No. 20-2159

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

APPALACHIAN VOICES; WILD VIRGINIA; WEST VIRGINIA RIVERS COALITION; PRESERVE GILES COUNTY; PRESERVE BENT MOUNTAIN, a chapter of Blue Ridge Environmental Defense League; WEST VIRGINIA HIGHLANDS CONSERVANCY; INDIAN CREEK WATERSHED ASSOCIATION; SIERRA CLUB; DEFENDERS OF WILDLIFE; CHESAPEAKE CLIMATE ACTION NETWORK; and CENTER FOR BIOLOGICAL DIVERSITY,

Petitioners,

v.

UNITED STATES DEPARTMENT OF THE INTERIOR; DAVID BERNHARDT, in his official capacity as Secretary of the U.S. Department of the Interior; UNITED STATES FISH AND WILDLIFE SERVICE, an agency of the U.S. Department of Interior; AURELIA SKIPWITH, in her official capacity as Director of the U.S. Fish and Wildlife Service; and CINDY SCHULZ, in her official capacity as Field Supervisor, Virginia Ecological Services, Responsible Official,

Respondents,

and

MOUNTAIN VALLEY PIPELINE, LLC,

Intervenor.

On Petition for Review

PETITIONERS' FINAL OPENING BRIEF

Elizabeth F. Benson
Nathan Matthews
Sierra Club
2101 Webster Street, Suite 1300
Oakland, CA 94612
Telephone: (415) 977-5723
elly.benson@sierraclub.org
nathan.matthews@sierraclub.org

Benjamin A. Luckett
Derek O. Teaney
Appalachian Mountain Advocates
Post Office Box 507
Lewisburg, WV 24901
Telephone: (304) 646-1182
bluckett@appalmad.org
dteaney@appalmad.org

Counsel for Petitioners

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INTRODUCTION

Mountain Valley Pipeline, LLC ("MVP") is in the process of constructing approximately 304 miles of new 42-inch diameter gas pipeline across West Virginia and Virginia. Pipeline construction requires cutting a 125-foot right-of-way through forests and over highly erodible steep slopes in Appalachia. Digging the pipeline trench disturbs massive amounts of soil, and MVP has had to resort to blasting the trench in shallow bedrock along 153 miles of the route. Overall, the project will disturb approximately 6,951 acres of land and cross more than 1,100 waterbodies. It will harm plants and wildlife, including endangered species already suffering precipitous population declines.

Petitioners now seek review of the U.S. Fish and Wildlife Service ("FWS") approvals for the pipeline for a second time. After this Court stayed the original approvals in October 2019, the Federal Energy Regulatory Commission ("FERC") halted pipeline construction. New FWS approvals followed in September 2020, and construction recommenced. The new approvals fail to consider aggregate effects on imperiled species, and discount information showing that pipeline construction would harm species recovery. The agency's reauthorizations also introduce new problems with the incidental take limits and improperly ignore destruction of suitable habitat.

JURISDICTIONAL STATEMENT

Petitioners seek review of the U.S. Fish and Wildlife Service's Biological Opinion and Incidental Take Statement authorizing construction and operation of the Mountain Valley Pipeline. This Court has "original and exclusive jurisdiction" over review of FWS's reauthorization. 15 U.S.C. §717r(d)(1).

The Biological Opinion and Incidental Take Statement is a final agency action reviewable under the Administrative Procedure Act ("APA"). 5 U.S.C. §§701–706. Congress provided a six-year statute of limitations for these claims "against the United States." 28 U.S.C. §2401(a). Petitioners' challenge was timely filed within two months of the agency's September 4, 2020 decision.

Petitioners are organizations dedicated to the conservation of the natural environment and wildlife across the region and in the project area. Accordingly, Petitioners' claims are "germane to [each] organization's purpose." *Friends of the Earth v. Laidlaw Envtl. Servs. (TOC), Inc*., 528 U.S. 167, 181 (2000). Organizations like Petitioners have standing when their "members would otherwise have standing to sue in their own right." *Id*. Petitioners' members, in turn, possess standing because they have: "(1) suffered an injury in fact, (2) that is fairly traceable to the challenged conduct of the defendant, and (3) that is likely to be redressed by a favorable decision." *Hill v. Coggins*, 867 F.3d 499, 505 (4th Cir. 2017) (internal quotations omitted).

Petitioners' members have aesthetic and recreational interests in viewing threatened and endangered species in the project area. For example, several of Petitioners' members enjoy observing or searching for Roanoke logperch and candy darter, and plan to continue doing so in the future. Gay Decl. ¶6 (ADD196); Kilduff Decl. ¶13 (ADD232); Christopulos Decl. ¶12 (ADD179); Bowers Decl. ¶23 (ADD115); Chisholm Decl. ¶¶13-14 (ADD172-73); Reilly Decl. ¶¶13-15 (ADD245). Other members routinely travel to areas impacted by the pipeline to view and monitor endangered bats, including Indiana bats. Lambert Decl. ¶¶10-14 (ADD238-40).

These members' interests are harmed by impacts to these endangered species, which can only occur with FWS's sign-off. *See Lujan v. Defs. of Wildlife*, 504 U.S. 555, 562–63 (1992) (observing "animal species...is undeniably a cognizable interest"). Accordingly, Petitioners have organizational standing. *See Am. Canoe Ass'n v. Murphy Farms*, 326 F.3d 505, 517 (4th Cir. 2003).

This Court previously exercised review over Petitioners' claims when it granted their motion to stay FWS's original authorization for this project (Case No. 19-1866).

STATEMENT OF ISSUES

1. Is FWS's analysis of the environmental baseline and cumulative effects arbitrary?

2. Is FWS's analysis regarding the project's impacts on Roanoke logperch and candy darter recovery arbitrary?
3. Is the incidental take limit for Roanoke logperch and candy darter arbitrary?
4. Does FWS improperly omit the Blackwater River drainage when considering effects on the logperch?
5. Does FWS fail to rationally specify the impact of pipeline construction on Indiana bats?

STATEMENT OF THE CASE

Procedural History

On July 10, 2017, FERC requested formal consultation with FWS under Section 7 of the Endangered Species Act ("ESA"). Formal consultation is required if a federal agency "action may affect listed species or critical habitat." 50 C.F.R. §402.14(a). On October 13, 2017, FERC authorized the pipeline under the Natural Gas Act. 161 FERC ¶61,043, Mountain Valley Pipeline, Order Issuing Certificates (Oct. 13, 2017). On November 21, 2017, FWS issued a Biological Opinion and Incidental Take Statement ("2017 BiOp") for the project.

Several of the Petitioners petitioned this Court for review of the 2017 BiOp on August 12, 2019, and filed a motion for stay on August 21, 2019. FERC requested reinitiated consultation on August 28, 2019, and FWS accepted this request on September 11, 2019. AR0015638 (JA1048). On October 11, 2019, this

Court issued an order staying the 2017 BiOp. Order, ECF No. 41 (Case No. 19-1866). The case was put in abeyance pending completion of re-consultation. *Id*.

FWS issued a new Biological Opinion and Incidental Take Statement ("2020 BiOp") on September 4, 2020. On September 30, 2020, the parties moved to voluntarily dismiss the petition for review challenging the 2017 BiOp. On October 27, 2020, Petitioners filed a timely petition for review challenging the 2020 BiOp.

Statement of Facts

The Mountain Valley Pipeline is a 304-mile gas pipeline stretching from West Virginia into Virginia. To install the pipeline, MVP has cleared a 125-foot right-of-way for most of that distance. In total, the project will disturb 6,951 acres of land, including 4,168 acres of soils that are classified as having the potential for severe water erosion. AR0000010 (JA0010), AR0028339 (JA1563). The pipeline route crosses 22.3 miles of slopes between 15 and 30 percent grade, and 75.4 miles of slopes greater than 30 percent. AR0028133 (JA1562). Excavating the pipeline trench across these highly erodible steep slopes displaces massive amounts of soil, and often requires blasting through shallow bedrock. The pipeline route requires over 1,100 waterbody crossings. AR0028126 (JA1560).

FWS issued a BiOp for the project on November 21, 2017, finding that the project was "not likely to jeopardize the continued existence" of five threatened

and endangered species, including the Roanoke logperch, Indiana bat, and Northern long-eared bat. AR0022230-31 (JA1495-96).

On October 23, 2018, Dr. Paul Angermeier—a federal scientist who has studied the Roanoke logperch for thirty years, but was not asked to review the 2017 BiOp—sent comments to FWS outlining serious deficiencies in the BiOp. AR0019833-41 (JA1358-66). He pointed out that, *inter alia*, the BiOp failed to consider sedimentation impacts caused by upland disturbance. AR0019835 (JA1360). MVP's 2017 Biological Assessment had concluded that 36.4 miles of logperch habitat would experience at least a 10 percent increase in sediment load due to "upland Project construction (i.e., upland runoff)." SEN_0003544 (JA1923).

FWS's notes summarizing a November 7, 2018 call acknowledged that "[t]he information from Dr. Angermeier warrants reinitiation of consultation to determine if FWS correctly analyzed the extent of the effects of the action on the [logperch]." AR0019591 (JA1346). Yet four months after Dr. Angermeier sent his letter, FERC had not yet seen it and FWS was "not in a place to recommend reinitiating consultation…." AR0019384 (JA1324). In the meantime, on November 21, 2018, FWS had published a final rule listing the candy darter as endangered. 83 Fed. Reg. 58,747. As described in notes from a March 6, 2019 conference call, "FWS want[ed] to analyze impacts from upland sedimentation on the candy darter"

but was "concerned that conflicting information…might raise legal concerns." AR0019067 (JA1320).

Dr. Angermeier's comments were not made publicly available until April 12, 2019, when FWS attached them to a letter to FERC. Remarkably, in that letter, FWS asked FERC to "provide an explanation as to whether effects to [logperch] from upland sedimentation were considered" in FWS's 2017 BiOp. AR0019052 (JA1305). Several of Petitioners promptly wrote a letter to FWS requesting that the agency reinitiate consultation. AR0018882 (JA1289). On May 16, 2019, MVP responded that FWS was still "actively considering Dr. Angermeier's letter" and that pipeline construction should continue "while the federal agencies complete the[ir] ongoing analyses." AR0018796 (JA1284). On May 22, 2019, FWS responded that it was "currently engaging with FERC on these issues to determine whether reinitiation of our consultation…may be appropriate." AR0018792 (JA1280).

