little Jacks Creek	279.5	Per	RPW	4.0	4.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-MM45	UNT to Little Jacks Creek^	279.6	Eph	NRPW	4.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-MM46	UNT to Little Jacks Creek^	279.6	Int	RPW	3.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-MM48	UNT to Little Jacks Creek*	279.9	Per	RPW	7.0	9.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H24	UNT to Little Jacks Creek*	280.0	Per	RPW	10.0	46.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H25	Little Jacks Creek*	280.0	Per	RPW	7.0	9.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H23	UNT to Turkey Creek	280.3	Eph	NRPW	5.0	5.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-HH1	UNT to Turkey Creek^	280.5	Eph	NRPW	5.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A13	Turkey Creek*	280.6	Per	RPW	8.0	12.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	TE	Orangefin madtom	March 15 - May 31
S-A11	UNT to Turkey Creek^	280.8	Eph	NRPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A7	UNT to Dinner Creek	281.2	Per	RPW	6.0	6.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H17	Dinner Creek	281.2	Int	RPW	8.0	8.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-SS8	Polecat Creek*	281.5	Per	RPW	8.0	12.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) or less	FERC Classification	Classification	Fishery Type below	Fish Species below	Time of Year Restriction below
S-CD8	UNT to Owens Creek*	Int	RPW	4.5	4.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-AB8	UNT to Owens Creek*	Int	RPW	4.0	5.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-DD3	Owens Creek*	Int	RPW	15.0	18.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	AL	TE	Orangefin madtom	March 15 - May 31
S-G16	Strawfield Creek*	Per	RPW	30.0	30.0	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	AL	TE	Orangefin madtom	March 15 - May 31
S-G15	UNT to Parrot Branch*	Int	RPW	9.0	9.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G13	Parrot Branch*	Per	RPW	8.0	8.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	TE	Orangefin madtom	March 15 - May 31
S-D7	UNT to Jonnikin Creek^	Int	RPW	8.0	8.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
Roanoke S-MN13	UNT to Roanoke River	Int	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MN-277.02	Fill / Culvert	-	Minor	-	-	-	-
S-MN13	UNT to Roanoke River	Int	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-277.02	TF	-	Minor	-	-	-	-
TTVA-S-MN13	UNT to Roanoke River	Int	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-277.02	TF	-	Minor	-	-	-	-
TTVA-S-206	UNT to Roanoke River~	Eph	NRPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MN-277.02	Fill / Culvert	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/, g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
TTVA-S-206	UNT to Roanoke River	234.0	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-277.02	TF	-	Minor	-	-	-	-
TTVA-S-207	UNT to Roanoke River~	234.0	Int	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-MN-277.02	Fill / Culvert	-	Minor	-	-	-	-
TTVA-S-207	UNT to Roanoke River	234.0	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-277.02	TF	-	Minor	-	-	-	-
S-KL32	UNT to Roanoke River	237.0	Per	RPW	2.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-278.01	TF	-	Minor	-	-	-	-
S-EF20c	UNT to Roanoke River	237.6	Per	RPW	10.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-MN-278.01	TF	-	Minor	-	-	-	-
S-EF20d	UNT to Roanoke River	237.7	Per	RPW	7.0	-	0.1	-	-	Access Roads Work Space Temporary	MVP-MN-278.01	TF	-	Minor	-	-	-	-
S-MM22	UNT to Roanoke River**^	238.1	Per	RPW	15.0	64.4	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	-	-	-	-
S-IJ50	UNT to Roanoke River*	239.7	Per	RPW	10.0	10.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-Y13	UNT to Bottom Creek**^	240.8	Int	RPW	8.0	9.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
S-Y14	UNT to Bottom Creek*	240.8	Per	RPW	14.0	14.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	5	Intermediate	AL	CW, WT, TE	Orangefin madtom	October 1 - June 30
S-EF32	Bottom Creek*	241.5	Per	RPW	14.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-281	TF	-	Intermediate	AL	CW, WT, TE	Orangefin madtom	October 1 - June 30

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) ³ at	FERC Classification	Classification at, gL	Fishery Type below	Fish Species below	Time of Year Restriction below
S-EF34	UNT to Bottom Creek*	Per	RPW	10.0	-	<0.1	-	-	ATWS	MVP-ATWS-1229	TF	-	Minor	AL	CW, WT, TE	Orangefin madtom	October 1 - June 30
S-EF34	UNT to Bottom Creek*	Per	RPW	10.0	18.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT, TE	Orangefin madtom	October 1 - June 30
S-EF35	UNT to Bottom Creek**^	Int	RPW	4.0	8.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-EF32	Bottom Creek	Per	RPW	15.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-282	TF	-	Intermediate	AL	CW, WT, TE	Orangefin madtom	October 1 - June 30
S-EF33	UNT to Bottom Creek	Int	RPW	5.0	5.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
TTVA-S-026	UNT to Bottom Creek	Int	RPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-1303	TF	-	Minor	-	-	-	-
TTVA-S-028	UNT to Bottom Creek~	Per	RPW	6.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-RO-283	Fill / Culvert	-	Minor	-	-	-	-
TTVA-S-029	UNT to Bottom Creek^	Int	RPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-1303	TF	-	Minor	-	-	-	-
TTVA-S-302	UNT to Bottom Creek	Int	RPW	4.0	-	<0.1	-	-	ATWS	MVP-ATWS-1303	TF	-	Minor	-	-	-	-
TTVA-S-303	UNT to Bottom Creek^~	Eph	NRPW	3.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-RO-283	Fill / Culvert	-	Minor	-	-	-	-
TTVA-S-303	UNT to Bottom Creek^	Eph	NRPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-283	TF	-	Minor	-	-	-	-
TTVA-S-030	Bottom Creek	Per	RPW	10.0	10.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	CW, WT, TE	Orangefin madtom	October 1 - June 30

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/	Pipeline Burial Depth (ft) e/	FERC Classification	Classification f/, g/	Fishery Type h/	Fish Species i/	Time of Year Restriction j/
S-KL25	UNT to Mill Creek	243.1	Int	RPW	3.0	3.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
TTVA-S-032	UNT to Mill Creek	243.7	Per	RPW	5.0	5.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-EF51	UNT to Bottom Creek	244.2	Int	RPW	1.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-285	TF	-	Minor	-	-	-	-
S-EF52	UNT to Bottom Creek	244.2	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-285	TF	-	Minor	-	-	-	-
S-IJ12	UNT to Mill Creek	244.2	Per	RPW	3.5	3.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
TTVA-S-306	UNT to Mill Creek	244.2	Int	RPW	5.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-285	TF	-	Minor	-	-	-	-
TTVA-S-EF51	UNT to Bottom Creek	244.2	Int	RPW	1.5	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-285	TF	-	Minor	-	-	-	-
TTVA-S-EF52	UNT to Bottom Creek	244.2	Int	RPW	4.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-285	TF	-	Minor	-	-	-	-
S-EF44	UNT to Bottom Creek^	244.7	Int	RPW	5.0	5.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-IJ43	Mill Creek	245.1	Per	RPW	15.0	15.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	AL	CW, WT, TE	Orangefin madtom	October 1 - June 30
S-Y7	UNT to Mill Creek	245.4	Int	RPW	4.0	5.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^a	Milepost	Flow Regime ^b	Water Type ^c	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^d	Pipeline Burial Depth (ft) ^e	FERC Classification	Classification ^f , g/	Fishery Type ^h	Fish Species ⁱ	Time of Year Restriction ^j
S-Y8	UNT to Mill Creek	245.4	Per	RPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-Y9	UNT to Mill Creek	245.4	Int	RPW	4.0	-	<0.1	<0.1	-	Permanent Easement	-	OCDD	-	Minor	-	-	-	-
S-Z16	UNT to Mill Creek	245.4	Per	RPW	3.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-287	TF	-	Minor	-	-	-	-
S-Z17	UNT to Mill Creek	245.4	Per	RPW	6.0	-	<0.1	-	-	Access Roads Work Space Temporary	MVP-RO-287	TF	-	Minor	-	-	-	-
S-KL4	UNT to Mill Creek	245.8	Int	RPW	3.5	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-RO-288	Fill / Culvert	-	Minor	-	-	-	-
S-Q20	UNT to Mill Creek	245.8	Per	RPW	5.0	-	<0.1	-	<0.1	Access Roads Work Space Permanent	MVP-RO-288	Fill / Culvert	-	Minor	-	-	-	-
S-B22	UNT to Mill Creek	245.9	Per	RPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-B23	UNT to Mill Creek	245.9	Int	RPW	2.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-B25	UNT to Mill Creek [^]	245.9	Eph	NRPW	5.0	7.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-B21	UNT to Mill Creek	246.0	Per	RPW	4.0	4.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
Pittsylvania ^a																		
S-D3	UNT to Jonnikin Creek	284.5	Per	TNW	10.0	10.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	TE	Orangefin madtom	March 15 - May 31

