

United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued January 12, 2018

Decided July 6, 2018

No. 16-1195

AMERICAN RIVERS AND ALABAMA RIVERS ALLIANCE,
PETITIONERS

v.

FEDERAL ENERGY REGULATORY COMMISSION AND UNITED
STATES SECRETARY OF THE INTERIOR,
RESPONDENTS

ALABAMA POWER COMPANY,
INTERVENOR

Consolidated with 16-1336

On Petitions for Review of Orders of the
Federal Energy Regulatory Commission

Megan H. Huynh argued the cause for petitioners. On the
briefs were *Catherine Wannamaker* and *Sarah Stokes*.

Anand Viswanathan, Attorney, Federal Energy Regulatory
Commission, argued the cause for respondent. With him on
the brief were *David L. Morenoff*, General Counsel at the time
the brief was filed, and *Robert H. Solomon*, Solicitor.

Allen M. Brabender, Attorney, U.S. Department of Justice, argued the cause for respondent the Secretary of the Interior. With him on the brief was *Eric Grant*, Deputy Assistant Attorney General. *David C. Shilton* and *Robert J. Lundman*, Attorneys, entered appearances.

James A. Byram Jr., *James H. Hancock Jr.*, *Jason B. Tompkins*, *Peter D. Keisler*, and *C. Frederick Beckner III* were on the brief for intervenor Alabama Power Company.

Before: SRINIVASAN and MILLETT, *Circuit Judges*, and SENTELLE, *Senior Circuit Judge*.

MILLETT, *Circuit Judge*, and SENTELLE, *Senior Circuit Judge*: Many portions of Alabama's and Georgia's Coosa River ecosystem are in fragile condition after, among other things, decades of power plant operations and development. In 2013, the Federal Energy Regulatory Commission granted the Alabama Power Company a 30-year license to continue power generation on a portion of the Coosa River. A review of the licensed project's impact on the environment and endangered species documented that the project would cause a 100% take of multiple endangered mussels, a large loss of indigenous fish, and perilously low dissolved oxygen levels for substantial periods of time.

Nevertheless, the Commission concluded that licensing the generation project would have no substantial impact on either the River's ecological condition or endangered species. In doing so, the Commission declined to factor in the decades of environmental damage already wrought by exploitation of the waterway for power generation and that damage's continuing ecological effects. Because the Commission's environmental review and a biological opinion it relied on were unreasoned and unsupported by substantial evidence, the

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Commission's issuance of the license was arbitrary and capricious. Accordingly, we dismiss the first petition for review, grant the second petition for review, vacate the licensing decision, and remand for further proceedings consistent with this opinion.

I

A

This case implicates three intersecting statutory schemes, all of which are designed to force federal agencies to carefully assess and address the environmental impacts of large-scale development projects.

1. The Federal Power Act, 16 U.S.C. § 791 *et seq.*, charges the Federal Energy Regulatory Commission with licensing the development, improvement, and operation of hydroelectric projects along navigable waterways. No license may be issued unless the Commission first determines that the proposed project “will be best adapted to a comprehensive plan for improving or developing” the relevant waterways. *Id.* § 803(a)(1); *see also id.* § 797(e). In making that judgment, the Commission must give “equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality.” *Id.* § 797(e).

When an existing license holder seeks to renew its license, “the Commission shall * * * take into consideration * * * (A) [t]he existing licensee’s record of compliance with the terms and conditions of the existing license [and] (B) [t]he actions taken by the existing licensee related to the project which affect

the public.” 16 U.S.C. § 808(a)(3)(A)–(B). And whether issuing the first license for a project or relicensing an ongoing project, the Commission must equally advance the Federal Power Act’s multifaceted purposes and ensure that the licensed project is the most viable option for developing a waterway. *Id.* §§ 797(e), 803(a)(1)(2). While a relicensing decision is under review, the Commission also must maintain the power-generation status quo by temporarily extending the expired license on its original terms and conditions. *Id.* § 808(a)(1).

2. The National Environmental Policy Act (“NEPA”), 42 U.S.C. § 4321 *et seq.*, obligates federal agencies to analyze the environmental consequences of proposed major federal actions and to factor those impacts into its decisionmaking. Under NEPA, agencies may first conduct an Environmental Assessment (“Assessment”) to determine whether the proposed federal action will significantly impact the quality of the human environment. 40 C.F.R. §§ 1501.4; 1508.9(a). If that Assessment reveals that the environmental consequences of the agency’s proposed action will not be significant, the agency must issue a “[f]inding of no significant impact,” explaining why the agency action will not significantly affect the environment. *Id.* §§ 1508.9; 1508.13. But if the Assessment demonstrates that significant effects could result, the agency must prepare an Environmental Impact Statement, 42 U.S.C. § 4332(C), describing a “range of alternatives” and explaining how the agency’s ultimate decision will comply with environmental laws and policies, 40 C.F.R. § 1502.2.