On July 2, 2019, MVP submitted a response to FWS's April 12, 2019 letter. AR0016820 (JA1097). MVP said it was preparing a "revised sedimentation analysis that…will address amounts, location, and timing of sediment loading." AR0017004 (JA1117). MVP acknowledged that its new analysis "expands the number of streams where [logperch] may be affected." AR0017005 (JA1118).

On August 12, 2019, several of the Petitioners filed a Petition for Review with this Court, and separately requested that FWS stay its 2017 BiOp. AR0016455 (JA1094), AR0016368 (JA1089). Three days later, MVP announced a voluntary suspension of "[c]ertain" "new" construction activities, while "continu[ing] certain activities" that, in its view, posed no risk to listed species. AR0016039 (JA1069), AR0016041 (JA1071). That same day, FWS denied Petitioners' stay request because it "expect[s] this voluntary stay to remain in place until the Service has made a final decision…whether it is necessary to reinitiate consultation under the ESA." AR0016035-36 (JA1065-66).

Because the voluntary suspension was inadequate, *see* AR0015960-63 (JA1061-64), Petitioners requested a judicial stay on August 21, 2019. AR0015943 (JA1059). One week later, FERC requested reinitiation of consultation. On September 11, 2019, FWS accepted FERC's request. AR0015638 (JA1048). On October 12, 2019, this Court issued an order staying the 2017 BiOp. On October 15, 2019, nearly one year after FWS received Dr. Angermeier's letter highlighting fatal flaws in the 2017 BiOp, FERC issued an order requiring cessation of construction activities. AR0014482 (JA1041).

On September 4, 2020, FWS issued a new Biological Opinion and Incidental Take Statement, maintaining its earlier no-jeopardy findings. On October 9, 2020,

FERC issued an order allowing construction to proceed along most of the route. FERC eLibrary No. 20201009-3054.

This Petition is relevant to three endangered species. Roanoke logperch are a small benthic fish that "flip rocks with their snout to expose invertebrates and ingest the exposed prey." AR0000046 (JA0046). They "are particularly susceptible to siltation impacts due to their specialized feeding strategy…." SEN_0003520 (JA1912). "Small logperch populations could go extinct with minor habitat degradation," and "[a]ll the populations are small." AR0016718 (JA1096). FWS anticipates that MVP will impact 24.3 kilometers of logperch habitat "through water quality and habitat degradation." AR0000168 (JA0168).

Candy darters are benthic spawners that are "generally intolerant of excessive stream sedimentation," which was "likely a primary cause of the[ir] historical decline…." AR0000050 (JA0050), AR0000053 (JA0053). Their "risk of extinction is high…." AR0019961 (JA1371). FWS anticipates that MVP will impact 3.0 kilometers of darter habitat "through water quality and habitat degradation." AR0000172 (JA0172).

The Indiana bat ("Ibat") is "declining" rangewide. AR0000057 (JA0057). In Virginia and West Virginia, surveys indicate that Ibat populations have decreased at least 95% in recent years. AR0000079 (JA0079). The project would remove

4,714.87 acres of suitable Ibat habitat within the Appalachian Mountain Recovery Unit. AR0000075 (JA0075).

In sum, construction and operation of the pipeline will harm or kill species protected by the ESA. Those activities will intensify the threats facing these species rangewide.

SUMMARY OF ARGUMENT

FWS unlawfully issued a BiOp that includes flawed environmental baseline and cumulative effects analyses that fail to identify past, present, and future activities and analyze their impacts in conjunction with the pipeline's impacts. The BiOp also fails to adequately assess impacts on Roanoke logperch and candy darter recovery, even though the project will harm populations that are key to these species' recovery.

The Incidental Take Statement is arbitrary because it purports to adopt previously established sediment concentration thresholds as the best available methodology for monitoring take of the logperch and darter, but then weakens those standards without providing a reasoned explanation. It also fails to set clear, enforceable limits to prevent excessive take of the logperch and darter, and to trigger renewed consultation if impacts exceed projections.

The BiOp improperly omits consideration of project impacts in streams with potential suitable habitat where FWS stated that logperch presence would be

assumed. The take limit for Ibats omits, without rational explanation, habitat destruction that would have indirect impacts on the bat, and that FWS previously stated would cause the majority of impacts to the bat for a similar pipeline in the same region.

These errors allow endangered species to be harmed in ways not contemplated, or authorized, under FWS's approvals. As a result, the Biological Opinion and Incidental Take Statement are unlawful and should be vacated.

ARGUMENT

I. LEGAL BACKGROUND

A. Standard of Review

This Court reviews the Biological Opinion and Incidental Take Statement under the arbitrary and capricious standard of the APA. *See Sierra Club v. U.S. Dep't of the Interior*, 899 F.3d 260, 270 (4th Cir. 2018); 5 U.S.C. §706(2)(A). Agency decisions are arbitrary and capricious when an agency "entirely fail[s] to consider an important aspect of the problem, offer[s] an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Sierra Club v. U.S. Forest Serv.*, 897 F.3d 582, 590 (4th Cir. 2018), *reh'g granted in part*, 739 F. App'x 185 (4th Cir. 2018) (citations omitted).

The Court "must ensure that the agency has examined the relevant data and articulated a satisfactory explanation for its action." *Defs. of Wildlife v. N. Carolina Dep't of Transp.*, 762 F.3d 374, 396 (4th Cir. 2014) (internal citations and quotations omitted). "The presumption of agency expertise may be rebutted if its decisions, even though based on scientific expertise, are not reasoned." *Greenpeace v. Nat'l Marine Fisheries Serv.*, 80 F. Supp. 2d 1137, 1147 (W.D. Wash. 2000) (citation omitted).

B. The Endangered Species Act

The ESA aims "to protect and conserve endangered and threatened species and their habitats." *Nat'l Ass'n of Home Builders v. Defs. of Wildlife*, 551 U.S. 644, 651 (2007); *see generally* 16 U.S.C. §1531 *et seq*. The legislative history of the ESA "reveals an explicit congressional decision to require agencies to afford first priority to the declared national policy of saving endangered species." *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 185 (1978). The ESA aims "not just to ensure survival, but to ensure that the species recovers to the point that it can be delisted." *Alaska v. Lubchenco*, 723 F.3d 1043, 1054 (9th Cir. 2013), *as amended on denial of reh'g and reh'g en banc* (Oct. 16, 2013) (citations omitted). "The plain intent…was to halt and reverse the trend toward species extinction, whatever the cost." *Tenn. Valley Auth.*, 437 U.S. at 184.

To protect listed species, the ESA prohibits "take" of endangered species. To "take" means to "harass, harm,…wound, [or] kill,…or to attempt to engage in any such conduct." 16 U.S.C. §1532(19). "Harm and harassment include the disruption of normal behavioral patterns and indirect injury caused by habitat modification." *Sierra Club*, 899 F.3d at 269 (citations omitted). The ESA also prohibits agencies from engaging in any action "likely to jeopardize the continued existence of any endangered species or threatened species." 16 U.S.C. §1536(a)(2). To jeopardize means "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. §402.02; *see also Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 524 F.3d 917, 930 (9th Cir. 2008).

The jeopardy determination is made pursuant to the consultation procedures under Section 7. 16 U.S.C. §1536(a)(2). Formal consultation with FWS is required whenever an agency action "may affect listed species or critical habitat." *Sierra Club*, 899 F.3d at 269 (quoting 50 C.F.R. §402.14(a)). During consultation, FWS must "[e]valuate the current status and environmental baseline of the listed species" and "the effects of the action and cumulative effects on the listed species," and offer its opinion "as to whether the action is likely to jeopardize the continued existence of listed species." 50 C.F.R. §402.14(g)(2)-(4).

When consultation has concluded, FWS issues a Biological Opinion. *Defs. of Wildlife v. U.S. Dep't of the Interior*, 931 F.3d 339, 343 (4th Cir. 2019). If FWS determines the activity will not jeopardize the continued existence of any listed species, it may allow the "incidental take" of that species. That occurs only pursuant to a valid Incidental Take Statement ("ITS") "setting enforceable limits on the quantity that may be taken." *Id*. Because an ITS serves as a "'trigger' that, when reached, results in an unacceptable level of incidental take," *Sierra Club*, 899 F.3d at 269 (internal quotations and citations omitted), it must "[s]pecif[y] the impact, i.e., the amount or extent, of such incidental taking on the species." 50 C.F.R. §402.14(i)(1)(i).

The ITS "ensure[s] both that the agency really does ensure against jeopardy and that any take that occurs i[s] minimized." *Defs. of Wildlife v. U.S. Dep't of Navy*, 733 F.3d 1106, 1125 (11th Cir. 2013); *see also* 80 Fed. Reg. 26,832, 26,835 (May 11, 2015) ("The primary purpose of an incidental take statement is…to exempt the incidental take of listed species…and impose conditions on that exemption intended to minimize the impacts of such take for the species' benefit.").

If FWS determines the activity will jeopardize the continued existence of a listed species, then it must "suggest those reasonable and prudent alternatives" that could be implemented by the action agency to avoid jeopardy. 16 U.S.C.

§1536(b)(3)(A). Ultimately, if an "agency's action may jeopardize the survival of species protected by the ESA…the action must be modified" to continue. *Nat'l Wildlife Fed'n*, 524 F.3d at 925.

II. FWS Failed to Consider Aggregate Effects on Protected Species

Few, if any, individual projects would lead to jeopardy of a listed species if considered solely in isolation. *See Pac. Coast Fed'n of Fishermen's Ass'n v. Nat'l Marine Fisheries Serv.*, 265 F.3d 1028, 1036-37 (9th Cir. 2001). Yet species decline anyway, the result of the aggregate impact of many activities over a period of time. *See Nat'l Wildlife Fed'n v. Norton*, 332 F. Supp. 2d 170, 178-79 (D.D.C. 2004). Accordingly, the ESA requires FWS to consider the effects of a proposed action together with (1) the effects of past and present actions in the *environmental baseline*, and (2) the effects of certain future actions in the *cumulative effects* analysis. 50 C.F.R. §402.02; *id*. §402.14(g)(4). FWS then evaluates "whether the aggregate effects…are likely to jeopardize the continued existence of the species." AR0033080 (JA1794). *See also Pac. Coast Fed'n of Fishermen's Ass'ns v. U.S. Bureau of Reclamation*, 426 F.3d 1082, 1093 (9th Cir. 2005) (FWS must analyze "what jeopardy might result from the agency's proposed actions in the present and future human and natural contexts.").