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name ^{a/}	Milepost	Flow Regime ^{b/}	Water Type ^{c/}	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method ^{d/}	Pipeline Burial Depth (ft) ^{e/}	FERC Classification	Classification ^{f/} , ^{g/}	Fishery Type ^{h/}	Fish Species ^{i/}	Time of Year Restriction ^{j/}
S-D4	UNT to Jonnikin Creek [^]	284.5	Int	RPW	6.0	9.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL	-	-	-
S-D2	Jonnikin Creek	284.8	Per	RPW	18.0	18.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	-	-	-	-
S-D1-EPH	UNT to Jonnikin Creek [^]	285.0	Eph	RPW	10.0	10.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-D1-INT	UNT to Jonnikin Creek	285.0	Int	RPW	10.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G11	UNT to Jonnikin Creek	285.4	Int	RPW	6.0	6.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G9	UNT to Jonnikin Creek	285.7	Int	RPW	4.0	4.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G8	UNT to Jonnikin Creek	285.9	Int	RPW	4.0	4.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-Q15	UNT to Jonnikin Creek [^]	285.9	Eph	NRPW	5.0	8.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A5	UNT to Rocky Creek [^]	286.2	Eph	NRPW	8.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-A6	UNT to Rocky Creek	286.4	Per	RPW	5.0	5.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H11	UNT to Rocky Creek [^]	286.6	Eph	NRPW	3.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) at	FERC Classification	Classification at, below, within	Fishery Type below	Fish Species below	Time of Year Restriction below
S-C3	Harpen Creek**+	Per	RPW	18.0	18.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6	Intermediate	AL, FC, R, W	TE	Roanoke logperch, Orangefin madtom	March 1 - June 30
S-H13	Harpen Creek**+	Per	RPW	20.0	20.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	6	Intermediate	AL, FC, R, W	TE	Orangefin madtom	March 15 - May 31
S-G6	UNT to Harpen Creek	Int	RPW	6.0	6.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G5	UNT to Harpen Creek	Eph	NRPW	6.0	6.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G4	Harpen Creek**+	Per	RPW	30.0	33.0	0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	AL, FC, R, W	TE	Orangefin madtom	March 15 - May 31
S-G3	UNT to Harpen Creek	Per	RPW	9.0	9.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-CC16	UNT to Harpen Creek*	Per	RPW	11.0	11.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	-	-	-	-
S-CC13	UNT to Cherrystone Creek	Int	ISOLATED	7.0	7.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-CC14	UNT to Cherrystone Creek	Int	RPW	8.0	8.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-MM8	UNT to Cherrystone Creek	Per	RPW	6.0	6.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-CC15	UNT to Cherrystone Creek	Per	RPW	6.0	6.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																	
Waterbodies Crossed by the Mountain Valley Project																	
Waterbody ID	Waterbody Name at Milepost	Flow Regime below	Water Type Classification	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method	Pipeline Burial Depth (ft) at	FERC Classification	Classification at, below	Fishery Type below	Fish Species below	Time of Year Restriction below
S-CC5	UNT to Cherrystone Creek*	Per	RPW	12.0	21.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	4	Intermediate	-	-	-	-
S-CC8	UNT to Cherrystone Creek**^	Int	RPW	6.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-CC9	UNT to Cherrystone Creek^	Eph	NRPW	5.5	5.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-CC10	UNT to Cherrystone Creek	Int	RPW	9.0	9.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-CC11	UNT to Cherrystone Creek	Per	RPW	8.0	8.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-MM10	UNT to Cherrystone Creek^	Int	RPW	7.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-CC1	Cherrystone Creek	Per	RPW	15.0	16.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	-	-	-	-
S-CC3	UNT to Cherrystone Creek^	Per	RPW	8.0	8.5	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-P5	UNT to Cherrystone Creek^	Eph	NRPW	5.0	6.8	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-IJ35-INT	UNT to Pole Bridge Branch	Eph	NRPW	5.5	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-Q4	UNT to Pole Bridge Branch	Per	RPW	5.0	6.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-Q2	UNT to Pole Bridge Branch*	296.7	Per	RPW	7.0	8.7	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-Q3	Pole Bridge Branch	296.7	Per	RPW	25.0	25.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	-	-	-	-
S-Q1	UNT to Pole Bridge Branch^	296.8	Eph	NRPW	4.0	-	<0.1	-	-	Temporary Workspace	-	TF	-	Minor	-	-	-	-
S-B6	UNT to Pole Bridge Branch	297.3	Eph	NRPW	10.0	11.9	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-B8	UNT to Pole Bridge Branch	297.4	Int	RPW	4.0	4.6	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-B9	UNT to Pole Bridge Branch	297.5	Per	RPW	7.0	7.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-E5	UNT to Mill Creek	298.3	Per	RPW	10.0	-	<0.1	-	<0.1	Access Roads Work Space	MVP-PI-338	Fill / Culvert	-	Minor	-	-	-	-
S-DD4	UNT to Mill Creek	298.4	Int	RPW	6.0	6.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-KL27	UNT to Mill Creek^	298.8	Eph	NRPW	1.0	1.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-C1	Mill Creek	299.1	Int	RPW	6.0	6.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-G2	Little Cherrystone Creek+	300.1	Per	RPW	3.5	7.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	AL, FC, R, W	-	-	-

APPENDIX F1 (continued)																		
Waterbodies Crossed by the Mountain Valley Project																		
Waterbody ID	Waterbody Name &l	Milepost	Flow Regime &l	Water Type &l	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method &l	Pipeline Burial Depth (ft) ³ &l	FERC Classification	Classification &l, &g	Fishery Type &l	Fish Species &l	Time of Year Restriction &l
S-B2	UNT to Little Cherrystone Creek^	300.6	Eph	NRPW	5.0	5.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H55	UNT to Little Cherrystone Creek^	301.3	Eph	NRPW	3.0	3.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-GG11	UNT to Little Cherrystone Creek*	301.5	Per	RPW	8.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H54	UNT to Little Cherrystone Creek*	301.5	Per	RPW	12.0	14.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	3 or 4	Intermediate	-	-	-	-
S-H3	UNT to Little Cherrystone Creek^	302.2	Int	RPW	6.0	-	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H5	UNT to Little Cherrystone Creek	302.2	Per	RPW	8.0	9.1	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-OO1	UNT to Little Cherrystone Creek	302.5	Int	RPW	5.0	5.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-OO2	UNT to Little Cherrystone Creek	302.7	Int	RPW	5.0	5.3	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-EF26	Little Cherrystone Creek+	303.0	Per	RPW	24.0	21.2	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Intermediate	AL, FC, R, W	-	-	-
S-H42	UNT to Little Cherrystone Creek~	303.3	Int	RPW	5.0	5.0	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-
S-H44	UNT to Little Cherrystone Creek	303.3	Per	RPW	8.0	11.4	<0.1	<0.1	-	Permanent Easement / Temporary Workspace	-	OCDD / TF	-	Minor	-	-	-	-

APPENDIX F1 (continued)												
Waterbodies Crossed by the Mountain Valley Project												
Waterbody ID	Waterbody Name a/	Milepost	Flow Regime b/	Water Type c/	Top of Bank Width (ft)	Length of Pipeline Crossing (ft)	Temporary Acreage Impact	Permanent Acreage Impact	Permanent Access Road Impact	Project Component	Component ID	Crossing Method d/
												Pipeline Burial Depth (ft) e/
												Classification
												f/, g/
												Fishery Type h/
												Fish Species i/
												Time of Year Restriction j/
Notes												
~ Requires mitigation for permanent impacts												
^ First order streams both originating, and maintaining first order status, within the project's limits of disturbance.												
* Waterbodies crossed by the MVP in areas of shallow bedrock												
+ Waterbodies listed on a state's 303(d) list of impaired waters												
a/	UNT - Unnamed Tributary											
b/	Flow Regime: Eph = Ephemeral, Int = Intermittent, Per = Perennial											
c/	From Federal Register / Vol. 80, No. 124 / Monday, June 29, 2015 / Rule: Ephemeral streams (rain-dependent streams) have flowing water only in response to precipitation events in a typical year and are always above the water table. Intermittent streams (seasonal streams) are those that have both precipitation and groundwater providing part of the stream's flow and that flow continuously only during certain times of the year (e.g., during certain seasons such as the rainy season). Perennial streams have water present year round when rainfall is normal or above normal.											
d/	UNT = Unnamed Tributary, RPW = Relatively Perm. Waters, NRPW = Non-Relatively Perm. Waters, TNW = Traditional Navigable Waters, ISO = Isolated											
e/	For instances in which the pipeline crossing length is greater than top of bank width it is either due to the pipeline not crossing perpendicular to the waterbody or the pipeline crossing the stream more than once because of the meandering or branched nature of the waterbody.											
f/	OCDD = Open-Cut Dry Ditch, HDD – based on recommendation in sections 4.3 and 5.2.											
g/	Pipeline burial depth is a proposed mitigation measure for potential waterbody impacts due to vertical scour. Burial depth varies according to Mountain Valley's vertical scour estimates, which were determined for Per waterbody crossings only and were filed with the Secretary on February 9, 2017. Some Per crossings in this table may not have Pipeline Burial Depth values due to changes in the route that occurred after the February 9, 2017 filing.											
h/	West Virginia State Water Classifications: (Source: WVDEP) A = Public water, B = Propagation and Maintenance of fish and other aquatic life includes: warm water fishery, trout waters, and wetland, C = Water Contact Recreation, D = Irrigation, Wildlife, Livestock watering, E = Water transport, Cooling water, Power production, Industrial Virginia State Water Classifications: (Source: VDEQ) AL = Propagation and Maintenance of fish and other aquatic life, FC = Production of edible and marketable natural resources including fish and shellfish, R = Water Contact Recreation, including swimming and boating, W = Wildlife; PWS = Public Water Supply, No data = This stream has not been accessed by the VDEQ and there is no data											
i/	Fishery Type: (Sources: WVDNR and VADGIF) M = Mussel Stream, B2 = Trout Waters (WV only), CW = Coldwater Stream, WW = Warmwater Stream, TE = Threatened and Endangered Species Stream WT = Wild Trout Stream (VA only), ST = Stocked Trout Stream (VA only)											
j/	VADGIF in-stream construction restriction by species: Atlantic pigtoe mussel and James spinymussel: May 15-July 31; Green floater mussel and Yellow lampmussel: April 15 - June 15 and August 15 - September 30; Orangefin madtom March 15 - May 31; Roanoke logperch March 15 - June 30											
k/	TOYR - Time of Year Restriction = Any span of time within time-of-year restrictions set forth by U.S. Army Corps of Engineer's 401 Water Quality Certification for streams crossed in WV and by VDGIF in VA for streams containing rare, threatened, or endangered species. TOYR will be reviewed by the states on a case by case basis.											