3. The Endangered Species Act (“ESA”), 16 U.S.C. § 1531 *et seq.*, broadly protects endangered and threatened animal and plant species as well as their habitats. The Department of the Interior’s Fish and Wildlife Service (“Service”) is charged with administering the Act. *See* 50 C.F.R. § 402.01(b). Once the Service lists a species as

threatened or endangered, the Endangered Species Act requires “[e]ach federal agency,” in consultation with the Service, to ensure that any action “authorized, funded, or carried out by such agency * * * is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [the] habitat of such species[.]” *Id.* § 1536(a)(2).

As part of that inter-agency consultation process, the Service will issue a “biological opinion” that explains whether “the action, taken together with cumulative effects, is likely to jeopardize the continued existence of listed species[.]” 50 C.F.R. § 402.14(g)(4). If the Service determines that the agency action is not likely “to jeopardize the continued existence of any species,” 16 U.S.C. § 1536(a)(2), but will result in the “incidental taking” of some members of the listed species, the biological opinion must spell out “the impact of such incidental taking on the species,” describe “reasonable and prudent measures * * * necessary or appropriate to minimize such impact,” and set “the terms and conditions (including, but not limited to, reporting requirements) that must be complied with” for the agency action to go forward, *id.* § 1536(b)(4)(C); *see* 50 C.F.R. § 402.14(i). The Endangered Species Act defines “take” broadly, meaning “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” any listed species. 16 U.S.C. § 1532(19).

B

1

The Coosa River Basin spreads across about 10,161 square miles in Alabama, Georgia, and Tennessee. The Coosa River is formed by the confluence of the Oostanaula and Etowah Rivers near Rome, Georgia, and it flows 267 miles south where

it meets with the Tallapoosa River in Alabama. *Order Issuing New License*, 143 FERC ¶ 61,249 P 8 (2013) (“*Licensing Order*”). The Coosa River is a highly regulated waterway with nine hydropower and storage developments controlling its flow. Each of those developments is operated by either the Alabama Power Company or the United States Army Corps of Engineers.

Alabama Power operates seven hydroelectric generator and storage developments along waterways located primarily in Alabama. The Company’s developments on the Coosa River (“the Coosa Project”) are at the center of this dispute. From upstream to downstream, the developments are: (1) Weiss; (2) H. Neely Henry; (3) Logan Martin; (4) Lay; (5) Mitchell; (6) Jordan; and (7) Bouldin. The Army Corps of Engineers operates an additional five developments along the same waterways and extending into neighboring States, none of which are directly at issue in this case.

The Coosa Project traces its roots back to the 1920s, when the Mitchell and Jordan hydropower plants were licensed and constructed. The Army Corps of Engineers oversaw the projects with the goal of developing the Alabama-Coosa River system to support navigation, flood control, and hydroelectric power generation.

Some three decades later, Congress suspended federal hydropower development of the Coosa River in favor of private development under licenses issued by the federal government. Alabama Power received its first Coosa River license in 1957 and proceeded to construct and operate five additional developments.

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Licenses for the original Coosa Project, as well as for Mitchell and Jordan hydropower plants, were all scheduled to expire on July 31, 2007. Two years before that deadline, Alabama Power tendered its application for relicensing of all of its developments, as required by 16 U.S.C. § 808(c)(1). In its application, Alabama Power sought to consolidate all of the projects into a single license. The Commission published a notice of the license application in the Federal Register in June 2008, indicating that “the application was ready for environmental analysis” and soliciting protests, comments, and recommendations. *Licensing Order* at P 5. A number of public and private conservation and natural resource stakeholders timely intervened, including Alabama Rivers Alliance, American Rivers, Atlanta Regional Commission, American Whitewater, Coosa River Paddling, and World Wildlife Fund (collectively, the “Conservation Groups”).

Eighteen months after the Federal Register notice, the Commission issued its final Environmental Assessment on the license application. That Assessment concluded that the relicensing decision did not constitute a major federal action significantly affecting the environment, and so the Commission issued a “Finding of No Significant Impact.” *See* 40 C.F.R. § 1508.13.

Two and a half years later, in June 2012, the Fish and Wildlife Service issued its Biological Opinion analyzing the impact of renewing the license on endangered and threatened species in the project area, with particular focus on the Coosa River’s nine listed species and twelve critical habitats. *See generally Biological Opinion for the Relicensing of Alabama Power Company’s Coosa River Hydroelectric Project* (2012) (“Biological Opinion”). The Biological Opinion concluded

that relicensing the project was not likely to “jeopardize” any threatened or listed species, nor destroy or deleteriously affect any critical habitats. Biological Opinion at 89–90.

On June 20, 2013, the Commission granted Alabama Power a new 30-year license to continue operating the now-combined Coosa Project. Both the Commission’s final Environmental Assessment and the Service’s Biological Opinion were incorporated, without change, into the license. *See Licensing Order* at PP 200–214, Appendix B. The license imposed several terms and conditions on Alabama Power’s operations, including as most relevant here, the duty to (i) implement “aeration” measures to achieve a constant minimum dissolved oxygen level of 4.0 milligrams per liter (“mg/L”) at each development “at all times,” (ii) enhance dissolved oxygen levels at Logan Martin during periods of non-generation to protect certain listed aquatic species, (iii) incorporate water-quality monitoring measures prescribed by the Alabama Department of Environmental Management, and (iv) conduct surveys of aquatic species to ensure no further decline of threatened and endangered mussels and snails. *Id.* at PP 72–73.