Here, a host of past, present, and future activities—including agriculture, forestry operations, mining, residential and commercial development, and

urbanization—have effects within the MVP action area that degrade endangered species' habitat. As explained below, FWS failed to adequately analyze these activities or their impacts. This failure undermines FWS's conclusions regarding jeopardy and renders the BiOp arbitrary and capricious. *See Turtle Island Restoration Network v. U.S. Dep't of Com.*, 878 F.3d 725, 737-738 (9th Cir. 2017) (finding no-jeopardy determination arbitrary where it focused only on harm from proposed action, rather than in combination with other factors leading to species decline); *Oceana v. Ross*, No. CV 15-0555 (PLF), 2020 WL 5995125, at *23 (D.D.C. Oct. 9, 2020) (finding no-jeopardy conclusion arbitrary where "the jeopardy analysis…lacks any discussion of many of the effects on the species that are identified earlier in the BiOp").

A. FWS Failed to Properly Analyze the Environmental Baseline

FWS cannot reasonably determine a species' ability to weather a proposed action without first addressing the stresses the species is already under. This "environmental baseline" includes "the past and present impacts of all Federal, State, or private actions and other human activities in the action area" and "the impact of State or private actions which are contemporaneous with the consultation in process." 50 C.F.R. §402.02. As explained in FWS's Endangered Species Consultation Handbook ("Handbook"), FWS must analyze "factors affecting the

environment of the species…in the action area."[1] AR0033070 (JA1790) (emphasis in original); *see also Am. Rivers v. FERC*, 895 F.3d 32, 45-46 (D.C. Cir. 2018) (invalidating jeopardy determination inconsistent with Handbook guidance related to baseline conditions).

Here, FWS failed to undertake the required analysis. For Roanoke logperch, for example, instead of assessing factors affecting the aquatic action area, FWS lists each waterbody crossing that has potential logperch habitat and explains that several of them "will not be discussed further in this Opinion."[2] AR0000070-71 (JA0070-71). For the few crossings that remain, and the extensive stream reaches that will be affected by upland sediment runoff, there is no analysis of past or present activities or their impacts on these areas. Instead, FWS concludes the discussion with a generic statement that logperch "decline in the action area is primarily the result of destruction and modification of habitat and fragmentation of the species range. Primary causes of [logperch] habitat degradation include chemical spills, non-point runoff, channelization, impoundments, impediments,

[1] *See, e.g.*, AR0017035 (JA1126); AR0017141 (JA1151); AR0017441 (JA1164); AR0018457 (JA1201); AR0031770 (JA1652).

[2] Several of these crossings are eliminated from further consideration without adequate justification. For example, FWS ignores that, as FERC has acknowledged, boring underneath streams can have serious aquatic impacts, including sediment runoff resulting from bore pit excavation adjacent to waterways and borehole collapse that reroutes the waterbody into the bore pathway. AR0003240-41 (JA0398-99). *See also* section V, *infra* (describing improper omission of Blackwater River drainage crossings).

and siltation." AR0000072-73 (JA0072-73). FWS does not provide any analysis regarding the specific causes or extent of habitat degradation within the action area. *Compare id. with* AR0014092-93 (JA1034-35) (recent BiOp discussing various "historic and ongoing activities and conditions which could affect the candy darter and its proposed critical habitat in the Action Area").

This falls far short of the requirement to provide a meaningful analysis of impacts from "State, tribal, local, and private actions already affecting the species or that will occur contemporaneously with the consultation," as well as any "[u]nrelated Federal actions affecting the same species" that have completed consultation. AR0033070 (JA1790). There is no dispute that such activities—and consequent impacts—exist. In the Cumulative Effects section, FWS states that "there are numerous state and private activities currently occurring within the action area…" AR0000141 (JA0141).[3] MVP has stated that "[n]umerous known third-party land disturbance activities (e.g., agriculture, timber, mining, and off-road vehicle tracks) exist immediately adjacent to the aquatic species streams and

[3] FWS asserts that "these activities are ongoing and the[ir] effects" are considered in the Status of the Species and Environmental Baseline sections, AR0000141 (JA0141), but that is not the case. Moreover, FWS's inadequate cumulative effects analysis, *see* section II.B, *infra*, reveals specific ongoing projects whose effects are not considered in the environmental baseline. For example, the Midway Estates residential development, which would disturb 8.57 acres in close proximity to the South Fork Roanoke River, AR0005194 (JA0455), is dismissed in the Cumulative Effects section because it is "ongoing or completed." AR0000141 (JA0141). But the effects of this action are not considered in the environmental baseline.

the tributaries to those streams…." AR0004698 (JA0430). *See also* AR0000329 (JA0329) (MVP explaining that "there are numerous point sources (e.g., third party construction), nonpoint sources (e.g., disturbed land associated with forestry operations, agriculture, mining, and residential and commercial development), and natural sources (e.g., upland stormwater runoff, streambank erosion), which actively contribute sediment to the Streams of Interest impacts areas and their tributaries…."). The Environmental Impact Statement ("EIS") for MVP shows mining activity in close proximity to the pipeline in Roanoke logperch and candy darter habitat watersheds. AR0027025 (JA1558). *See also* AR0026011-50 (JA1516-55) (listing various projects in the relevant watersheds); AR0031975 (JA1668) (discussing the federal Roanoke River Flood Reduction Project's potential to have "major negative impacts on the logperch population in the upper Roanoke River"). The BiOp also failed to analyze effects in the action area due to factors like urbanization,[4] water withdrawals,[5] and chemical spills.[6]

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[4] *See* FWS, Roanoke Logperch 5-Year Review: Summary and Evaluation (2007), AR0031966 (JA1659) (noting that rapid urbanization in the upper Roanoke River watershed "threatens the existing population density and abundance in this portion of the logperch range").

[5] *See* FWS, Roanoke Logperch Factsheet, AR0016718 (JA1096) ("Water withdrawals may pose a serious threat to the species in the future as the human population of the Roanoke River basin increases.").

[6] Questionnaire – Roanoke Logperch 5-Year Review, 2019 (Responses by Professor James Roberts), AR0018786 (JA1276) (explaining that study "indicated that [the Upper Roanoke] population experiences frequent fish kills from chemical

The candy darter discussion is similarly flawed. For example, the Species Status Assessment for the darter notes that the lower 3.3 miles of the Stony Creek population "is adjacent to a large underground limestone mine, an associated lime plant, a railroad spur line, and a paved road." AR0022093 (JA1443). The BiOp for MVP, which will potentially impact the lower 4.15 miles of Stony Creek, AR000091 (JA0091), fails to even acknowledge the existence of those facilities let alone discuss their effects on candy darters in Stony Creek.

Courts have found that "[s]imply reciting the activities and impacts that constitute the baseline and then separately addressing only the impacts of the particular agency action in isolation is not sufficient." *Defs. of Wildlife v. Babbitt*, 130 F. Supp. 2d 121, 127–28 (D.D.C. 2001); *see also Nat'l Wildlife Fed'n v. Souza*, No. 08-14115-CIV, 2009 WL 3667070, at *6 (S.D. Fla. Oct. 23, 2009) (finding environmental baseline analysis arbitrary and capricious because FWS failed to adequately assess other projects). Here, FWS did not even recite other projects in the action area,[7] let alone "evaluate the[ir] impact" or "analyze the effects of the action in conjunction with the impacts that constitute the baseline." *Id.*

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pollution events, and that such events play a large role in predicting extinction probability for [logperch] populations").

[7] FWS also must include impacts of land-based activities that are outside the terrestrial action area but that have impacts within the aquatic action area. *See S. Yuba River Citizens League v. Nat'l Marine Fisheries Serv.*, 723 F. Supp. 2d 1247, 1271 (E.D. Cal. 2010).

In sum, FWS failed to consider the effects of the pipeline "within the context of other existing human activities that impact the listed species." *ALCOA v. Bonneville Power Admin*., 175 F.3d 1156, 1162 n.6 (9th Cir. 1999) (citing 50 C.F.R. §402.02). This failure to analyze "the effects of the action on the species when 'added to' the environmental baseline—in other words, an analysis of the *total* impact on the species"—was arbitrary and capricious. *Babbitt*, 130 F. Supp. 2d at 128 (quoting 50 C.F.R. §402.02) (emphasis in original).

B. FWS Failed to Properly Analyze Cumulative Effects

FWS also failed to properly consider cumulative effects, which are "effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area…." 50 C.F.R. §402.02. This deficiency is critical because FWS must "formulate its biological opinion as to whether the action, *taken together with cumulative effects*, is likely to jeopardize the continued existence of listed species…." *Pac. Coast Fed'n of Fishermen's Ass'ns v. Gutierrez*, 606 F. Supp. 2d 1122, 1155 (E.D. Cal. 2008) (emphasis added); *see also* 50 C.F.R. §402.14(g)(4); *Greenpeace*, 80 F. Supp. 2d at 1149.

As MVP explained in its 2020 Supplement to the Biological Assessment ("Supplement"), such future activities may include "tree cutting and removal; agricultural activities; industrial, commercial, and residential development; construction and operation of transportation infrastructure; and traditional and

renewable energy development and operation." AR0006678 (JA0567). These are the types of activities that FWS has previously considered when analyzing cumulative effects. For example, in a biological opinion for a 32-mile gas pipeline in Virginia, this same field office wrote that "[c]umulative effects likely to impact these species include ongoing coal mining, the transport of coal via rail, natural gas production, siltation from upland activities, and point and non-point source pollution inputs into waterbodies from roadways and surrounding upland development." AR0017044 (JA1129). The comprehensive Cumulative Effects section in that biological opinion included subsections on "Local Gas Distribution" and "Increased Gas Development." AR0017044-47 (JA1129-32).[8] *See also Souza*,

[8] *See also* AR0018150 (JA1195) (BiOp for construction of a single proposed railway bridge discussing flow depletion due to excessive groundwater pumping, off-road vehicle use within the river channel and riparian area, introduction of baitfish from anglers, and potential spillage of hazardous waste from additional railroad shipments); AR0017628 (JA1172) (discussing municipal water withdrawals, agriculture, timber harvest, rural development, flood control, and commercial and recreational fish harvest); FWS, *Biological Opinion for Koppers, Inc. Intake Structure Modifications* 7 (May 21, 2014), https://www.fws.gov/northeast/endangered/TEBO/pdf/20140521_Letter_Service_to_Corps_BO_Koppers_Inc_SIGNED.pdf ("Urbanization, increased impervious surfaces, untreated runoff, sedimentation, and contaminant spills…are continuing threats to the logperch…."); FWS, *Biological Opinion for Route 40 near Stony Creek, Virginia* 8 (April 17, 1998), https://www.fws.gov/northeast/endangered/TEBO/PDFs/40STBO.PDF ("Cumulative effects…include ongoing siltation, and toxics inputs into the waterway from the bridge and roadway in the action area."). *See Sierra Club*, 899 F.3d at 280, n.7 (taking judicial notice of biological opinions available on FWS's website).