**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

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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 pose 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.

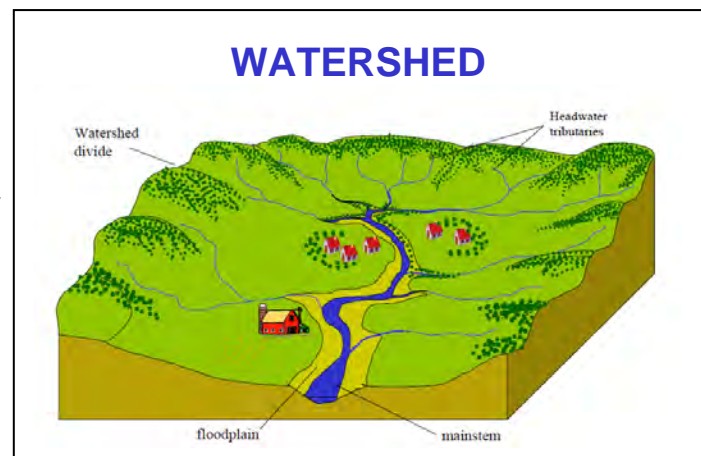
The U.S. Geological Survey (USGS) 2014 Seismic Hazard Map depicts the area of the proposed Greenbrier River crossing in Summers County in a zone of concern for earthquake events. The West Virginia Geological and Economic Survey 2014 earthquake map indicates several recent earthquakes in Summers County. 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.

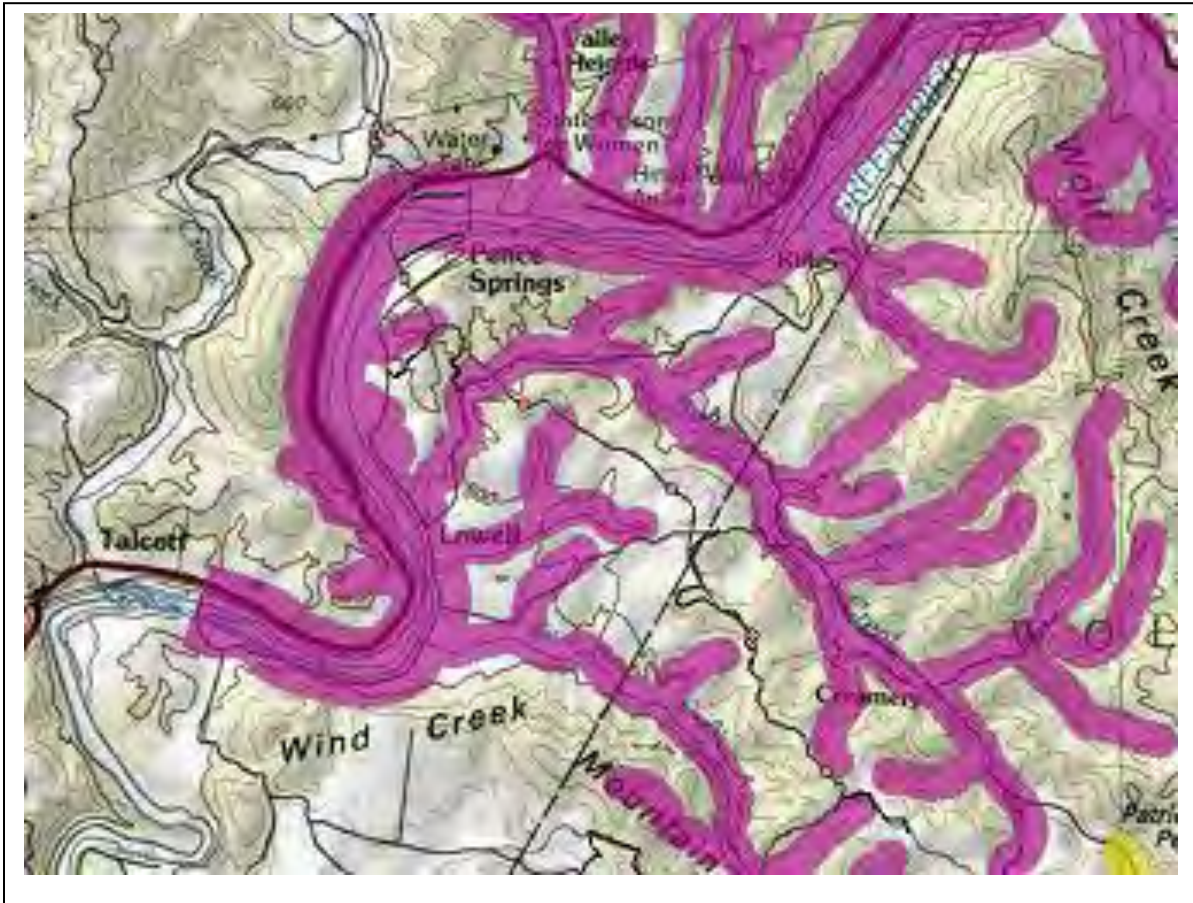


Figure 1.0.1 – Big Bend PSD Zone of Critical Concern, depicted in purple. (Map excerpted from the Indian Creek Watershed Association interactive map project).

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 Data 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 Data 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.

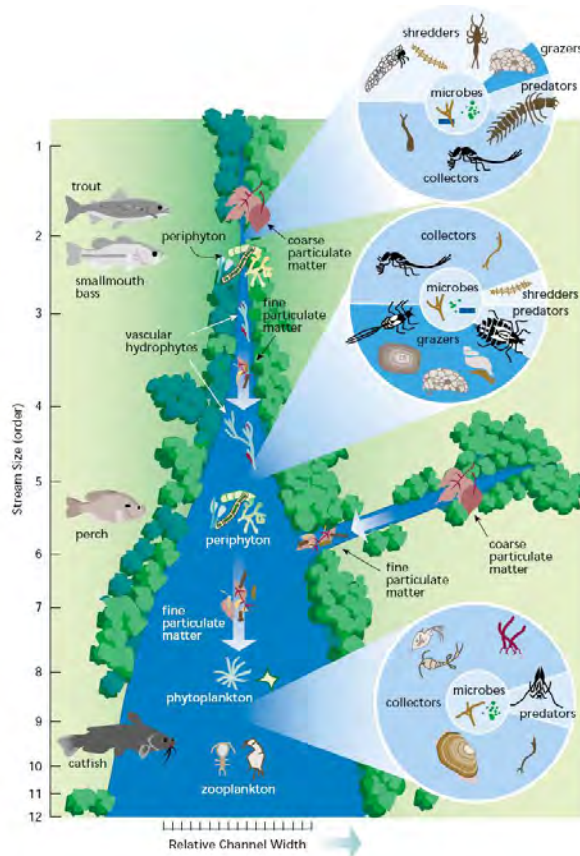


Figure 2.0.1 – The River Continuum (Vannote, et al; 1980) illustrates the food chain connection between headwater areas of first order high gradient streams and the wider, larger downstream areas in the overall watershed.

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).

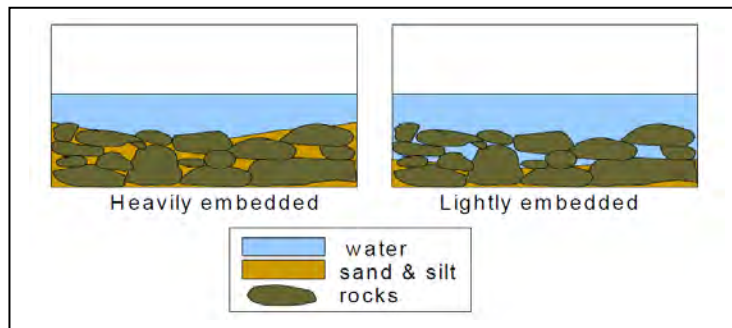


Figure 2.0.2 – Cobbles and pebbles provide aquatic habitats and protection for aquatic organisms. When the aquatic habitats are removed for trenching and stream crossing work spaces, they cannot be restored.