Several parties, including the Conservation Groups and Alabama Power, timely sought rehearing of the Licensing Order. The Commission denied the Conservation Groups’ rehearing request in full. But it granted Alabama Power’s request, materially slackening Alabama Power’s duty to maintain the required levels of dissolved oxygen. In particular, the Commission provided that the prescribed water quality standards, including the maintenance of dissolved oxygen levels, would apply only when the hydroelectric developments were actually generating power. *Order on Rehearing and Clarification and Dismissing Request for Stay,*

155 FERC ¶ 61,080 (2016) (“*First Rehearing Order*”). That is generally less than 20% of the year.

The Conservation Groups filed a petition in this court seeking review of the Commission’s Licensing Order, First Rehearing Order, and the Biological Opinion on the ground that they violated the Federal Power Act, NEPA, and the Endangered Species Act. Meanwhile, the Conservation Groups submitted a second rehearing request to the Commission addressing the significantly lowered water-quality standards and alteration of the dissolved oxygen levels, as well as reiterating the objections from their first request for rehearing. The Commission denied that request. *Order Denying Rehearing*, 156 FERC ¶ 61,171 (2016) (“*Second Rehearing Order*”).

Two weeks later, the Conservation Groups filed a second petition for review in this court challenging the Commission’s Second Rehearing Order. They also immediately moved to consolidate their two petitions for review. We granted the motion to consolidate.

II

Because confirming jurisdiction must always be a federal court’s first inquiry, we start there.

A

Although the Commission and the Secretary of the Interior have not challenged the Conservation Groups’ standing to seek review of the Commission’s licensing orders, intervenor Alabama Power Company argues that the Conservation Groups have failed to establish standing for any of the issues raised in either petition. “Even in the absence of intervenor’s objection,

we would be required to review petitioners' standing." *Grocery Mfrs. Ass'n v. EPA*, 693 F.3d 169, 174 (D.C. Cir. 2012). Article III standing is jurisdictional, and "we have an 'independent obligation to be sure of our jurisdiction.'" *Id.* (quoting *Sierra Club v. EPA*, 292 F.3d 895, 898 (D.C. Cir. 2002)). If neither American Rivers nor Alabama Rivers Alliance "has Article III standing, then this court has no jurisdiction to consider these petitions." *Id.* (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992)). Therefore, before we reach the merits of the petitions, we must determine whether the Conservation Groups have standing to raise those petitions in court.

Each petitioner asserts that it has associational standing. "An organization has associational standing to bring suit on its members' behalf when: (1) at least one of its members would have standing to sue in his or her own right; (2) 'the interests it seeks to protect are germane to the organization's purpose'; and (3) 'neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.'" *Sierra Club v. FERC*, 827 F.3d 59, 67 (D.C. Cir. 2016) (quoting *WildEarth Guardians v. Jewell*, 738 F.3d 298, 305 (D.C. Cir. 2013)). It is clear and undisputed that the Conservation Groups meet the latter two requirements of associational standing. The only question is whether the first requirement is met.

"To satisfy the first requirement of the associational standing inquiry, [the Conservation Groups] must show that: (1) at least one of [their] members has suffered an 'injury-in-fact' that is 'concrete and particularized' and 'actual or imminent, not conjectural or hypothetical'; (2) the injury is 'fairly traceable to the challenged action'; and (3) it is 'likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.'" *WildEarth Guardians*,

738 F.3d at 305 (quoting *Friends of the Earth, Inc. v. Laidlaw Env'tl. Servs. (TOC), Inc.*, 528 U.S. 167, 180–181 (2000)).

Under controlling precedent, associations like the Conservation Groups “adequately allege injury in fact when they aver that [one or more members] use the affected area and are persons ‘for whom the aesthetic and recreational values of the area will be lessened’ by the challenged activity.” *WildEarth Guardians*, 738 F.3d at 305 (quoting *Laidlaw*, 528 U.S. at 183). The Conservation Groups allege that their members will be injured because the license will adversely affect their recreational use of the river and their interest in observing the biodiversity of the Coosa River. In support of this alleged injury, the Conservation Groups submitted declarations from multiple members attesting to their use and enjoyment of the Coosa River and the alleged negative impacts that the license will have on that use and enjoyment.