2009 WL 3667070, at *11(identifying 47 projects affecting wood stork habitat in cumulative effects section for a proposed 1,713-acre residential development).

Yet in this BiOp for a 304-mile pipeline with an action area of approximately 1,002,628 acres of land, AR0000075 (JA0075), and 1,163 miles of streams, AR0000040 (JA0040), FWS included only a cursory analysis before concluding that "no cumulative effects are anticipated." AR0000141 (JA0141). Rather than conducting an analysis of actions reasonably certain to occur, FWS relied entirely on MVP's Supplement, which includes a table listing "[e]nergy and transportation projects within two miles" of the project. AR0006680-81 (JA0569-70). The Supplement indicates that MVP identified these projects by reviewing "publicly available Construction Stormwater permits in West Virginia and Virginia." AR0006678 (JA0567).

In the BiOp, FWS considered only six projects. AR0000141 (JA0141). FWS proceeded to quickly dismiss each of these remaining projects because they are "ongoing or completed,"[9] FWS "could find no available information to determine" if the project is "ongoing, completed, or some other status," or "there are no anticipated impacts on listed species." *Id*.

There are several problems with FWS's truncated approach. As an initial matter, FWS made no attempt to identify future actions itself, and instead relied

[9] None of the projects that were dismissed as ongoing or completed were analyzed in the environmental baseline.

entirely on the project proponent's identification of projects requiring a state construction stormwater permit. *See, e.g.*, AR0000141 (JA0141); PRIV_REDACT_0001015 (JA0479). But as FWS's Handbook explains, a variety of sources should be used to identify future non-Federal actions, including "observations and inquiries during field reconnaissance in the action area; discussions with State game and fish agencies and other Federal, State, tribal and local agencies, and conservation organizations; and newspapers and other sources of local information (e.g., radio, television, libraries)." AR0033079 (JA1793).[10] Here, FWS simply relied on the narrow universe of projects supplied by MVP, which did not have access to the same range of information as the federal agencies.[11] FWS does not explain how MVP's review of stormwater permits encompasses all relevant future activities or is an adequate substitute for the searching analysis described in FWS's own Handbook.

FWS's narrow approach also precluded a forward-looking analysis based on past trends, as well as impacts from factors such as continuing urbanization. In other words, FWS made no attempt to undertake an analysis of reasonably certain future activities based on ongoing activities. *See* AR0033080 (JA1794) (FWS's

[10] In the 2017 EIS, FERC "identifie[d] other projects or actions within the geographic scope of analysis for the MVP…through scoping and independent research, as well as information provided by the Applicants." AR0028843 (JA1572).

[11] *See* AR0005155 (JA0449) (MVP explaining that its "responses capture the information that we were able to compile from the sources available to us.").

Handbook explaining, as an example, that where gas development was occurring in the county and within the action area for a proposed highway, "[f]uture natural gas development is a cumulative effect" because "[t]he frequent occurrence of new drilling sites in the area indicated this activity was 'reasonably certain to occur' in the future"). Given the activities currently occurring in the action area, *see* section II.A, *supra*, it is not credible to claim that no such activities are reasonably certain to occur in the future.[12]

In *National Wildlife Federation v. Norton*, which involved "a single permit for a mine on a single site," the court rejected the defendants' argument "that there are no private development projects that are 'reasonably certain' to occur and that plaintiffs have failed to point out a single piece of evidence to the contrary." 332 F. Supp. 2d at 179. The court found "that is an inadequate response where FWS itself recognizes that habitat destruction is one of the most serious threats facing the [species]…, and where, during the period leading up to the issuance of the BiOp for the…project, the [action agency] was engaged in a large-scale cumulative effects analysis." *Id*.

[12] FWS also must identify land-based actions that may impact the aquatic action area, even if such projects are not located in the terrestrial action area. *See* n.7, *supra*. Excluding such activities "would undermine the Act's requirement that agencies 'insure' that their actions do not jeopardize the continued existence of endangered species." *Babbitt*, 130 F. Supp. at 129.

Here, too, habitat degradation is one of the most serious threats facing the endangered species at issue. And FERC's more thorough cumulative effects analysis in its EIS is further evidence that future effects are likely to occur. *See, e.g.*, AR0028857 (JA1583) ("Multiple non-jurisdictional intrastate oil and gas well interconnect and gathering facilities are either proposed, under construction, or have been recently constructed in the vicinity of the proposed projects."); AR0028860 (JA1586) ("WVDOT[] and VADOT are overseeing multiple ongoing and proposed infrastructure projects in the geographic scope for the proposed projects"); AR0028861 (JA1587) (discussing mining operations that "require[] surface clearing, excavation, and mineral extraction," and noting that "[t]hese activities are presently ongoing and could occur into the foreseeable future"). But here, as in *Norton*, "in stark contrast to the []EIS, the BiOp contains almost no discussion of the prospect of future development." 332 F. Supp. 2d at 179.

FERC's ongoing environmental compliance monitoring program for MVP further demonstrates that such development is reasonably certain to occur. *See, e.g.*, Pet'rs' Mot. for Stay, Ex. T at 6 (ECF. No. 23-22) (FERC, Weekly Summary Report for Aug. 30–Sept. 5, 2020) ("[T]he coal company is going to build a coal road across the Mountain Valley easement so the coal company can access its easement on the other side of the pipeline right-of-way."); *id.*, Ex. U at 4 (ECF No. 23-23) (FERC, Weekly Summary Report for Sept. 6–12, 2020) ("[A] landowner's

logging crew damaged erosion control devices off [an] access road…. [T]he environmental crew will replace the damaged erosion control devices once the logging crew has completed work in this area.").[13]

In sum, FWS made no meaningful effort to identify activities for the cumulative effects analysis. Instead, it relied solely on the project proponent's identification of activities, which included only a limited subset of actions that require a state construction stormwater permit. FWS's unduly narrow approach is particularly egregious because the expansive size of the action area and the many ongoing activities leave little doubt that there will be future non-federal actions with impacts in the action area. This failure to undertake the required analysis is significant because "cumulative effects can be the deciding factor in determining the likelihood of jeopardy or adverse modification." AR0033079 (JA1793).

C. FWS Failed to Analyze Climate Impacts on the Logperch and Darter

The BiOp briefly notes that "[c]limate change is an increasing threat to [logperch] with storm events increasing in frequency and intensity, resulting in increased periods of higher water volume, flow rates, and turbidity that affect the

[13] Petitioners included these examples in their stay motion, as they do here, to demonstrate that such activities are occurring in the action area, and it is not credible to claim that no such activities are reasonably certain to occur in the action area in the future. In response, FWS argued that because they are ongoing, these activities form part of the environmental baseline. *See* Resp'ts' Opp'n to Mot. to Stay at 15 (ECF No. 29). These activities are not discussed in the environmental baseline section, nor are their impacts analyzed.

[logperch's] abilities to forage, shelter, and reproduce." AR0000049 (JA0049). *Compare id. with* AR00174442 (JA1165) (in-depth discussion of climate change in bull trout BiOp) *and* AR0017594 (JA1170) (same). The BiOp fails to mention that "persistent threats to [candy darter] populations include…increasing water temperatures from climate change." AR0007303 (JA0721).

More is required. In *Oceana v. Ross*, for example, the agency "identified specific and significant effects on the various sea turtle species from climate change, both in the present and the future." 2020 WL 5995125, at *16. But the court found that the agency "must do more. [The agency] must explain in its jeopardy analysis how it reached its no-jeopardy conclusion in light of these significant effects from climate change." *Id.* Because the agency made no attempt to do so, it "has not provided a reasoned basis for its no-jeopardy conclusion." *Id.*

Here, FWS briefly acknowledged climate impacts on logperch but did not provide a reasoned explanation for failing to consider them in conjunction with project impacts in its jeopardy analysis. "[T]he climate change issue was not meaningfully discussed in the biological opinion, making it impossible to determine whether the information [regarding climate change] was rationally discounted because of its inconclusive nature, or arbitrarily ignored." *Nat. Res. Def. Council v. Kempthorne*, 506 F. Supp. 2d 322, 369 (E.D. Cal. 2007).

III. FWS's Analysis of the Project's Impacts on Species Recovery is Arbitrary and Capricious

FWS must determine whether, "given the aggregate effects, the species can be expected to both survive *and recover*." AR0033084 (JA1796) (emphasis added); *see also* 50 C.F.R. §402.02 (defining "jeopardize" to include an appreciable reduction in "the likelihood of *both the survival and recovery* of a listed species" (emphasis added)); *Nat'l Wildlife Fed'n*, 524 F.3d at 931 (FWS "must consider both recovery and survival impacts."). Recovery means "improvement in the status of listed species to the point at which listing is no longer appropriate…." 50 C.F.R. §402.02. Here, FWS's analysis of the project's impacts on logperch and darter recovery is arbitrary. Consequently, there is no "reasonable assurance that the agency action…will not appreciably reduce the odds of success for future recovery planning, by tipping a listed species too far into danger." *Nat'l Wildlife Fed'n*, 524 F.3d at 936.

1. Roanoke Logperch

Because Roanoke logperch depends on the stream bottom for breeding and feeding, AR0000046 (JA0046), it is "particularly susceptible" to sedimentation. SEN_0003520 (JA1912). Primary factors influencing its status include risks posed by increased sediment and deposition. AR0000049 (JA0049). FWS's recovery plan emphasizes the need to "protect[] and enhanc[e] habitat containing [logperch] populations," and the primary actions to address such conditions include

"[m]aintain[ing] and increas[ing] the health and vigor of present populations through a watershed-level conservation approach that addresses sediment loading…." AR0000046 (JA0046).