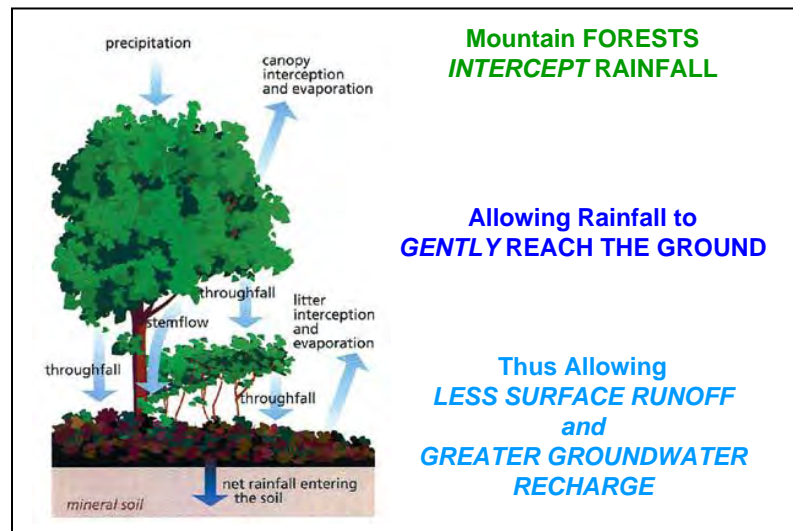
SECTION 3.0

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.

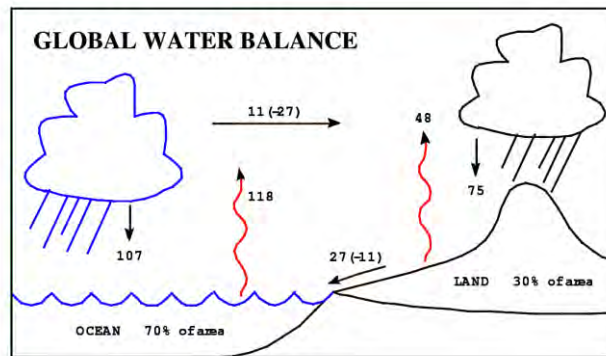


Figure 4.0.1 – Our water resources are finite on our continents. Calculations of the global water balance indicate that water transferred to land from the oceans is balanced by water drainage from land to the oceans. If water drainage to the oceans exceeds the amount of water transferred to land from 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).

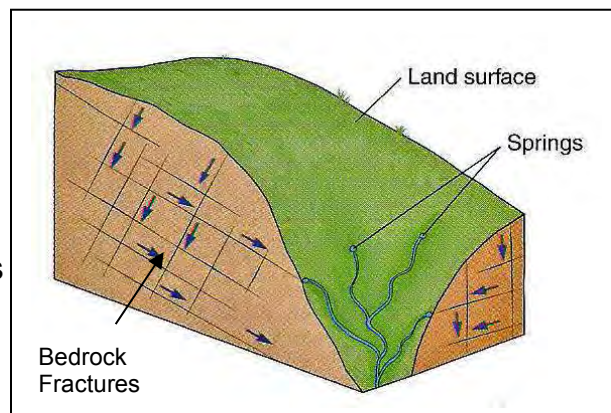


Figure 5.0.1 – Bedding planes and vertical fractures of the bedrock adjacent to the Greenbrier River near the proposed MVP crossing. Bedrock is also present in the river bed.



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.

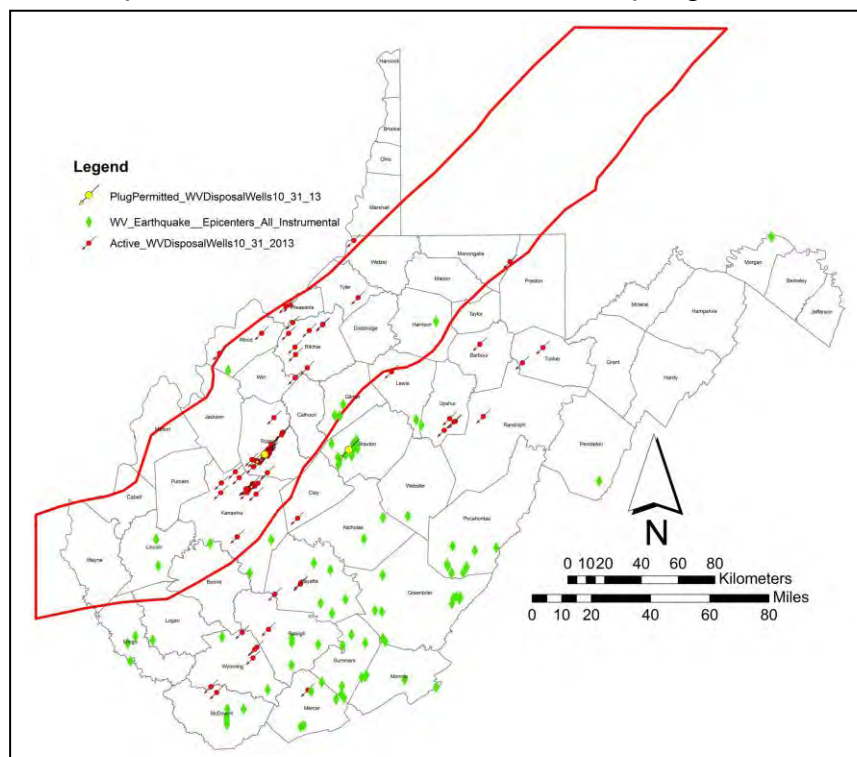


Figure 5.0.4 – WVGES map showing the locations of earthquake epicenters.

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).

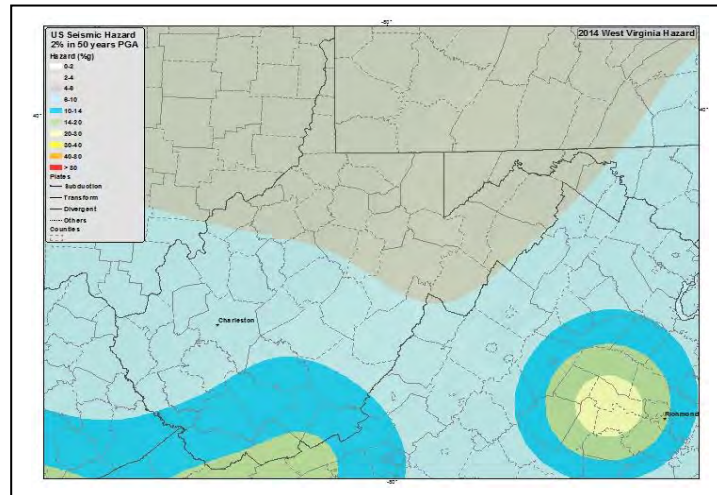


Figure 5.0.5 – USGS 2014 Seismic Hazard map showing zones of concern.

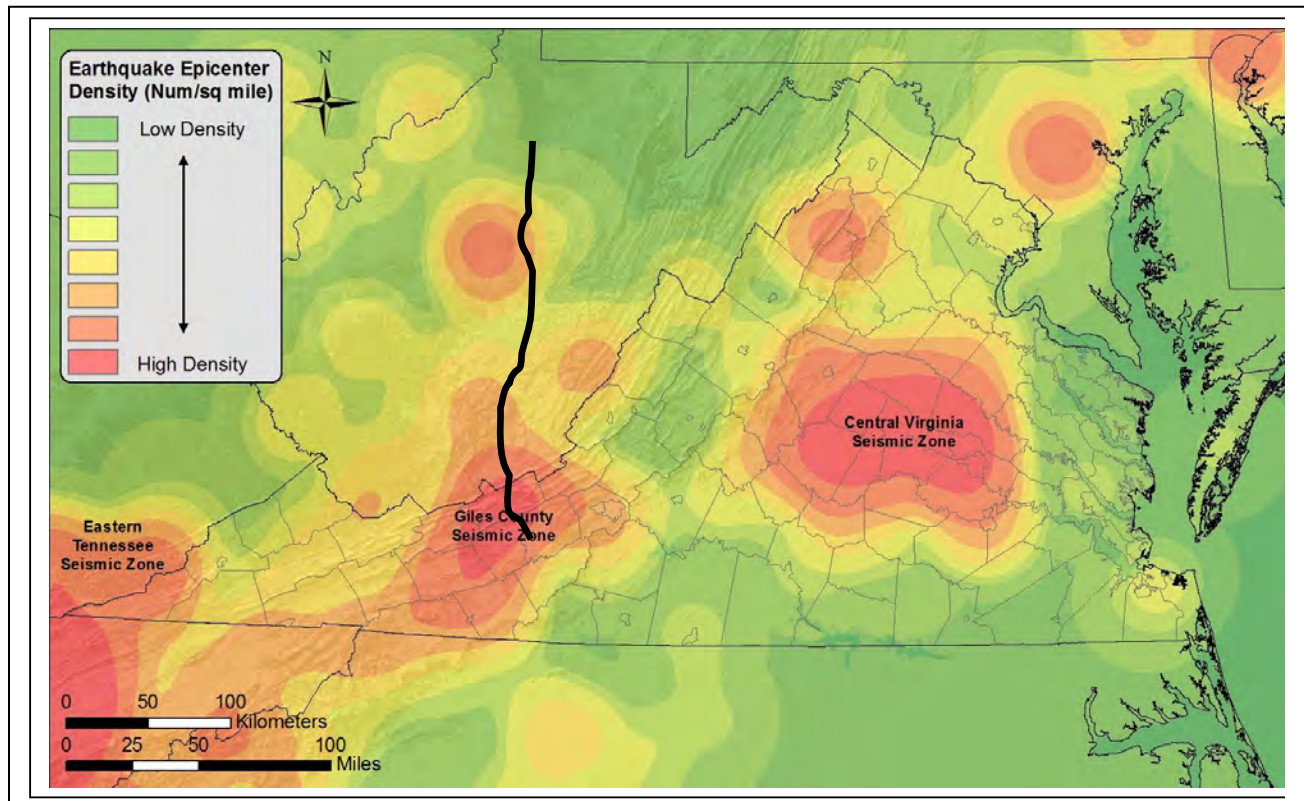


Figure 5.0.6 – Map showing the densities of earthquake epicenters, provided as a color scale indicating the relative densities in numbers per square mile. (Map from <https://dmme.virginia.gov/DGMR/EQHazardMapping.shtml>).