Alabama Power argues that the Conservation Groups fail to show injury because they cannot show that the license threatens their current recreational interest in the Coosa River. Alabama Power contends that the Conservation Groups’ members will be able to continue to use the Coosa River as they have always used it because the new license will benefit the Coosa River, not harm it. However, that argument goes to the merits not standing. The Environmental Assessment and Biological Opinion recognize the possibility of “[f]luctuating flow releases,” “intermittent periods of low [dissolved oxygen],” and other potential “poor water quality conditions” that could “adversely affect some aquatic species” and “aquatic resources.” Environmental Assessment at 222, 250; Biological Opinion at 90–93. The Conservation Groups’ members expressed interests in observing and enjoying the diversity of the Coosa River. The increased risks to water quality and endangered and threatened species in the Coosa

River satisfy the injury-in-fact requirement. Alabama Power contends that this license imposes more stringent requirements or may improve some environmental conditions. The Conservation Groups have adequately alleged that even these allegedly improved conditions will continue to harm their use and enjoyment of the Coosa River. Whether the evidence of harm ultimately supports the allegation is a question for a later day. In short, the Conservation Groups have adequately alleged a concrete and imminent injury to their members' use and enjoyment of the Coosa River that is traceable to the Commission's decision to issue a license and redressable by revocation or alteration of its terms.

In addition to the injury to their members' use and enjoyment of the Coosa River, the Conservation Groups allege that the Commission's failure to prepare an Environmental Impact Statement constitutes a procedural injury. "Where, as here, a party alleges deprivation of its procedural rights, courts relax the normal standards of redressability and imminence." *Sierra Club*, 827 F.3d at 423. To establish causation, the Conservation Groups "need demonstrate only that 'the procedural step was connected to the substantive result,' not that 'the agency would have reached a different substantive result' but for the alleged procedural error." *Id.* (quoting *WildEarth Guardians*, 738 F.3d at 306). "[A]n adequate causal chain must contain at least two links: one connecting the omitted [Environmental Impact Statement] to some substantive government decision that may have been wrongly decided because of the lack of an [Environmental Impact Statement] and one connecting that substantive decision to the plaintiff's particularized injury." *WildEarth Guardians*, 738 F.3d at 306 (quoting *Florida Audubon Soc'y v. Bentsen*, 94 F.3d 658, 668 (D.C. Cir. 1996) (en banc)). Applying that precedent to this case, the Conservation Groups do not need to show that the preparation of an Environmental Impact

Statement would have led to a different ultimate result, but only that the requirement for such a report is connected to the ultimate decision. The Conservation Groups have adequately alleged that the omission of the Environmental Impact Statement was causally connected to the issuance of the license which they allege will harm their members' use and enjoyment of the Coosa River.

“The relaxed redressability requirement is also satisfied.” *WildEarth Guardians*, 738 F.3d at 306. “Vacatur of the [licensing] order would redress [the Conservation Groups'] members' injuries because, if [the Commission] is required to adequately consider each environmental concern, it could change its mind about” issuing the license. *Id.* Alabama Power argues that the Conservation Groups' injury cannot be redressed because “NEPA is forward looking and does not require federal agencies to restore biodiversity that may have been lost due to decisions that were made long ago.” Intervenor Br. 15. Although Alabama Power may be correct in the generality of its statement, on the specifics of the case before us, the Conservation Groups seek to prevent future deterioration to the biodiversity of the Coosa River so that the future use and enjoyment of their members are not impaired. This injury is redressable. Requiring the Commission to prepare an Environmental Impact Statement might cause the Commission to gather more information that could improve the conditions in the license and the conditions of the Coosa River. Under these circumstances, the Conservation Groups have established standing to challenge the Coosa River Project license.

B

Alabama Power also argues that the Conservation Groups' first petition for review is jurisdictionally barred, and that this

court is limited to reviewing only the challenges raised in their second petition for review, which were aimed at the Biological Opinion and the materially reduced water quality standards.

Alabama Power is half right. The first petition for review must be dismissed, but the second petition for review encompasses the Conservation Groups' challenges to both the Biological Opinion and the Environmental Assessment.

The Federal Power Act generally requires any party seeking judicial review of a Commission order to first present its claims in an application for rehearing to the Commission. *See* 16 U.S.C. § 825l(a), (b). Once the Commission acts on the application, the party has sixty days to file its petition for judicial review. *Id.* § 825l(b).

After the Commission granted Alabama Power its license, both the Conservation Groups and Alabama Power filed timely applications for rehearing. The Conservation Groups' application challenged the Licensing Order's compliance with NEPA, the Endangered Species Act, and the Federal Power Act. Three years later, the Commission denied the Conservation Groups' rehearing request and granted Alabama Power Company's request by substantially weakening the required water quality standards. *First Rehearing Order* at P 150.

The Conservation Groups quickly filed a second application for rehearing before the Commission that both (i) challenged the Commission's decision to decrease the water quality standards originally required by the license, and (ii) incorporated by reference the Groups' NEPA, Federal Power Act, and Endangered Species Act challenges from their first rehearing application.

While that second rehearing request was still pending before the Commission, the Conservation Groups filed a petition for review in this Court seeking review of the Licensing Order, the First Rehearing Order, and the Biological Opinion.¹ The Commission moved to dismiss that petition for lack of jurisdiction due to the ongoing rehearing proceedings before the Commission. Resp'ts' Mot. to Dismiss for Lack of Jurisdiction 1.