There are seven extant populations of Roanoke logperch; only four have a population size above the "minimum viable population level." AR0000049 (JA0049). MVP impacts two of those four: the Roanoke River population and the Pigg River population. FWS predicts that MVP will impact 2,517 adult logperch in 17.6 kilometers (km) in the Roanoke River system (which has a known range extent of 118 km), and 622 adult logperch in 6.7 km in the Pigg River system (which has a known range extent of 100 km). AR0000105-06 (JA0105-06). This 24.3 km impact area "encompasses the stream reaches in which harm to [logperch] from increased sedimentation/turbidity and from increased embeddedness is reasonably certain to occur." AR0000107 (JA0107). "Sediment deposited on the waterbody bottom due to suspended sediment will interfere with the ability of [logperch] to feed" and will "degrade fish spawning habitat." AR0000102 (JA0102), AR0000097 (JA0097).[14]

[14] Past field inspections of the pipeline illustrate the severity of potential impact. For example, in June 2018, a Virginia Department of Environmental Quality inspection of an unnamed tributary to Flatwoods Branch on property adjacent to the MVP right-of-way found that "[a]pproximately 3,600 linear feet of stream channel contained sediment ranging from 1-inch to a maximum depth of 7-inches…." AR0005587 (JA0518). In another inspection of two separate unnamed tributaries to the North Fork Roanoke River, inspectors observed "[a]pproximately

FWS nonetheless asserts that MVP will not impair recovery because only a small portion of logperch populations and their habitat will be impacted, and because these impacts will be temporary. Neither explanation is supported by the record.

First, FWS downplays impacts to recovery by asserting that MVP is anticipated to affect only "a small number of individuals…relative to the overall population numbers," and that "[t]he amount of habitat to be impacted is minor (0.9%) compared to the overall amount of [logperch] habitat available in VA." AR0000149 (JA0149). But FWS expects that this one project will impact 5% of *all* remaining adult logperch,[15] as well as habitat in 3.7% of its known range.[16] FWS cannot simply assert that these percentages are small and therefore irrelevant to species recovery. The ESA's consultation regulations "ensure that a species cannot be 'gradually destroyed, so long as each step on the path to destruction is

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2,200 linear feet of stream channel contain[ing] sediment ranging from 1-inch to a maximum depth of 5-inches…." AR0005592 (JA0523).

[15] FWS anticipates that MVP will take 3,141 adult logperch. AR0000171 (JA0171). The estimated adult population size for the seven remaining populations is 62,029. AR0018757 (JA1247).

[16] The logperch's total "[g]eographic range extent" is estimated to be 663 km. AR0018754 (JA1244). FWS calculates 0.9% by taking the 24.3 km anticipated to be impacted and dividing it by 2,795 km of predicted *suitable* habitat in Virginia. AR0000105 (JA0105). FWS treats suitable habitat inconsistently, without explanation. The agency discounts impacts on suitable habitat in the Blackwater River drainage, *see* section V, *infra*, but maintains that impacts on occupied habitat are minor based on the amount of suitable habitat that remains. Stated differently, in determining the percentage of habitat impacted, FWS includes suitable habitat in the Blackwater River drainage in the denominator but not the numerator.

sufficiently modest.'" *Oceana*, 2020 WL 5995125, at *3 (quoting *Nat'l Wildlife Fed'n*, 524 F.3d at 930); *see also Norton*, 332 F. Supp. 2d at 177 (finding BiOp arbitrary because it "makes no effort to discuss what these percentages mean for the [species].").

In analyzing recovery impacts, FWS also fails to consider the importance of the subset of the "overall population" affected here, and the extensive impacts thereon. *See* AR0000149 (JA0149). The Roanoke and Pigg River populations "underpin the recovery of the species." AR0000073 (JA0073). FWS previously concluded that these populations, like all distinct logperch populations, are "vulnerable because of [their] relatively low density and limited range" and "could go extinct with minor habitat degradation." AR0016718 (JA1096). FWS anticipates that MVP will impact 14.9% and 6.7%, respectively, of the known habitat for these populations. AR0000105-06 (JA0105-06). The fact that other populations may not be impacted does not mean that increased sedimentation in 24.3 km of streams harboring these key populations will not harm species recovery. *See also* AR0018748 (JA1238) (Roanoke population "harbors the majority of the species' extant genetic diversity" and "should receive the highest priority for protection"); *Norton*, 332 F. Supp. 2d at 179 ("FWS must not only explain what its 'disturbance intensity' numbers mean for [the species'] habitat

now, but what part the…project will play in the reasonably expectable degradation over time of the habitat upon which [the species] depends.").

Nor has FWS demonstrated that MVP's impacts will be temporary and therefore insignificant. The agency asserts that MVP's effects are "expected to be *primarily* temporary" and that "*in general*, [logperch] habitat will recover to a suitable condition following temporary impacts." AR0000149 (JA0149) (emphasis added). But FWS expect that "effects from sedimentation and turbidity on food sources (benthic invertebrate community) within the impact areas will last up to 4 years." AR0000109 (JA0109). *See also* AR0000106 (JA0106) (increased embeddedness "alters, degrades, and entombs microbenthic communities that [logperch] depend on as a food source"); SEN_0003526 (JA1918) ("introduced sediment…can be sequestered in streams and impart a legacy effect to future generations in the form of altered aquatic community assemblages and/or reduced sheltering, feeding, or breeding habitats"); AR0009509 (JA0949) ("it is generally the potential for alteration of aquatic habitats due to sedimentation which poses the greatest risk to fish populations").

As FWS's hydrologist wrote, after construction "effects remain as the sediment accumulates in channels or migrates downstream." AR0007017 (JA0590). In a draft of the BiOp, FWS acknowledged that it "expect[s] long-term impacts" and that impacts from re-suspended sediment could last for years.

PRIV_REDACT_0002205 (JA0678).[17] In addition, "[c]onstruction of multiple crossings…within a watershed…has the potential for cumulative effects on that system. In such cases, the capacity of the system to recover from impact may be exceeded, and the detrimental effects of crossing construction permanent." AR0032289 (JA1679). The project will cross hundreds of streams within the Roanoke River watershed. AR0000028 (JA0028); *see also* AR0000313 (JA0313) (map). Moreover, FWS is not requiring MVP to engage in comprehensive habitat monitoring to ensure that habitat impacts are temporary,[18] and largely ignores that the permanent right-of-way is expected to increase sedimentation loading.[19]

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[17] The take limit does not account for these types of long-term impacts. AR0000276 (JA0276). *See also* AR0019839 (JA1364) (explaining that take "associated with a years-long timeframe" is likely to be much larger than short-term take and "would affect multiple reproductive seasons," which has "important implications for meeting the more general challenge of recovering [logperch] from its endangered status").

[18] MVP must conduct a logperch habitat assessment at only three locations (North Fork Roanoke River, Bradshaw Creek, and Harpen Creek crossings), six months after crossing activities are completed. AR0000183 (JA0183). FWS initially proposed a more stringent aquatic species monitoring plan that included a requirement to "develop a scientifically-sound survey/assessment plan to evaluate fish and benthic invertebrate communities and associated physical habitat upstream, within, and downstream of the impacted area at appropriate temporal scales to assess the status of logperch habitat." AR0005880 (JA0537). That plan was replaced with MVP's proposed monitoring plan after the company complained it "need[ed] to resume project construction during the third quarter of 2020." AR0005526 (JA0496).

[19] *See, e.g.*, AR0019838 (JA1363) ("Sediment dynamics are complex and can take decades to return to baseline, especially if some additional sediment-loading continues indefinitely. For the MVP, such long-term sediment-loading seems certain…. Further, sediment mobilized in portions of [logperch] catchments

FWS attempts to dismiss longer-term impacts by claiming that logperch "are expected to continue to occupy waterways within the impact area during and after the project." AR0000149 (JA0149). But occupation is not synonymous with recovery. FWS ignores that any logperch returning to the area "will still suffer adverse effects from sediment deposition because it will impair feeding," PRIV_REDACT_0001006 (JA0470), and "[e]ven incremental impairment of foraging could reduce growth, survival, and/or reproductive success of individual [logperch], which could collectively threaten population persistence." AR0019836 (JA1361).

FWS concludes its discussion of impacts to species recovery with the incredible assertion that MVP, which will increase suspended sediment and sediment deposition, "will not increase threats listed in the [logperch] recovery plan…." AR0000149 (JA0149). The very first page of the recovery plan states that "[m]ajor causes of decline include excessive stream sedimentation…." AR0033620 (JA1835). *See also* AR0033630 (JA1845) ("Factors that have adversely affected the Roanoke logperch in various locations include: turbidity and siltation…."); AR0033640 (JA1855) (listing "Implement measures to reduce erosion and excessive stream sedimentation" as a recovery task, and noting that "[h]ighest priority should be placed on reducing the quantity of silt entering the North Fork

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upstream of [logperch] occurrences may easily take decades to find its way to [logperch]-occupied habitats.").

Roanoke, Nottoway, and Pigg Rivers"); AR0030007 (JA1632) ("Recovery strategies for the species emphasize…particularly (d) reducing sediment loading into streams harboring the species."). Clearly, the sedimentation that MVP will generate is wholly inimical to logperch recovery. *See also* AR0019834 (JA1359) ("any additional sediment-loading is inherently problematic for persistence of [logperch] populations"). FWS's failure to properly consider those impacts on the species' recovery renders the BiOp arbitrary.

2. Candy Darter

Many of the same concerns apply to FWS's analysis of candy darter recovery. "As brood-hiding, benthic spawners that deposit eggs between unembedded pebble and gravel substrates…, [darters] are particularly sensitive to changes resulting from increased sedimentation." AR0000111 (JA0111). They feed "almost exclusively on benthic macroinvertebrates." AR0000110 (JA0110). Darter conservation needs include "unembedded gravel and cobble substrates with minimal sedimentation" and "an abundant, diverse benthic macroinvertebrate community." AR0000051 (JA0051). "Absence or degradation of these features could limit populations of the [darter]." *Id*.