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 “chanter”, 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 pose 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

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*Curriculum vitae for***Pamela Crowson Dodds, Ph.D., L.P.G.**

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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



**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.,
Respondents.

No. 20-_____

DECLARATION OF DAVID SLIGH

I, David Sligh, state and affirm as follows:

1. I am of legal age and am competent to give this declaration. All information herein is based on my personal and professional knowledge. As to matters that reflect an opinion, they reflect my personal and professional opinion on the matter.
2. I give this declaration for use by Wild Virginia in its legal challenge to U.S. Army Corps of Engineers' authorizations issued to the Mountain Valley Pipeline (MVP).
3. I am Conservation Director of Wild Virginia. I have worked for Wild Virginia in this role since 2015. During my tenure at Wild Virginia, I have worked to protect and restore forests, waters, and wildlife species in Virginia and to help citizens participate effectively in decision-making processes that affect their interests. I hold a B.A. in environmental science from the

University of Virginia and a J.D. from Vermont Law School. I am a member of the District of Columbia Bar.

4. Wild Virginia is a non-profit organization, incorporated in Virginia, which was founded in 1996.¹ Wild Virginia's mission is to protect and restore natural ecosystems in Virginia and the communities that use and depend on those resources. Wild Virginia is based in Charlottesville, Virginia and works throughout the state. More than 500 members and dozens of volunteers support Wild Virginia's work and many participate in efforts to insist that government agencies' decisions comply with the law and reflect their values. Efforts have been particularly focused on National Forests in Virginia and on the enforcement of laws intended to protect water quality, including the Clean Water Act and state statutes.

5. In addition to my position as Conservation Director, I am an active member of Wild Virginia. I and other members of Wild Virginia use, enjoy, and derive benefit from Virginia's forests, streams and wetlands, and a range of animal and plant species. I and other members of Wild Virginia have substantial interests in preserving and restoring Virginia's natural resources.

I and Wild Virginia have participated in numerous administrative

¹ The group's original name was the Shenandoah Ecosystems Defense Group (SEDG). The name was changed to Wild Virginia in 2003.

proceedings and court cases related to the Mountain Valley Pipeline (MVP) and its potential impacts on Virginia's waters and on our interests in the use and enjoyment of those resources. I and Wild Virginia will continue use, enjoy, and derive benefits from the environments to be affected by MVP and the Corps' authorizations. This declaration is submitted on behalf of Wild Virginia in my capacity as a member, as well as in my role as a staff member.

6. Since 2010, I have also worked as a private consultant. In that role I have prepared technical analyses, comments for regulatory processes, and reports dealing with potential impacts on water quality from various activities, including natural gas pipelines. Clients for whom I have completed technical work include the Environmental Integrity Project, the Southern Environmental Law Center, Earthjustice, Assateague Coastkeeper, the Dominion Pipeline Monitoring Coalition, Shenandoah Riverkeeper, and Upstate Forever.
7. For more than five decades, I have had a variety of interests in streams that are affected by the U.S. Army Corps of Engineers' permits for the MVP.
8. I grew up in Roanoke and Botetourt Counties in Virginia. Before I was ten years old, I fished and waded in Craig Creek in the Jefferson National

Forest, in the area where the MVP is proposed to cross the stream and in numerous areas downstream from this site.

9. As a Boy Scout and an adult Scout troop leader I visited the areas along Craig Creek downstream from the proposed MVP crossing to hike, fish, and camp on a number of occasions. These visits during my time as a Scout, were important to my education about and enjoyment of the natural features of these areas. As an adult leader, I used these trips to educate my troop members about the environment and the value of clean, undisturbed streams and watersheds.
10. I have visited numerous areas along Craig Creek throughout my life, on dozens of occasions, and will continue to visit these areas and to value them for their scenic qualities, the clean water, and richness of wildlife and for my own education and that of Wild Virginia members.
11. Pipeline construction through Craig Creek will release sediment into the stream, threatening aquatic species that are dependent on clear water and altering stream habitats. Pipeline construction may also cause damage to aquatic habitat through physical disruption associated with digging or blasting through the bottom of the stream. These impacts will threaten native aquatic species in the stream, many of which are especially sensitive to pollution and habitat changes. One species of particular concern in the

stream downstream from the proposed crossing site is the James Spineymussel, a federally-listed Endangered species, which needs bottom habitats that are free from silt.

12. In acquiring my undergraduate degree in Environmental Science, I completed course work in ecology, geology, and hydrology and focused most heavily on water quality and stream ecology. During two of my summer breaks in college, I worked as an intern for Virginia's water quality regulatory agency, the State Water Control Board.² During my senior year in college, I completed an independent study in which I compiled and analyzed chemical, physical, and biological data from stream studies conducted by the State Water Control Board, other state agencies, and private companies to assess impacts from stream flow variations in the Roanoke River.
13. After graduating from college, I again worked for the State Water Control Board on a two-year study to assess impacts from pollution, including sedimentation from development activities, on streams throughout the upper Roanoke River basin. I helped design an intensive monitoring program, conducted water sampling, made physical habitat and stream flow measurements, analyzed data, and prepared reports for the study conducted

² The State Water Control Board merged with other state agencies in 1993 to form the Department of Environmental Quality.

using funding from the U.S. Environmental Protection Agency. Streams I monitored in this study included a number that are affected by the Corps permit for MVP, including the North and South Forks of the Roanoke River and the Roanoke River.

14. I took a permanent position with the State Water Control Board in 1985. My duties included performing stream and reservoir water and sediment sampling studies, investigating reports of pollution problems in streams, and documenting fish kills and other pollution impacts. In this position, I visited numerous waterbodies that will be affected by MVP activities authorized by the Corps. These included Stony Creek (sometimes called Big Stony Creek); the North Fork Roanoke River, the South Fork Roanoke River, the Blackwater River, and Leesville Lake.
15. In another position at the State Water Control Board, I was responsible for compiling, analyzing, and reporting on all surface water quality monitoring data for a sixteen-county region of the state that included Giles, Montgomery, Roanoke, Franklin, and Pittsylvania Counties, all of which have waters affected by activities on MVP covered under the Corps' authorizations. This reporting was incorporated as part of Virginia's water quality assessment, prepared every two years in accordance with Clean Water Act section 305(b), and the priority waterbodies list required by

section 303(d) of the Act. Preparation of these documents required assessing and describing chemical, physical, and biological data from waters and sediments in streams, determining whether the waters were impaired, and identifying the causes of the impairments wherever possible.

16. In another position at the State Water Control Board, I was responsible for coordinating all water quality monitoring activities throughout the region that includes all of the Virginia counties where Corps authorized MVP activities will occur. I also conducted water and sediment sampling and sampling of stream organisms known as benthic (bottom dwelling) macroinvertebrates (invertebrates visible without use of a microscope). I conducted all of the types of sampling in streams that are affected by MVP and authorized by the Corps' permits, including Stony Creek, the North and South Forks of the Roanoke River, the Roanoke River, Blackwater River, and Leesville Lake.
17. As part of all of the duties of jobs discussed in paragraphs 9 – 12, I conducted pollution complaint and fish kill investigations during which I sampled and measured stream characteristics, assessed and documented impacts from various activities. I collected and identified fish affected by pollution impacts.

18. In a subsequent job, as a senior environmental engineer at the State Water Control Board (and then with the Department of Environmental Quality (DEQ)) I oversaw discharge permitting activities under the Virginia Pollutant Discharge Elimination System (VPDES) and Virginia Pollution Abatement programs. I prepared permits and supervised a team of environmental engineers in all permitting actions to protect streams throughout a region that includes all of the counties where MVP construction will affect waterbodies. This work required assessment of stream quality data, review of proposals for stream studies and of resulting reports, and use of these data to set pollution limits sufficient to protect water quality.
19. I served as a witness on behalf of the State of Virginia in federal and state court proceedings and formal hearings before the Department of Waste Management, presented as an expert on water quality, pollution impacts on streams, and water quality assessments.
20. I worked for the non-profit group American Rivers as the representative for the southeastern U.S. In that role, I worked on projects across the region to influence decisions about impacts to streams and other waterbodies. I served on numerous technical advisory committees formed during regulatory

review processes by the Federal Energy Regulatory Commission and other state and federal agencies.