The Commission denied the Conservation Groups' second request for rehearing shortly thereafter. *Second Rehearing Order* at P 1. The Conservation Groups then promptly filed a second petition for review in this court challenging that denial and the Biological Opinion. The next day, the Conservation Groups moved to consolidate their two petitions for review. That action prompted the Commission to withdraw its earlier motion to dismiss. This court granted consolidation in November 2016.

The Conservation Groups' first petition for review is jurisdictionally barred. The law is "well-established that a party may not simultaneously seek both agency reconsideration and judicial review of an agency's order." *Tennessee Gas Pipeline Co. v. FERC*, 9 F.3d 980, 980 (D.C. Cir. 1993)

¹ The Conservation Groups have explained that they filed their first petition in an effort to protect against any risk of having a later challenge to the first denial of rehearing deemed untimely. *See* Pet'rs' Opp. to Mot. to Dismiss 5 (explaining that the first petition for review was filed because the Groups "did not want to risk losing their right to appeal despite the pending second request for rehearing"). We have advised parties that are unsure whether a rehearing order has made a significant change to an underlying license to follow the "safer course" by filing a protective petition for review. *Smith Lake Improvement & Stakeholders Ass'n v. FERC*, 809 F.3d 55, 58 (D.C. Cir. 2015).

(citation omitted). Because the Conservation Groups' first petition for review was filed while its second request for agency reconsideration was still pending before the Commission, it was "incurably premature and must be dismissed for lack of jurisdiction." *Id.* at 981 (internal quotation marks omitted); *see also Smith Lake Improvement & Stakeholders Ass'n v. FERC*, 809 F.3d 55, 57–58 (D.C. Cir. 2015).

All is not lost for the Conservation Groups, however. Their second petition for review filed with this court was both proper and timely. But the content of that second petition for review raises another issue: it specifically sought review only of the Commission's Second Rehearing Order and the Biological Opinion. The second petition did not list the underlying Licensing Order or the First Rehearing Order as the decisions for which review was sought.

Federal Rule of Appellate Procedure 15 requires that a petition for review must "specify the order * * * to be reviewed." FED. R. APP. P. 15(a)(2)(C). But a "mistaken or inexact specification of the order to be reviewed" is "not fatal," as long as the "intent to seek review of a specific order [i] *can be fairly inferred* from the petition for review or *from other contemporaneous filings*, and [ii] the respondent is not misled by the mistake." *Entravision Holdings, LLC v. FCC*, 202 F.3d 311, 313 (D.C. Cir. 2000) (emphases added) (collecting cases in which the petitioner's intent to obtain review was inferred from contemporaneous filings).

Fortunately for the Conservation Groups, their intent to seek review of all three of the Commission's Orders and the Service's Biological Opinion can be fairly inferred from the motion to consolidate the two petitions for review, the docketing statement, the statement of issues, and the

underlying decisions attached to the appeal. *See Martin v. FERC*, 199 F.3d 1370, 1371–1373 (D.C. Cir. 2000) (concluding that a contemporaneously filed motion to stay, docketing statement, and certificate as to rulings under review demonstrated the petitioner’s intent also to seek review of the Certificate Order, even though it was not initially listed in the petition for review); *Damsky v. FCC*, 199 F.3d 527, 532–534 (petitioner’s contemporaneously filed Notice of Appeal and Concise Statement of Reasons adequately “brought the [challenged order] before this court for review.”); *see also Entravision*, 202 F.3d at 314 (denying review of an underlying order because petitioner’s intent to seek review could not be inferred from contemporaneous filings, such as the docketing statement and statement of issues, which did not reference the order).

Nor was the Commission in any way misled or prejudiced by the Conservation Groups’ *seriatim* filings. The Commission has claimed no prejudice before this court and, in fact, agreed to the Groups’ consolidation of the two petitions. In the Commission’s view, “[b]ecause [the] Conservation Groups filed a second petition for review * * * and because they moved to consolidate both petitions for review, dismissal of their first petition for review *will have no practical effect on the issues presented* for this Court’s review.” FERC Br. 5 (emphasis added). Nor does Alabama Power identify any concrete harm or prejudice to its litigation of this case.

For those reasons, we can fairly infer the Conservation Groups’ intent to seek review of all three Commission Orders and the Biological Opinion, and allowing them to do so will result in no harm to the Commission or Alabama Power.

On to the merits.

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III**A**

“Our review is governed by Section 706 of the Administrative Procedure Act, requiring us to determine that agency decisions are not ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’” *City of Tacoma v. FERC*, 460 F.3d 53, 76 (D.C. Cir. 2006) (quoting 5 U.S.C. § 706). The Conservation Groups argue that the Fish and Wildlife Service’s Biological Opinion does not comply with the Endangered Species Act because it failed to properly analyze the relevant environmental baseline or effects of the action, it failed to include an adequate statement of incidental take, and it failed to make a rational connection between facts found and the conclusion that the Coosa River Project will not jeopardize listed species or adversely modify critical habitat.