"The risk of extinction is high…." AR0019961 (JA1371). The candy darter has been extirpated from almost half of its historical range. AR0000054 (JA0054). "Excessive sedimentation was likely a primary cause of the historical decline of

the [darter].” AR0000053 (JA0053). Currently, the primary factor influencing its status in West Virginia is hybridization with the variegate darter, but excessive sedimentation remains a “contributing threat[] to [candy darter] populations” and “[s]edimentation remains a problem in many streams within the range of the [darter].” *Id.*. The rangewide status of the species is declining. AR0000054 (JA0054). “The ongoing threats of introgressive hybridization and stream degradation make the recovery potential low for [darters] in the near term.” *Id*.

According to the candy darter recovery plan, “[e]xisting populations should be maintained and enhanced by protecting habitat integrity and quality of streams within watersheds that currently support the species,” which “ should be accomplished by avoiding and minimizing threats to the species including: 1) sedimentation….” AR0019962 (JA1372). Activities to reduce sedimentation include “avoiding or reducing other watershed activities that release sediments…into the water or that result in instream disturbances.” *Id*.

FWS concluded that MVP would impact 2 km of candy darter habitat in the Upper Gauley River (Upper Gauley watershed) and 1 km in Stony Creek (Middle New River watershed). AR0000114 (JA0114).[20] *But see* AR0000091 (JA0091) (noting that the “scope of potential effects to [candy darter] proposed critical habitat” includes “approximately the lowest 4.15” miles of Stony Creek). These

[20] As explained in section IV.C.1, *infra*, there is a high level of uncertainty inherent in MVP’s modeling from which these estimates were derived.

two populations "are considered to be among the most genetically pure populations," which gives them "added importance…for the future conservation and recovery of the species." AR0000075 (JA0075). *See also id*. ("The Upper Gauley and Middle New metapopulations are relatively free from hybridization, making them essential to the recovery of the species.").

Despite the darter's sensitivity to sedimentation and the importance of the affected populations, FWS downplays MVP's impacts on the darter as "temporary" and "relatively small…." AR0000153 (JA0153). This contradicts the evidence in the record. For example, "[s]ediment deposited on the waterbody bottom will interfere with the ability of [the darter] to feed." AR0000110 (JA0110). Because they are not highly mobile, "most adult [darters] will likely not avoid areas of heavy sedimentation by moving to other areas of suitable habitat within the system as the sediment moves within the channel." AR0000111 (JA0111). FWS anticipates that effects on food sources "will last up to 4 years." AR0000116 (JA0116).

This time frame is significant because darters have a "relatively short life cycle, reaching sexual maturity by age 2 and often dying during their third year." AR0000050 (JA0050). FWS's analysis of recovery impacts arbitrarily "ignores the life cycle" of the darter. *Pac. Coast*, 265 F.3d at 1037. Impacts that last longer than the lifespan of a species cannot be dismissed as temporary, particularly in the

context of recovery. Accordingly, "[a]ny biological opinion that plans to allow short-term habitat degradation—presumably, as part of a longer-term plan that anticipates the species' future recovery—must carefully consider the life cycles and behavioral patterns of the species to avoid crippling that recovery." *Miccosukee Tribe of Indians of Fla. v. United States*, 566 F.3d 1257, 1271 (11th Cir. 2009); *see also Nat'l Wildlife Fed'n*, 524 F.3d at 934 ("The 2004 BiOp disregarded our clear instruction that [the agency] 'must consider near-term habitat loss to populations with short life cycles.'"); *Pac. Coast*, 426 F.3d at 1094 (rejecting no-jeopardy finding for failure to provide adequate, reasoned analysis of short-term impacts on endangered salmon). FWS has irrationally and impermissibly failed to do that here.

Finally, FWS's assertion that the project will not diminish the ability of the darter to repatriate historically occupied areas, AR0000154 (JA0154), contradicts the record. Such repatriation is one of the primary actions necessary for darter recovery, AR0000051 (JA0051), and the project will hinder it. The pipeline route crosses Indian Creek, AR0028495 (JA1565), which a West Virginia Division of Natural Resources staffer confirmed is "important habitat for the future survival of this species and should be treated with the same care as a stream containing an extant population of candy darters." AR0024932 (JA1498). As FWS recognized in its Species Status Assessment, "the stream crossings and forest clearing associated

with the permanent right-of-way are likely to increase sediment loading in the relevant watersheds, possibly degrading the habitat in streams potentially suitable for future candy darter reintroductions….” AR0022091 (JA1441). FWS’s refusal to consider those impacts on the darter’s recovery was arbitrary.

IV. The Incidental Take Limit for Roanoke Logperch and Candy Darter is Arbitrary and Capricious

The ESA prohibits “take” of listed species, including disruption of behavior and injury resulting from habitat modification. *Sierra Club*, 899 F.3d at 269 (citing 50 C.F.R. §17.31). MVP would indisputably cause take of listed species. However, in a “narrow exception” to this prohibition, FWS can issue an “incidental take statement” (“ITS”) allowing take incidental to otherwise lawful activity. *Id*. (citing 16 U.S.C. §1539(a)(1)(B)). The ITS must identify a level of take that, in FWS’s view, can occur without causing jeopardy, but that will “trigger” additional review if exceeded. *Id*. at 269-70.

Here, FWS used impact areas in which suspended sediment concentration (“SSC”) levels are expected to exceed certain thresholds as a “surrogate” to monitor logperch and darter take. AR0000169 (JA0169), AR0000173 (JA0173). The take limit is exceeded if water quality monitors indicate that project-related sediment levels exceed various thresholds at the downstream limit of certain “impact areas.” *Id*. As described below, the choice of thresholds was arbitrary for three reasons. First, FWS purported to employ previously established thresholds as

the best available methodology, but then weakened them without providing a reasoned explanation. Second, the take limits are not sufficiently clear to be enforceable. Third, FWS failed to justify its decision not to require monitors in many potentially affected stream reaches.

A. FWS Purported to Adopt Previously Established Sediment Thresholds as a Proxy, But Arbitrarily Weakened Them

FWS based the take limits on thresholds that the agency previously established for another sediment-sensitive fish, the bull trout. The bull trout thresholds, and prior incidental take statements employing them, set limits based on "cumulative" exposure. Here, however, last-minute edits to the BiOp replaced this with "continuous" exposure, resulting in a weaker standard. FWS failed to provide a reasoned explanation for this change.

The bull trout framework was prepared by FWS's Washington State field office in 2010, and concluded that adverse effects to bull trout are anticipated when sediment concentrations exceed background concentrations by:

- 148 mg/L, for any amount of time;
- 99 mg/L, "for more than one hour continuously";
- 40 mg/L, "for more than three hours *cumulatively*"; or
- 20 mg/L, "for over seven hours *cumulatively*."

AR0000277 (JA0277) (emphases added). These thresholds reflect the agency's conclusion that bull trout are harmed at certain elevated concentrations even if exposure is intermittent, rather than continuous.

FWS has repeatedly used these thresholds to set take limits in other ITSs, consistently using "cumulative[]" three- and seven-hour thresholds. *See* AR0017729 (JA1181); AR0010242 (JA0960); Biological Opinion on Index-Galena Road Relocation Project 75–76 (Feb. 14, 2017); Biological Opinion on Telegraph Vegetation Project 2-42 (Jan. 4, 2017); Biological Opinion on Monte Cristo CERCLA Project 83 (Sept. 16, 2011); Biological Opinion on State Route 20, Skagit River Emergency Bank Stabilization and Chronic Environmental Deficiency Project 53 (Aug. 16, 2011).[21]

Here, FWS similarly initially adopted the bull trout thresholds without alteration, proposing to set three- and seven-hour thresholds based on "cumulative" exposure. *See* PRIV_REDACT_0001648 (JA0547), PRIV_REDACT_0001684 (JA0551) (July 2020 draft of the BiOp using "cumulatively" for the three- and seven-hour durations); AR009212 (JA0909) (correspondence from FWS describing threshold for expected adverse effects as "when sediment concentrations exceed 20 mg/L over background for over 7 hours cumulatively"). AR0008025 (JA0858) (same). *See also* AR0000369 (JA0369) (describing the

[21] *See Sierra Club*, 899 F.3d at 276, n.4 & n.7 (taking judicial notice of biological opinions).

proposed surrogate measure of take as "the impact area in which project-related sediment concentrations are predicted to exceed one or more of the [bull trout] thresholds").

The final BiOp, however, abruptly changed course, replacing "cumulatively" with "continuously" for the three- and seven-hour thresholds, *see* AR0000102 (JA0102), and emphasizing that "the elevated concentrations must persist continuously to result in take" of the logperch and darter. AR0000330 (JA0330). FWS has failed to "provide a reasoned explanation" for abruptly abandoning its prior determination that those elevated sediment levels can cause adverse effects even if exposure is not continuous. *Encino Motorcars, LLC v. Navarro*, 136 S. Ct. 2117, 2125 (2016). FWS has neither "display[ed] awareness that it is changing position" relative to how FWS applied the framework in prior ITSs, nor shown "good reasons" for the change. *Id.* at 2126.

FWS's only justification for this change is a footnote added mere days before the BiOp was finalized. AR0000102 (JA0102); *see* AR0003086 (JA0388) (August 27, 2020 draft without this footnote). The footnote's excuse for this change—that the bull trout thresholds were developed based on a 1996 paper that used the term "exposure duration," and the Merriam-Webster dictionary defines "duration" as "continuance in time," AR0000102 (JA0102)—irrationally conflates

a lay definition of the word "duration" and the scientific term "exposure duration."[22]

Merriam Webster notwithstanding, the research underlying the bull trout framework recognized that "construction does not produce uniformly high [total suspended solids] concentrations downstream" and emphasized that "[f]rom the perspectives of ecological effects and stream protection, it is the sum effect of all disturbances which is of critical interest." AR0011912 (JA0978); *see* AR0000250 (JA0250) (explaining that the bull trout framework relied on this study). The sum effect comes from cumulative exposure, not from continuous. And as recently as 2019, FWS's West Virginia Field Office explained that "multiple [sediment] pulses in one area will increase the *total duration of exposure*" for the candy darter, demonstrating the importance of cumulative, rather than just continuous, exposure. AR0014101 (JA1038) (emphasis added). *See also* U.S. E.P.A., Guidelines for Exposure Assessment 7 n.7 (May 1992) (defining "exposure duration" as "a time interval of interest for assessment purposes during which exposure occurs, either continuously *or intermittently*" (emphasis added)).