21. While at American Rivers, I served as an expert witness in administrative law court cases, testifying about impacts to the physical, chemical, and biological conditions in streams from construction and discharges.
22. On behalf of American Rivers, I joined as a nominator of Bottom Creek in Roanoke County to be designated as an Exceptional State Water, also known as a Tier 3 water under state and federal regulations defining antidegradation provision. This required me to review data and information about the condition of the stream and the resources in the Bottom Creek watershed.
23. On behalf of Wild Virginia, I have helped organize and lead training sessions to teach dozens of citizens how to monitor water quality in streams that may be affected by the MVP. This monitoring involves collection of data and samples to characterize the subject streams before impact from MVP and to measure changes caused by the project. I have reviewed the data collected by these monitors and made assessments about conditions and impacts in these streams based on those findings.
24. On at least eight occasions I have visited MVP construction areas and examined water quality in streams in these areas, assessing impacts from the

project. I have observed adverse changes in the physical and chemical condition of these waters caused by MVP construction.

25. I have visited and used Bradshaw Creek since I was in my early teens, when I would picnic along its banks and wade in the stream at a family friend's cabin.
26. For approximately ten years, I owned a house and land through which a tributary of Bradshaw Creek flows. My property was less than 500 feet from Bradshaw Creek and runs through the property owned by numerous neighbors and friends and which I visited for various purposes on a regular basis during that time. I continue to visit the area and will continue to do so and I value and have a lasting interest in the quality and health of Bradshaw Creek.
27. The crossing of Bradshaw Creek by the MVP under the Corps' authorization will threaten fish populations in the areas I use and value. A particular damage that may be caused is the disruption of movement of fish, including the endangered Roanoke Logperch, throughout the stream system. Physical disruption of the habitat around pipeline crossing sites may limit movement of fish either temporarily or permanently, by changing hydrogeological structures and processes, either permanently or temporarily.

28. Sedimentation in Bradshaw Creek from the construction work and dredge and fill discharges authorized by the Corps approval will alter populations and habitat for benthic macroinvertebrates, hindering fish feeding in affected areas and their movement through those areas. Finally, sediment suspended in the water during and for some time after construction, when it is re-suspended after bottom deposition, may harm fish health directly and disrupt their feeding and reproductive behaviors. I have reviewed a large body of scientific studies regarding sediment impacts on stream life from pipeline construction, including those referenced by the Corps when it issued the Nationwide 12 permit. That literature indicates that the biological changes and damages can persist for months or even several years after construction.
29. I have reviewed the scientific literature about the dispersal patterns of Roanoke Logperch, which indicates that they are likely to travel relatively large distances throughout native drainages. This is likely true in Bradshaw Creek and its tributaries and may lead to diminishment of the Logperch's use of its full available range in the Bradshaw system. Availability of the full stream system for use by the fish is important, because when natural or human-caused disturbances reduce or eliminate populations in some parts of a stream system, other areas serve as refugia and the populations in those areas are needed to re-populate the rest of the stream habitats.

30. I have used and valued portions of the North Fork Roanoke River for many years. I have numerous friends who are landowners along the River, both downstream and upstream from the pipeline crossing authorized by the Corps' permit, and have enjoyed the stream when visiting their properties. I intend to continue visiting these areas and using the stream.
31. I have also used and valued portions of the North Fork in areas upstream and downstream from the confluence of the River and Bradshaw Creek. I have visited a church and cemetery, which holds the graves of my five-times great grandfather and dozens of my kin, near the banks of the North Fork near Flatwoods, and have accessed the River near the church and from the properties of friends on many occasions. I plan to continue to visit these sites for the rest of my life and I highly value the environmental resources in this area, including the North Fork.
32. I greatly value the ecological values of the North Fork Roanoke River. Fish species, including the Roanoke Logperch and native Eastern Brook Trout are important parts of a diverse biotic community in the North Fork.
33. The likely impacts described above for the Bradshaw Creek system, in paragraphs 27. through 30., apply to other portions of the North Fork Roanoke River system.

34. I have personally visited areas around previous MVP construction sites in the Bradshaw Creek and North Fork Roanoke River watersheds and have viewed heavy sedimentation to these streams during the last two years. These impacts to the streams will combine with any level of sediment release from the pipeline crossings and any level of habitat disruption and will exacerbate the damage to these streams and the populations of biota, including the Roanoke Logperch.
35. I have visited locations along Teels Creek in Franklin County numerous times in the past three years. In particular, I have viewed the stream at numerous sites around the proposed crossing points authorized by the Corps permit near Grassy Hill Road. In at least one point, I have viewed collapsing stream banks and continued heavy sediment deposits to the stream from this physical disruption. This site is located within 200 feet of a pipeline crossing of a small tributary to Teels Creek and upstream of another crossing which lies approximately 400 yards downstream on Teels Creek.
36. Wild Virginia has documented these damages in reports to the Virginia Department of Environmental Quality, the Corps of Engineers, and in a formal complaint filed with the Federal Energy Regulatory Commission and has noted that the impacts from these construction damages will continue to result in sediment inputs to the streams unless and until major stream bank

and bed restoration is achieved. Wild Virginia will continue to monitor this and other sites, for use in documenting and insisting on corrective action orders by regulatory agencies, and as educational tools to teach the public and our volunteers about the nature and extent of damage that construction can cause.

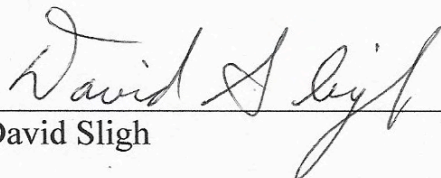
37. The damages described in paragraph 34. above will combine with any sediment releases resulting from Corps-authorized crossings of Teels Creek and its tributary and with physical alterations in the stream channel and banks.
38. Teels Creek is within the habitat range of the Roanoke Logperch and the impacts noted above will threaten populations of this fish and other aquatic organisms in the Creek and the larger stream system in which Teels Creek lies.
39. Based on my personal investigations, my decades of training and experience in assessing stream and aquatic system conditions and impacts from activities, and my review of information compiled by state and federal agencies about actual and potential impacts from MVP, I believe the actions authorized by the Corps' approvals will damage numerous streams, including those where sensitive species populations and habitats are found.

40. Digging and blasting through numerous waterbodies, including Stony Creek, Craig Creek, the North and South Forks of the Roanoke River, Blackwater River, Teels Creek, Bottom Creek, Little Creek, Mill Creek, Bradshaw Creek, and others will release pollution into these streams and threaten species, including the Candy Darter, the Roanoke Logperch, the James Spineymussel, as well as sensitive Eastern Brook Trout and other species.
41. Changes to instream habitats caused by the physical disruption from creating trenches and installing pipe through waterbodies will threaten the integrity of these ecosystems and the hydrologic flow patterns on which they depend may be permanently altered.
42. Significant damage has already been caused to numerous streams and wetlands by so-called “upland” construction on MVP. These impacts must be considered in combination with any impacts from the Corps-regulated activities to make a true and valid assessment of overall effects on the waterbodies and no such cumulative assessment has been done on a geographic scale that is useful or meaningful for understanding the project’s impacts.
43. I am aware that Wild Virginia petitioned the United States Court of Appeals for the Fourth Circuit to review the Norfolk District of the U.S. Army Corps of Engineers’ authorizations issued to the MVP.

44. If successful, this lawsuit will force the U.S. Army Corps of Engineers to reevaluate the authorization it issued and ensure that it truly complies with all legal requirements. If this were to happen, many of my concerns would be alleviated.

I declare under penalty of perjury the foregoing is true and correct to the best of my knowledge.

Executed on this 25th day September, 2020.


David Sligh



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Virginia Field Office
6669 Short Lane
Gloucester, VA 23061

September 4, 2020



Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, D.C. 20426

Attn: James Martin, Branch Chief

Re: Mountain Valley Pipeline, LLC; Docket
Number CP16-10-000; Project #05E2VA00-
2016-F-0880 and #05E2WV00-2015-F-0046

Dear Ms. Bose:

On November 21, 2017, the U.S. Fish and Wildlife Service (Service) provided the Federal Energy Regulatory Commission (FERC) with a non-jeopardy biological opinion (BiOp) based on our review of the referenced project and its effects on the federally listed species in Table 1 in accordance with Section 7 of the Endangered Species Act (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA).

Table 1. Listed species considered in the November 21, 2017 BiOp.