Under the standard of review, the Opinion “must be upheld as long as the [Fish and Wildlife Service] ‘considered the relevant factors and articulated a rational connection between the facts found and the choice made.’” *City of Tacoma*, 460 F.3d at 76 (quoting *Arizona Cattle Growers’ Ass’n v. FWS*, 273 F.3d 1229, 1235–1236 (9th Cir. 2001)).

For every species that is listed as endangered or threatened, Section 7 of the Endangered Species Act requires each federal agency, in consultation with the Secretary of the Interior, to “insure that any action authorized, funded, or carried out by such agency * * * is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat[s] of such species.” 16 U.S.C. § 1536(a)(2). “When an agency concludes that its activities may adversely affect a listed species, it must engage in a formal consultation

with the Interior Department's Fish and Wildlife Service[.]” *Rancho Viejo, LLC v. Norton*, 323 F.3d 1062, 1064 (D.C. Cir. 2003) (citing 50 C.F.R. § 402.14). As part of its formal consultation, the Fish and Wildlife Service must:

- (1) Review all relevant information provided by the Federal agency or otherwise available. Such review may include an on-site inspection of the action area with representatives of the Federal agency and the applicant.
- (2) Evaluate the current status of the listed species or critical habitat.
- (3) Evaluate the effects of the action and cumulative effects on the listed species or critical habitat.
- (4) Formulate its biological opinion as to whether the action, taken together with cumulative effects, is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

50 C.F.R. § 402.14(g). The “[*e*]ffects of the action refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline.” 50 C.F.R. § 402.02 (emphasis added). Further, “[t]he environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section

7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process.” *Id.*

To “[j]eopardize the continued existence of 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 (emphasis added). The ESA handbook instructs the Fish and Wildlife Service to determine “whether the aggregate effects of the factors analyzed under ‘environmental baseline,’ ‘effects of the action,’ and ‘cumulative effects’ in the action area * * * are likely to jeopardize the continued existence of the species or result in destruction or adverse modification of critical habitat.” *See* United States Fish & Wildlife Serv. & Nat’l Marine Fisheries Serv., ESA Consultation Handbook, at 4-33 (emphasis omitted).

In requesting formal consultation from the Fish and Wildlife Service, the Commission staff identified actions as part of the relicensing of the Coosa River Project that could have potential effects on nine listed species and twelve critical habitat units within the project boundaries, as well as twenty-one listed species not occurring within the project boundaries but that will likely be reintroduced during the term of the new license. Biological Opinion at 10–11. The Opinion examined five actions: (1) Alabama Power’s Proposal for Operations, which includes continuation of current operations, improvements to dissolved oxygen, and implementation of an Adaptive Management Plan at the Weiss Bypass and Logan Martin tailrace; (2) implementation of a shoreline management plan; (3) implementation of a wildlife management plan; (4) implementation of the Coosa River Project Portion of the

Alabama Drought Response Operations Proposal; and (5) drawdown of Lay Lake. *Id.* at 11–15.

The Opinion purported to identify the environmental baseline by discussing the status of the species and factors affecting their environment within the identified action areas. Biological Opinion at 55–71. The Opinion did not “incorporate degraded baseline conditions into its jeopardy analysis.” *National Wildlife Fed’n v. National Marine Fisheries Serv.*, 524 F.3d 917, 929 (9th Cir. 2008). The Opinion stated:

The modifications to the Coosa River and the construction of [Alabama Power Company’s] hydro developments began nearly a century ago * * * and their cumulative effects (e.g., fragmented habitats, impeded fish passage, altered hydrology and water quality) have undoubtedly changed the landscape in the Coosa Basin forever, impacting many aquatic species and likely contributing to the extirpation and extinction of several. However, ***the relicensing of the Coosa Project at this time cannot take into account the historic impacts of these actions, but rather only the current and proposed future operations and their impacts.***

Biological Opinion at 89 (emphasis added). In defining the environmental baseline, the Opinion reasoned that certain activities that “began as early as the 1920’s * * * are beyond the scope of the consultation.” *Id.* at 58. This exclusion of the historic impacts on the Coosa River Project appears to be inconsistent with the guidance in the ESA handbook. The handbook instructs the Fish and Wildlife Service to determine

“whether the *aggregate effects of the factors analyzed under ‘environmental baseline,’* ‘effects of the action,’ and ‘cumulative effects’ in the action area * * * are likely to jeopardize the continued existence of the species or result in destruction or adverse modification of critical habitat.” *See* United States Fish & Wildlife Serv. & Nat’l Marine Fisheries Serv., ESA Consultation Handbook, at 4-33 (emphasis added). The Biological Opinion itself described certain past harms that triggered ongoing impacts that must be part of the environmental baseline. For example, the Opinion acknowledged that “the *continued* impoundment of these projects results in *continual degradation* of benthic habitats by sedimentation, reducing water velocities, changing flow patterns, and changing water chemistry both above and below dams.” Biological Opinion at 58 (emphases added). By discarding the methodology set forth in its own handbook and its own regulatory definitions, *see* 50 C.F.R. § 402.02, the Fish and Wildlife Service acted arbitrarily in establishing the environmental baseline without considering the degradation to the environment caused by the Coosa River Project’s operation and its continuing impacts.