FWS failed to acknowledge, much less provide a basis for disagreeing with, the scientific literature showing that FWS's prior use of "cumulatively" was

[22] An FWS biologist reviewing the draft was skeptical of the justification, asking "does the footnote make sense and capture why we use continuously?" PRIV_REDACT_0000245 (JA0381).

deliberate and well-supported. And FWS cites *no* factual evidence suggesting that the logperch and darter are not harmed by discontinuous, cumulative exposure to sediment above these threshold levels.[23] *See Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 422 F. Supp. 2d 1115, 1127 (N.D. Cal. 2006) ("To the extent that there is any uncertainty as to what constitutes the best available scientific information, Congress intended 'to give the benefit of the doubt to the species.'"). The decision to replace "cumulatively" with "continuously" was not based on agency expertise or scientific judgment. FWS has not "suppl[ied] a reasoned analysis" for weakening effects thresholds developed by its own scientists and repeatedly applied by the agency in subsequent biological opinions. *Motor Vehicle*

[23] Indeed, any deviation from the bull trout framework should have been in the direction of *additional* protection, given the science showing that the darter and logperch are *more* sensitive to sedimentation than bull trout. *See* AR0009088 (JA0899); AR0032454 (JA1741) (scientific study noting that "nonsalmonid species…may be more sensitive [to sedimentation] than salmonids after extended exposure") (citing Newcombe and Jensen, 1996); PRIV_REDACT_0000977 (JA0458) (FWS biologist explaining that "bull trout/salmonids are not more sensitive than darters. There isn't data to support that."). For example, darters are particularly vulnerable where, as here, the effects from sediment deposition (which degrades spawning habitat) last longer than the species' short generational cycle. AR0000050 (JA0050), AR0000116 (JA0116). In contrast, bull trout "frequently live for 10 years and occasionally for 20 years or more." FWS, *Recovery Plan for the Coterminous United States Population of Bull Trout* (Salvelinus confluentus) 4 (2015). Moreover, unlike bull trout, whose ability to migrate allows them to avoid impacted areas in the short-term, *id.* at 5, "most adult [darters] will likely not avoid areas of heavy sediment deposition by moving to other areas of suitable habitat…." AR0000111 (JA0111). *See also* AR0008768 (JA0878) (explaining that because "salmonids may be more mobile than many darter or logperch species," sedimentation impacts "may be more difficult for sensitive darter or logperch species to avoid or successfully survive").

Mfrs. Ass'n of U.S. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 42 (1983). *See Jimenez-Cedillo v. Sessions*, 885 F.3d 292, 298 (4th Cir. 2018) (agency acts arbitrarily when it departs from past practice without reasoned explanation). In sum, FWS concluded that the bull trout framework provided the "best available methodology" to determine how sediment would impact the logperch and darter, AR0000101 (JA0101), then failed to justify weakening that framework here.

B. The Incidental Take Statement's Triggers for Reinitiation of Consultation Are Unlawfully Vague

The sediment concentration take limits for the logperch and darter are not the "clear standard[s]" the ESA requires, because they are ambiguous as to whether MVP must be solely responsible for an increase that exceeds the thresholds, and because they are too vague as to how any increase in sediment will be attributed to MVP or to another source. 80 Fed. Reg. at 26,839. *See also Grand Canyon Tr. v. U.S. Bureau of Reclamation*, No. CV-07-8164-PHX-DGC, 2010 WL 2643537, at *23 (D. Ariz. June 29, 2010), *aff'd in part, appeal dismissed in part*, 691 F.3d 1008 (9th Cir. 2012), *as amended* (Sept. 17, 2012) (citing *Or. Natural Res. Council v. Allen*, 476 F.3d 1031, 1038 (9th Cir. 2007)) (surrogate must "identify[] the point at which it will be clear that the permitted level of take has been exceeded").

The take thresholds are triggered when "*project-related* SSC/turbidity levels cause an exceedance" of specified "sediment concentration[s] above background." AR0000169 (JA0169) (emphasis added). It is unclear if the BiOp contemplates

that, to exceed the take limit, MVP-related sediment must be found to have contributed the entire threshold amount (e.g., 20 mg/L) or to have been a contributing factor to an exceedance (e.g., if MVP contributed 10 mg/L and another source contributed another 10 mg/L). Portions of the BiOp describe the standard as being whether specifically "project-related" sediment exceeds the threshold, suggesting the former. AR0000330 (JA0330), AR0000335 (JA0335). Others suggest that the issue is whether the project would "cause" an exceedance, which, if interpreted as but-for or proximate causation, may include the latter. AR0000331 (JA0331), AR0000343 (JA0343).

Beyond this ambiguity, the BiOp gives MVP too much latitude to evaluate whether an exceedance of the suspended sediment thresholds was due to the project (i.e., "project-related"). If sediment concentrations rise above background levels, it is MVP that "make[s] a preliminary determination of whether Project-related sediment in fact caused a [threshold] exceedance," or whether, for example, the exceedance occurred because of a third party's actions. AR0000343 (JA0343). No measureable guidelines or enforceable standards explain how MVP will make, or how FERC or FWS will later evaluate, this determination. *See Allen*, 476 F.3d at 1038. Because they fail to provide a "clear standard" for determining when take has been exceeded, 80 Fed. Reg. at 26,839, and do not "adequately trigger

reinitiation of consultation," *Allen*, 476 F.3d at 1038, the take limits are unlawfully vague.

C. Flaws in the Monitoring Plan Render It Arbitrary and Capricious

1. The BiOp Omits Locations in Streams of Interest that Must be Monitored to Ensure Take Limits are Not Exceeded

FWS relies on MVP's hydrological analysis to determine whether certain stream segments require monitoring. If MVP's modeling shows that sedimentation is not anticipated to exceed certain levels, FWS does not appear to require monitoring at that location—whether it is a stream crossing or a "mixing zone" (i.e., a stream segment where sediment from tributaries is delivered to waters where endangered aquatic species are present, *see* AR0000039 (JA0039)).

One problem with this approach is the high degree of uncertainty associated with MVP's modeling. According to MVP, the modeling tools it "used to estimate potential sedimentation from upland construction activities and to define the aquatic portion of the action area are incapable of reliably identifying any areas in potentially occupied rivers/streams where the Project might cause an increase in [total suspended solids] of 20 mg/L above baseline/ambient under real-world conditions." AR0007175 (JA0654). *See also* AR0007177 (JA0656) ("scientifically reliable modeling tools are not available for estimating within a reasonable degree of confidence potential increased sediment concentrations and durations within a waterbody as a result of Project construction activities in order

to evaluate potential exposure of aquatic species"); AR0012349 (JA1001) ("it is worth noting that the model does not model maximum runoff during storms…"); AR0012351 (JA1003) (noting that the models used in the hydrological report are "poor at predicting localized, temporary spikes in stream turbidity…[and] are unlikely to accurately predict the magnitude of changes in suspended sediment"); AR0016056 (JA1086) (model used by MVP "cannot account for the soil loss or slope instability occurring during pulses of short duration and high intensity rainfall"); AR0007747 (JA0755) ("35% of the modeled areas resulted in sediment yields greater than 20 tons/acre/year, which may result in larger uncertainty in model results").

Nonetheless, the BiOp relies on these modeling results to omit monitoring in potentially impacted areas that contain important habitat for endangered species. For example, the BiOp indicates that MVP will only be required to monitor one segment within Stony Creek: the mixing zone associated with the confluence of Kimballton Branch and Stony Creek. AR0000312 (JA JA0312); AR0000317 (JA0317). But another tributary enters Stony Creek approximately 4.15 miles up from its confluence with New River. *See* AR0000091 (JA0091) ("sediment from project activities west of Stony Creek will primarily enter the watershed via the unnamed tributary at Stony Creek [mile] 4.15 and Kimballton Branch"). If MVP's modeling is wrong that the sediment entering Stony Creek from that tributary after

a storm event will be at levels that are "insignificant and/or discountable," AR0000092 (JA0092), then impacts to the darter will not be detected.

Similarly, FWS does not appear to require monitoring downstream of the Stony Creek crossing, even though sediment could enter the river both due to boring impacts, *see* n.2, *supra*, and upland runoff, *see* AR0000091 (JA0091). The BiOp also inexplicably states that "[t]he area below the end of the 800 m zone downstream of the [Stony Creek] crossing occurs in an area that is regularly dry during low summer flows, therefore sediment is not anticipated to be carried beyond this zone." AR0000091-92 (JA0091-92). This ignores both that the area is not dry during other seasons, and that sediment could be carried downstream at a later time. *See, e.g.*, AR0007963 (JA0855) ("Sediment from this site washed into a dry tributary and eventually into Indian Creek").

2. FWS Arbitrarily Assumes that Impacts in Areas Downstream of Crossings and Mixing Zones Will Not Exceed 800 Meters

Instead of attempting to determine "how far downstream adverse effects and take will occur," AR0000285 (JA0285), FWS adopted a blanket 200 m upstream/800 m downstream approach both for mixing zones and most crossings. But FWS never provides a basis for this number. *See also* PRIV_REDACT_0001005 (JA0469) (MVP "criticized the Service's 'one size fits all' approach"). This has wide-ranging impacts, from what tributaries are considered in the BiOp to monitoring locations.

For example, it appears that several tributaries to candy darter streams were omitted from further consideration because the crossing of the tributary "is more than 800m away from a Candy Darter Extant stream section…." AR0019567 (JA1326). *See also* AR0019584 (JA1343) (table indicating "No impact (>800m away)" for several crossings); *id*. ("The pipeline crossing of Strouds Creek is 975m upstream of mouth with Gauley; therefore the crossing is more than 800m upstream of extant population."); AR0000230 (JA0230) ("Due to the distance of the crossings in the tributaries from the confluence with [candy darter] occupied streams (>800 m), we expect impacts from contaminants and sediment would be insignificant and discountable."). But the record indicates that 800 meters is not necessarily an adequate distance. *See, e.g.*, AR0019592 (JA1347) (noting that "Dr. Angermeier's anecdotal experience is that sediment will occur several km downstream from a crossing; therefore he does not think that 800 m is the correct distance where sediment impacts will no longer occur to [logperch]"); AR0021877 (JA1396) (indicating that for the Atlantic Coast Pipeline, FWS requested "additional [erosion and sedimentation] controls" for tributary crossings up to one mile upstream of the confluence with aquatic species streams).