Species Common Name	Species Scientific Name	ESA Status	State
Small whorled pogonia (SWP)	<i>Isotria medeoloides</i>	threatened	West Virginia (WV)
Virginia spiraea (VASP)	<i>Spiraea virginiana</i>	threatened	WV
Roanoke logperch (RLP)	<i>Percina rex</i>	endangered	Virginia (VA)
Indiana bat (Ibat)	<i>Myotis sodalis</i>	endangered	VA, WV
Northern long-eared bat (NLEB)	<i>Myotis septentrionalis</i>	threatened	VA, WV

INTERIOR REGION 1 • NORTH ATLANTIC-APPALACHIAN

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS
NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, VERMONT
VIRGINIA, WEST VIRGINIA

Roanoke River crossing (MP 235.6), Roanoke County, VA, is known to support RLP. The proposed crossing method is microtunnel (M. Neylon, Mountain Valley, email to J. Stanhope, Service, August 6, 2020) (Tables 11 and 12). This trenchless crossing method minimizes impacts in the riparian zones by eliminating construction activities within or directly adjacent to the crossed stream (M. Eggerding, Mountain Valley, letter to J. Martin, FERC, May 13, 2020). Because no open-cut trenching is performed, the stream channel itself would not be impacted, allowing existing riparian vegetation near the stream banks to remain in place. Therefore, no instream construction impacts or impacts to RLP are anticipated at this crossing and this crossing will not be discussed further in this Opinion.

Pigg River crossing (MP 289.2), Pittsylvania County, VA, is known to support RLP. The crossing method was HDD, which was completed in 2019 (Table 11). This trenchless crossing method minimized impacts in the riparian zones by eliminating construction activities within or directly adjacent to the crossed stream (M. Eggerding, Mountain Valley, letter to J. Martin, FERC, May 13, 2020). Because no open-cut trenching was performed, the stream channel itself was not impacted, allowing existing riparian vegetation near the stream banks to remain in place. Therefore, no instream construction impacts or impacts to RLP are anticipated at this crossing and this crossing will not be discussed further in this Opinion.

There are 3 MVP waterbody crossings where adverse impacts to RLP are expected: Bradshaw Creek 1 (MP 230.9), Harpen Creek 1 (MP 290), and North Fork Roanoke River 1 (MP 227.4) (Table 11).

Additionally, we anticipate adverse effects to RLP from upland sediment contributions in the following waterbodies: Bradshaw Creek, North Fork Roanoke River, South Fork Roanoke River, Roanoke River, and Pigg River. More details are provided in the RLP Effects of the Action section.

Roanoke River Watershed

Bradshaw Creek 1 crossing (MP 230.9), Montgomery County, VA, is 2.5 km above the confluence of Bradshaw Creek with the Roanoke River. The Predicted Suitable Habitat layer for RLP (Virginia Natural Heritage Program 2017) identifies this crossing as potential RLP habitat and RLP presence is assumed. At the crossing site Bradshaw Creek was classified as moderately low gradient with narrow and shallow riffles. The construction ROW is 22.86 m wide at this crossing, the wetted width is 6 m. Bradshaw Creek contains suitable RLP habitat based on the in-situ assessment (ESI 2015b). RLP in this creek are part of the Roanoke River RLP population. As stated earlier, the RLP occupies medium to large warmwater streams with moderate to low gradient, therefore based on the creek width and proximity to the Roanoke River, we expect RLP will use Bradshaw Creek when water levels are high and RLP from the Roanoke River enter the creek; therefore we anticipate RLP numbers are lower in this creek than in the Roanoke River, but to be conservative we will assume density levels will be the same.

The North Fork Roanoke River 1 crossing (MP 227.4), Montgomery County, VA, is 34 km above the confluence of the North Fork Roanoke River with the Roanoke River. The Predicted Suitable Habitat layer for RLP (Virginia Natural Heritage Program 2017) model identifies the crossing as potential RLP habitat and RLP presence is assumed at this location. The construction

**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.,
Respondents.

No. 20-_____

DECLARATION OF ROBERTA CARPENTER JOHNSON

I, Roberta Carpenter Johnson, state and affirm as follows:

1. I am of legal age and am competent to give this declaration. All information herein is based on my own personal knowledge unless otherwise indicated.
2. I give this declaration for use by Wild Virginia and Sierra Club and in their legal challenge to U.S. Army Corps of Engineers' authorizations issued to the Mountain Valley Pipeline (MVP).
3. I am a member of Wild Virginia and Sierra Club. Wild Virginia is a non-profit corporation based in Charlottesville, Virginia with hundreds of members throughout Virginia. I joined Wild Virginia because I support the organization's mission to preserve and support the complexity, diversity and stability of natural ecosystems by enhancing connectivity, water quality, and climate in the forests, mountains, and waters of Virginia through education and advocacy.

4. I joined Sierra Club because I support the organization's mission to explore, enjoy, and protect the wild places of the Earth; to practice and promote the responsible use of the Earth's resources and ecosystems; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. The Sierra Club's concerns encompass the exploration, enjoyment, and protection of the environment in Virginia.
5. I have education and experience in environmental science. I graduated with a B.A. in anthropology/archeology with a minor in environmental studies from one of the first such programs in the United States (UC Santa Barbara, 1972). My course work and experience led to my subsequent position as an editorial assistant to the Science and Medicine Editor at Harvard University Press. In this position I worked with world-renowned scientist scholars including E. O. Wilson, Stephen Jay Gould, Jared Diamond, Ernst Mayr and Jane Goodall. In 1979 I received my M.A. in Education (Virginia Tech) and became the Youth Program Coordinator and a Museum Educator for the Science Museum of Western Virginia (Roanoke, VA) leading trips, conducting workshops, doing outreaches in schools, and sponsoring the museum science club. In subsequent years I worked in public and private schools where I taught life science and physical science to the learning

disabled population, led field trips, and was an advisor to school science and garden clubs. Being married to an environmental engineer and being committed to minimizing my footprint on earth have also shaped my experiences. Together my husband and I monitor local streams, volunteer at the Bottom Creek Gorge preserve, hike in National Parks, and visit centers here and abroad that promote sustainable development and alternative energy. In addition to being members of Sierra Club and Wild Virginia, we support other organizations that promote environmental awareness, nature and science: The Union of Concerned Scientists, National Wildlife Federation, Environmental Defense Fund, Trout Unlimited, The Nature Conservancy, and Virginia Native Plant Society.

6. I am aware that Wild Virginia and Sierra Club petitioned the United States Court of Appeals for the Fourth Circuit to review the Norfolk District of the U.S. Army Corps of Engineers' authorizations issued to the MVP.
7. My husband and I own property located at 9964 Patterson Drive, Bent Mountain, Virginia where we have lived for 33 years. The property borders Bottom Creek (in the South Fork Roanoke River watershed) and is about three miles downstream from where the MVP is proposed to cross one of Bottom Creek's major tributaries, Mill Creek in Roanoke County.

8. Bottom Creek, where it borders our 34-acre property, is considered by Virginia to be an Exceptional State Water or Tier III waterbody, the regulatory equivalent of an EPA Outstanding National Resource Water. My husband and I initiated the nomination of Bottom Creek as a Tier III stream and supported its approval by the Virginia Department of Environmental Quality (VDEQ) -- which took approximately 10 years. It is just one of 30 such streams in Virginia and is “exceptional” for its environmental setting, recreational opportunities, and its aquatic communities including 10% of all of the fish known from Virginia. Bottom Creek is considered critical habitat for 4 species of rare fish endemic to the headwaters of the Roanoke River including the orangefin madtom which is “Threatened” in Virginia. It also supports a large native brook trout population. Recently the VDEQ conducted a survey of Tier III Bottom Creek’s upland tributaries and found native brook trout in eighty percent of these surveyed waters, as well. They are the same very high-quality waters that the MVP will be crossing. It is extremely distressing to us that the MVP would even consider crossing the main headwaters of any Tier III stream, much less cross its headwaters 30 times and the surrounding wetlands 52 times* in just 6.2 miles – as it, in fact, plans to do in the watershed of Tier III Bottom Creek in Roanoke

County. *(According to USACE Tables 2.2 and 3.2, *Field Surveys of Stream and Jurisdictional Wetland Impacts*, December 2017)

9. For nearly a decade, my husband and I worked to protect Tier III Bottom Creek by doing benthic monitoring of the macroinvertebrates upstream from the State designated section and in 2 of its tributaries. We were trained by the Izaak Walton League as part of its Save Our Streams project. Data collected is part of a statewide databank shared with the VDEQ. Bottom Creek and its tributaries receive the highest scores for water quality.
10. For the past 28 months, I have been volunteering for a leading trout preservation organization as a water monitor under the WVVA Water Quality Monitoring Project, reporting and protecting water resources from Mountain Valley Pipeline activities. I have helped in the collecting of data at two stations on Bottom Creek, including one at the beginning of the Tier III section downstream of the pipeline right-of-way. Since earth-moving activities may recommence in the Bottom Creek watershed as a result of the Corps' authorizations and the new biological opinion, we fear there will be imminent and permanent damage not only to those headwaters and their streambeds, but also to the Tier III portion and the South Fork Roanoke River, as well.

11. My family, friends, and I like to hike along Bottom Creek, swim here, and fish its waters where we have caught many rainbow and brook trout. Also, in my career as an educator, I led ecological field trips in the headwaters of Bottom Creek for the Roanoke Valley Science Museum (now the Science Museum of Western Virginia) and for various school groups. In retirement, I continued to lead hikes at The Nature Conservancy's Bottom Creek Gorge Nature Preserve for the Bent Mountain Woman's Club and for friends. These activities and my enjoyment of Bottom Creek have been greatly impacted and may be extinguished entirely by the construction of the MVP.
12. For the past several years and especially since trees have been cut and removal and grading began in the right-of-way (ROW), recreation and field trips have not been priorities. Instead, we who are involved with protecting this watershed (children included) spend our free moments collecting baseline data, monitoring for violations, and pleading with bureaucrats (through letters and meetings) to protect our homes and the environment. Still, many of our friends and neighbors who have been personally impacted by the MVP (and now by Coronavirus restrictions) continue to seek out Bottom Creek (including our property) as a place of healing and refuge in nature. Like us, they are now wondering how much longer this sanctuary will be a part of our heritage.