In the Opinion, the Fish and Wildlife Service acknowledged the precarious state of certain species in the area and noted that the “[r]easons for the decline and current state” of those species included “habitat modification,” “sedimentation,” “eutrophication,” and “other forms of water quality degradation.” Biological Opinion at 24–54. Rather than analyze the effects of the continued operation of the Coosa River Project, the Opinion merely listed some effects and may have omitted others. *Id.* at 71–85.

By way of example, the Opinion noted “that depressed [dissolved oxygen] levels can adversely affect behavior, growth, feeding, and reproduction in freshwater fishes.”

Biological Opinion at 75. Likewise, the Opinion noted that “[f]reshwater mussels, like fish, respond negatively to depressed [dissolved oxygen] levels.” *Id.* at 76. The Opinion notes that “[dissolved oxygen] levels are still well below the desired levels for a healthy river system” and that it is a “major concern” that the license imposes no requirement to maintain dissolved oxygen during “non[-]discharge periods * * * since * * * the biological needs of fish and mollusks must still be met when a hydroelectric project is not generating.” *Id.* at 73–75. The Opinion failed to analyze how the dissolved oxygen levels are likely to affect the species in the area. Instead, the Opinion speculates that all will be well “if A[labama] P[ower] C[ompany] maintain[s] adequate [dissolved oxygen] levels downstream.” *Id.* at 76.

While the Opinion at least acknowledged dissolved oxygen levels as a potential issue, it largely omitted fish passage and seasonal flows—that is, the effects the lack of fish passage and minimal flow requirements might have on aquatic species—from the effects analysis. The Fish and Wildlife Service argues that to the extent there are issues with fish passage or seasonal flows, those are part of the environmental baseline (the historically degraded condition) and remain unaffected by this action. But, as previously explained, the Service failed to incorporate the environmental baseline into its jeopardy analysis. In fact, the Opinion hardly addressed fish passage and seasonal flows in its discussion of the environmental baseline. As the Ninth Circuit has explained, “even where baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy by causing additional harm.” *National Wildlife Fed’n*, 524 F.3d at 930. Under these circumstances, the Opinion’s jeopardy analysis is arbitrary because it fails to account for effects of degraded conditions on threatened species.

The Department of Interior defends the Opinion's jeopardy analysis by arguing that "the populations found inside the action area have been living under degraded baseline conditions since at least 1964, and this licensing action proposes to *improve* those conditions by, among other things, imposing a minimum-flow regime for the Weiss bypass for the first time." DOI Br. at 21. But attributing ongoing project impacts to the "baseline" and excluding those impacts from the jeopardy analysis does not provide an adequate jeopardy analysis. The Opinion's jeopardy analysis is arbitrary in failing to account for the impact of continued operations of the existing dams.

Also, the Service's Opinion failed to show a rational connection between the facts found and its conclusion that the Coosa River Project will not jeopardize listed species or adversely modify critical habitat. The Opinion's Incidental Take Statement estimates that ninety or one hundred percent of several species in particular sections will be taken. Biological Opinion at 90–93. For example, the Opinion predicted that the southern clubshell, finlined pocketbook, southern pigtoe, and Georgia pigtoe could be taken up to one hundred percent as a result of poor water quality conditions in a new flow regime near the Weiss Bypass. *Id.* at 90–91. Likewise, the Opinion predicted that one hundred percent of the tulotoma snail, painted rocksnail, and southern clubshell could be taken in the Logan Martin Dam section of the Coosa River based on the continued operation of that dam. *Id.* at 91. Despite these predictions, the Opinion concluded that "this level of expected take is not likely to result in jeopardy to any of the listed species or destruction or adverse modification of critical habitat." *Id.* at 94. At the least, the Opinion should explain how a one hundred percent incidental take for multiple species is not likely to result in jeopardy.

In its briefing before this Court, the Department of Interior argues that the one hundred percent take only refers to individual members of the species in a specific location. Given its absence from the Opinion, this argument appears to be a post-hoc litigation position. The Opinion never suggests as a basis for its finding of no jeopardy that the local populations are insignificant to the larger populations. *See* Biological Opinion at 90–93. Accordingly, the Opinion’s jeopardy analysis is not legally sufficient without further explanation from the Fish and Wildlife Service, especially because population distribution is one of the factors the Service had to consider when evaluating the overall health of the species. *See* 50 C.F.R. § 402.02 (defining “jeopardize” as 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”) (emphasis added).