V. FWS Improperly Excluded the Blackwater River Drainage

The BiOp identifies 14 waterbody crossings categorized as either logperch "suitable habitat" or "known to support [logperch]-presence assumed."

AR0000069 (JA0069). But FWS quickly concludes "no impacts to [logperch] are anticipated from the MVP Blackwater River drainage crossings" (6 of the 14 crossings), and states that those "crossings will not be discussed further in this Opinion." AR0000070 (JA0070). FWS fails to adequately support its decision to eliminate these crossings from further consideration.

The BiOp states that logperch "presence in the action area is assumed where suitable habitat was identified." AR0000069 (JA0069). But instead of assuming presence in the Blackwater River drainage, FWS eliminated these crossings from further consideration.

First, FWS states that, "[t]o date, survey efforts have not documented [logperch] in the Blackwater River drainage." AR0000069 (JA0069). But "[p]resence/absence surveys for [logperch] were not conducted for the proposed action." *Id*. *See also* AR0030693-94 (JA1635-36) (FWS instructing MVP to "survey for [endangered] species if suitable habitat is identified"); AR0029098 (JA1604) (noting that for streams with suitable habitat for endangered fish but where "few to no document occurrence [sic] are known," Virginia Department of Game and Inland Fisheries (VDGIF) "typically recommends that surveys for species be completed"); AR0029103 (JA1609) (VDGIF fish diversity biologist noting that in areas with suitable habitat such as the Blackwater River, "[f]urther sampling specifically targeting logperch can be used to determine presence"). And

MVP has stated that "many of the watersheds within the Roanoke-Chowan remain undersampled (e.g., Blackwater River system)…." SEN_0003284 (JA1907). *See also* AR0032332 (JA1719) ("It is not safe to assume that because a Roanoke or Chowan drainage watershed has no prior record of Roanoke logperch, that it does not contain Roanoke logperch."). Accordingly, FWS cannot rely on historical survey data to conclude that logperch do not occupy the Blackwater River drainage.

Nor does environmental DNA (eDNA) sampling demonstrate absence of logperch. Although eDNA analysis did not detect logperch, FWS acknowledges that eDNA testing results are not a "definitive means for determining presence/probable absence." AR0000070 (JA0070). *See also* AR0006542 (JA0559) ("Mountain Valley does not consider eDNA sampling to be a substitute for traditional presence/probable absence surveys."). Moreover, "even if a species is present in a stream, usable eDNA may not be captured in a water sample if species abundance is too low to produce a sufficient density of eDNA." AR0020978 (JA1379). Roanoke logperch is an "elusive[]" species, AR0017006 (JA1119), and their "low catchability, patchy distribution, and low abundance make them difficult to detect." AR0032330 (JA1717). *See also* AR0032302 (JA1689) ("Roanoke logperch are often sparse, which can lead to false observed absences."); SEN_0003284 (JA1907) (noting that several occurrence models

developed by Virginia Tech "suggest that logperch may occur within (1) many more waterbodies within watersheds with known documented occurrences, and (2) waterbodies in watersheds with no known occurrences."); Reilly Decl. ¶¶13-14 (ADD245) (landowner describing observing logperch in Little Creek, which is in the Blackwater River drainage).

In addition, FWS's suggestion that time-of-year-restrictions ("TOYR") will avoid impacts to any logperch that may be present, AR0000070 (JA0070), fails to consider all the avenues for impact. For example, TOYRs on instream work do not protect logperch from increased sedimentation caused by upland soil disturbance or longer-term consequences of open-cut stream crossings. *See* AR0000097 (JA0097) (noting impacts to logperch "when sediment entering a waterbody prior to the start of the TOYR is resuspended during the TOYR and reaches levels that would degrade spawning habitat"); AR0019838 (JA1363) ("TOYRs cannot address indirect and/or cumulative effects of MVP sediment-loading on a) young-of-year growth and survival, which is crucial to population persistence or b) general habitat suitability, including for spawning, in subsequent seasons and years.").

Accordingly, FWS's reasons for concluding that "no impacts to [logperch] are anticipated from the MVP Blackwater River drainage crossings" are inadequate, AR0000070 (JA0070), and FWS's decision to omit these crossings

from consideration when analyzing impacts to the logperch was arbitrary and capricious.

VI. FWS Failed to Specify the Impact for Indiana Bat, Arbitrarily Limiting Take Limits

Because the take limit creates a "'trigger' that, when reached, results in an unacceptable level of incidental take," *Sierra Club*, 899 F.3d at 269, FWS must accurately "[s]pecif[y] the impact, i.e., the amount or extent, of such incidental taking on the species." 50 C.F.R. §402.14(i)(1)(i). If FWS underestimates the impact, the species will be harmed in ways not contemplated in the BiOp or allowed under the ITS. Here, FWS arbitrarily concluded that clearing 1,252.11 acres of suitable unoccupied summer habitat type would have no adverse impacts on the endangered Indiana bat ("Ibat") "because no Ibats are expected to be present…." AR0000083 (JA0083). By omitting consideration of indirect impacts from clearing this habitat, FWS failed to rationally specify the project's impacts on the Ibat.

In its initial biological opinion for the similar Atlantic Coast Pipeline ("ACP"), this same field office concluded that "clearing [suitable unoccupied summer] habitat will have several anticipated indirect impacts, including the expenditure of additional travel energy by pregnant females, which could lead to decreased pup survival, and increased risk of predation, leading to injury or death." *Defs. of Wildlife*, 931 F.3d at 362. FWS "anticipate[d] effects will be greatest to

pregnant females that expend additional energy to seek alternate travel corridors as a result of tree clearing." AR0025656 (JA1512). These impacts are not trivial. Female bats have "tight energy budgets," AR0000123 (JA0123), and "given the significant declines in populations across much of the range, it is essential to minimize impacts to reproductive potential for surviving Ibats." AR0000156 (JA0156).

In *Defenders of Wildlife*, this Court held that FWS's failure to explain an about-face on the effects of clearing unoccupied summer habitat rendered the second ACP BiOp arbitrary and capricious. 931 F.3d at 362-63. The BiOp here suffers from the same flaw. FWS does not even attempt to explain why destroying more than one thousand acres of this habitat would result in *no* adverse effects here, while it concluded for ACP that "a 'majority' of the impacts to Ibats would be caused by the clearing of" this habitat. *Id.* at 362. The fact that no Ibats were captured in mist-net surveys conducted in 2015 and 2016 does not explain this difference. AR0000082 (JA0082).[24] For ACP, negative surveys similarly suggested no Ibat presence. *Defenders*, 931 F.3d at 362. Indeed, the very definition of this habitat type is "suitable for Ibat occupation but in which Ibats have not been detected

[24] Furthermore, these "[s]urvey results are expired." PRIV_REDACT_0001944 (JA0555) (comments on draft BiOp). *See also* AR0018794 (JA1282). Accordingly, "MVP needs to either resurvey this habitat or assume presence and move into the unknown use summer habitat category." PRIV_REDACT_0001944 (JA0555).

during the summer." *Id*. at 360. Thus the negative surveys "do not explain th[is] complete change in position…." *Id*. at 362.

If there is a rational explanation for why clearing suitable unoccupied summer habitat for ACP would have serious consequences, while clearing the same type of habitat for MVP would have no effects, FWS did not supply it. Moreover, the "BiOp's conclusion is in conflict with the evidence before the agency." *Id*. "[T]wo of the 'primary factors' that influence the Ibat's status are 'habitat loss and degradation' and 'forest fragmentation.'" *Id*. According to MVP, "[t]he largest indirect impact associated with construction of the Project is from forest fragmentation." AR0025705 (JA1515).

FWS also fails to consider the importance of suitable unoccupied summer habitat in light of climate change, which "poses a serious and increasing threat" to Ibats. AR0015745 (JA1053). Due to projected temperature changes, the Appalachian Mountain Recovery Unit areas in Virginia and West Virginia "may serve as climatic refugia for Indiana bats when other parts of the range become too warm." AR0015746 (JA1054) (citation omitted).[25] But currently unoccupied habitat cleared for pipeline construction "will not be suitable summer habitat available for future use." AR0025590 (JA1509). *See also* AR0013532 (JA1017)

[25] *See also* AR0000060 (JA0060) (noting that white-nose syndrome "impacts are expected to continue across the range for years to come as are other ongoing threats (e.g., climate change…)").

("It will be necessary to show why clearing of this [unoccupied summer] habitat will not impact recovery.").

The BiOp is thus "arbitrary and capricious because, in reaching incidental take conclusions for [the Ibat], it did not consider the potential effects of" clearing suitable unoccupied summer habitat. *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1119 (9th Cir. 2012). FWS was required to consider these impacts or, alternatively, offer a "cogent explanation for [its] about-face." *Defenders*, 931 F.3d at 362. It did neither.

CONCLUSION

For the foregoing reasons, Petitioners respectfully request that the Court vacate the Biological Opinion and Incidental Take Statement.

Petitioners respectfully request oral argument on this petition for review because it presents questions of continuing and important public interest, the dispositive issues have not been authoritatively decided by the Courts of the United States, and the decisional process would be aided by oral argument.

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Respectfully submitted,

/s/ Elizabeth F. Benson

Elizabeth F. Benson
Nathan Matthews
Sierra Club
2101 Webster Street, Suite 1300
Oakland, CA 94612
Telephone: (415) 977-5723
Fax: (510) 208-3140

elly.benson@sierraclub.org
nathan.matthews@sierraclub.org

Benjamin A. Luckett
Derek O. Teaney
Appalachian Mountain Advocates
P.O. Box 507
Lewisburg, WV 24901
Telephone: (304) 646-1182
bluckett@appalmad.org
dteaney@appalmad.org

Counsel for Petitioners

CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(g), I certify that this opening brief complies with the type-volume limitation because it contains 12,983 words.

I further certify that this brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in Times New Roman 14-point font using Microsoft Word.

Dated: March 19, 2021

/s/ Elizabeth F. Benson
Elizabeth F. Benson

CERTIFICATE OF SERVICE

I hereby certify that on March 19, 2021, I electronically filed the foregoing Opening Brief on behalf of Petitioners with the Clerk of Court using the CM/ECF System, which will automatically send e-mail notification of such filing to all counsel of record.

/s/ Elizabeth F. Benson
Elizabeth F. Benson