13. It is my understanding that the MVP proposes to use explosives to blast through or under the streambeds in Bottom Creek's watershed because they consist of metamorphic bedrock. (The option of tunneling under streambeds and wetlands is unlikely, however, due to the steep slopes and the high number of stream crossings in this watershed.) After blasting, these bedrock streambeds cannot be restored to their "original condition" as claimed. (Cement blocks and rebar are not the same as bedrock.) Furthermore, the resulting sedimentation (which would be beyond natural thresholds) would have a detrimental effect on benthic organisms with the subsequent colonization by pioneer species and the possibility of a total loss of the indigenous aquatic communities in the Tier III Bottom Creek watershed. This would include the "Threatened" orangefin madtom which is currently found in MVP ROW crossing locations from the top of Poor Mountain in the headwaters of Bottom Creek to the bottom of the ROW in Mill Creek (a major tributary of Bottom Creek). (Per Federal Energy Regulatory Commission, *Final Environmental Impact Statement for MVP*, Waterbody Crossings, Appendix F-1, June 2017)

14. The MVP will also trench across some of Bottom Creek's extensive wetlands that drain into it. The trenching of wetlands creates a French Drain Effect resulting in not only permanent conversion impacts and the concurrent loss of critical habitat but also the introduction of even more

surface water sediment and organic material due to reduced filtration of water flowing into streams.

15. The headwaters of Bottom Creek descend steep slopes from an elevation of 3,928 feet on Poor Mountain down to 2,200 – 2,300 feet at our property on the border of Roanoke and Montgomery Counties. The turbulence and velocity of Bottom Creek here have carved the gorge associated with its name, and the water descends another 1400 feet to its confluence with the South Fork of the Roanoke River. As a result of blasting, in combination with the steep slopes in Bottom Creek's watershed, much sediment will find its way into Bottom Creek and down to Bottom Creek Gorge adjacent to both my property and The Nature Conservancy preserve, then beyond to the South Fork Roanoke River and the Roanoke River. Increased sediment loads threaten all aquatic life and, in calmer stretches of the creek, it will result in the build up of sand and sandbars that will cover benthic organisms and fish eggs. This will degrade the quality and diversity of the stream overall, thereby reducing fish populations and enjoyment and use of the stream.
16. Already increased turbidity and sedimentation have occurred in the Bottom Creek watershed over the past 2 years, coinciding with deforestation in the MVP ROW. Of 8 rain events from July 2018 to July 2019, 3 were associated with hurricane or tropical storm systems, and widespread erosion and

sedimentation occurred in the watershed – at levels not seen in 33 years since the Flood of 1985. All 8 of the events that were monitored showed increased turbidity and conductivity levels. Stripping of topsoil on banks and deposition of sediment on other banks and fields are evident all along Bottom Creek – especially after it is joined by Mill Creek about ½ mile from an MVP ROW crossing. If the Erosion & Sedimentation Control Measures are as insufficient and ineffective in the Bottom Creek watershed as they have been in Franklin County during construction, the same mudflows (and worse) will be seen here.

17. In addition, because of the steep slopes of shallow bedrock thinly capped by highly erodible soil, vegetation along the pipeline route will not regenerate quickly, if at all. Increased erosion and sedimentation will persist for quite some time even after construction is finished because of the lack of vegetation and instability of the slopes.
18. The MVP will also remove approximately 10,000 linear feet of riparian vegetation along the banks of Bottom Creek and its tributaries (including Mill Creek) at crossings and along sections of the project paralleling waterbodies. This will have a profound impact on the water quality of the stream by eliminating shade, which will result in increased water temperatures. Trout, however, demand cool water habitat. Moreover, where

this shade is provided by mature trees, regrowth (if even allowed) would take many decades -- and, in the case of hemlocks, *hundreds* of years. This temperature impairment will, therefore, affect the trout fisheries in Bottom Creek and its tributaries (including Mill Creek) for decades, if not longer.

19. Loss of that riparian vegetation will also contribute to the increased sedimentation in Bottom Creek, with attendant negative impacts on aquatic life and enjoyment of the stream.
20. On April 25, 2017, my husband (a VDEQ Senior Environmental Engineer, Retired) and I submitted comments to FERC on Environmental Solutions & Innovations' (ESI's) "Biological Assessment" for the MVP. Those comments are attached as Exhibit 1 to my declaration. In those comments, we pointed out that although MVP will not cross the S. Fork of the Roanoke River, upstream it will cross Bottom Creek and its tributaries multiple times, exacerbating the assessed impact on the Roanoke logperch downstream. The Biological Assessment did not recognize this. Specifically, it failed to consider the fact that the Bottom Creek watershed and the S. Fork of the Roanoke River would be major contributors to the sediment load of the assessed segment of the Roanoke River since the proposed pipeline and associated access roads on Poor and Bent Mountains are slated to cross Bottom Creek and its tributaries 36 times and wetlands 44 times in just 6.2

miles. (Per FERC, *Final Environmental Impact Statement for MVP*, Waterbody & Wetlands Crossings Appendices F-1 & G-1, June 2017. Note: USACE reported numbers of 30 & 52, respectively, in Dec. 2017.) In our filing, we also noted that the S. Fork of the Roanoke River is itself a habitat for the Roanoke logperch, yet ESI did not indicate that Roanoke logperch in the S. Fork would be affected by the project.

21. My husband and I are horrified and emotionally distressed that Bottom Creek (which we have attempted to protect for over 40 years) will be despoiled by the MVP. Construction of the MVP will greatly and negatively impact our fishing, hiking, swimming, and conservation efforts (and, therefore, our physical and mental health) for decades to come.
22. If successful, this lawsuit will force the U.S. Army Corps of Engineers to reevaluate the authorization it issued and ensure that it truly complies with all legal requirements. If this were to happen, many of my concerns would be alleviated.

I declare under penalty of perjury the foregoing is true and correct to the best of my knowledge.

Executed on this 25th day of August, 2020.


Roberta Carpenter Johnson

April 25, 2017

RE: Comments on the ESI Biological Assessment for the Mountain Valley Pipeline (MVP) Docket No. CP16-10-000

We are submitting the following comments with regard to the *Biological Assessment of Potential Effects on Federally Listed Species* conducted by Environmental Solutions & Innovations (ESI) for the MVP and submitted to FERC in March 2017. The Assessment was submitted in response to FERC's request for data on the MVP. Although the MVP will not cross the South Fork of the Roanoke River, upstream it will cross Bottom Creek and its tributaries¹ multiple times, exacerbating the assessed impact on the Roanoke logperch. This was not recognized in the submittal. Based on this omission and the other information provided below, ESI's Biological Assessment must be deemed inadequate and cannot be used to satisfy FERC's request for biological data.

Section 5.5 attempts to analyze the effects of the Project construction and operation on the Roanoke logperch, concluding that the "Project May Affect – Is Likely to Adversely Affect Roanoke logperch." However, this conclusion falls short in that it fails to take into consideration that the Bottom Creek watershed (MVP mp240.3 – mp246.5) and the South Fork of the Roanoke River would be major contributors to the sediment load of the assessed segment of the Roanoke River. The proposed pipeline and associated access roads on Poor and Bent Mountains in Roanoke County, Virginia are slated to cross tributaries in the Tier III Bottom Creek watershed² 39 times in just 6.2 miles and will cross wetlands 18 times. Therefore, ESI's assessment does not account for all short- and long-term siltation and sedimentation effects on Roanoke logperch habitat.

In addition, the South Fork of the Roanoke River itself is a habitat for the Roanoke logperch (as well as being a popular Class V Stockable Trout Waterbody). Appendix A of ESI's Biological Assessment does not indicate that the Roanoke logperch in the South Fork of the Roanoke River (and possibly in the lower reaches of Bottom Creek) would be impacted by the project. Remarkably, Appendix B has no map showing the confluence of Tier III Bottom Creek (in Montgomery County, Virginia) with the South Fork of the Roanoke River – an important consideration since both are major tributaries to the Roanoke River and, as noted above, would be significant sources of siltation and sedimentation due to the MVP crossing the Bottom Creek watershed.

Such omissions of data in the Assessment are both unacceptable and unprofessional. Regardless, it is clear that the impacts on the Roanoke logperch will be even far worse than those indicated in ESI's submittal. Therefore, FERC must not only reject ESI's March 2017 Biological Assessment but must deny this proposed pipeline route.

Robert K. and Roberta C. Johnson
Bent Mountain, Virginia

¹All named and unnamed tributaries of Bottom Creek from its confluence with the South Fork of the Roanoke River upstream are Class VI, subclass ii Natural Trout Waters (VDEQ Water Quality Standards 9 VAC 25-260).

²A portion of Bottom Creek is one of 30 waterbodies in the State of Virginia designated as Tier III, the highest quality State waters.