Finally, the Opinion’s Incidental Take Statement is also legally insufficient. It failed to include an adequate trigger for re-consultation. Whenever an Opinion determines that “take is reasonably certain to occur,” the Opinion must provide an “Incidental Take Statement,” which authorizes harm to an endangered species and includes a trigger for re-consultation. 50 C.F.R. § 402.14(g)(7), (i)(1)(i), (i)(4). The Conservation Groups object that the Incidental Take Statement failed to provide a numerical trigger or identify a surrogate that provides a reasonable estimate for when to trigger reinitiation of formal consultation. The Department of Interior acknowledges that the Opinion did not provide a numerical trigger for certain species, but argues that it provided clear surrogate triggers for reinitiation of consultation.

The Incidental Take Statement’s reinitiation notice merely provides that reinitiation should occur if “the amount or extent

of incidental take is exceeded.” Biological Opinion at 99. But this statement does not provide enough guidance to explain how to determine whether “the amount or extent of incidental take is exceeded,” particularly because incidental take is one hundred percent for multiple species. At oral argument, the Department argued that for those areas where it identified one hundred percent take, there would be no reason to reinitiate consultation because the take cannot exceed one hundred percent. Oral Argument at 1:16:55–1:17:02. The Department argued that if there ended up being a higher percentage of harm than predicted, however, reinitiation of consultation would be required. *Id.* at 1:17:40–1:17:48. But the Department admitted that it would not be able to detect take for certain species. *Id.* at 1:18:28–1:18:52. As a result, the Department acknowledged that the reinitiation notice in the Opinion was only included to meet Fish and Wildlife Service’s regulatory obligations. *Id.* at 1:18:54–1:19:03. The requirement to include a trigger for reinitiation of consultation necessitates more than lip service. The lack of a clear trigger point to reinitiate consultation renders the Opinion unlawful.

B

The Conservation Groups’ NEPA challenge turns on the sufficiency of the Commission’s decision that relicensing the Coosa River Project for thirty years would not have any significant environmental effects on the vulnerable Coosa River ecological system. Because the record of the licensing proceedings points strongly in the opposite direction, the Commission’s decision to forgo an Environmental Impact Statement does not hold water.

NEPA’s primary function is “information-forcing,” *Sierra Club v. FERC*, 867 F.3d 1357, 1367 (D.C. Cir. 2017), compelling federal agencies to take a hard and honest look at

the environmental consequences of their decisions, *Mayo v. Reynolds*, 875 F.3d 11, 16 (D.C. Cir. 2017). *See also Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 558 (1978). In particular, to ensure that agency decisionmaking is fully environmentally informed, NEPA requires the agency to (1) identify accurately the relevant environmental concerns, (2) take a hard look at the problem in preparing its Environmental Assessment, (3) make a convincing case for any finding of no significant impact, and (4) show why, if there is an impact of true significance, there are sufficient changes or safeguards in the project to reduce the impact to a minimum, which would obviate the need for an Environmental Impact Statement entirely. *Sierra Club v. Van Antwerp*, 661 F.3d 1147, 1153–1154 (D.C. Cir. 2011), *as amended* (Jan. 30, 2012). Under that test, the Commission’s Assessment will pass muster only if it undertook a “well-considered” and “fully informed” analysis of the relevant issues and opposing viewpoints. *Myersville Citizens for a Rural Cmty., Inc. v. FERC*, 783 F.3d 1301, 1324–1325 (D.C. Cir. 2015).

While determining whether an agency’s “hard look” was adequate can often be an imprecise exercise, two fatal flaws in the Commission’s analysis make the decision in this case quite straightforward. First, the Commission failed to reasonably consider and address multiple indicators that the project could have a significant impact on the environment, including the types of substantial effects on fish passage and dissolved oxygen levels that would normally compel the preparation of an Environmental Impact Statement. Second, the Commission misanalyzed the cumulative environmental effects of the Coosa River Project.

1. Significant Environmental Impact

NEPA requires an Environmental Impact Statement for any major federal action that might “significantly” affect the human environment. 42 U.S.C. § 4332(C); *see Sierra Club v. Peterson*, 717 F.2d 1409, 1415 (D.C. Cir. 1983) (“If any ‘significant’ environmental impacts might result from the proposed agency action then an [Environmental Impact Statement] must be prepared *before* the action is taken.”). Evaluating an action’s environmental “significance” requires analyzing both the context in which the action would take place and the intensity of its impact. 40 C.F.R. § 1508.27.

Considering context is critical because the significance of an action can vary based on the setting and surrounding circumstances. For the type of site-specific action at issue in this case, significance typically depends on the action’s effects in the immediate locale, rather than in the broader ecosystem or world as a whole. 40 C.F.R. § 1508.27(a). Both short- and long-term effects must be addressed. *Id.*

“Intensity” refers to the “severity” or acuteness of the impact on the contextualized environment. 40 C.F.R. § 1508.27(b). NEPA’s implementing regulations prescribe a number of relevant factors that ensure the analysis of intensity rests on a comprehensive survey of the views of all affected governmental entities. *See id.* The NEPA analysis must take into account all foreseen impacts, both beneficial and adverse (regardless of whether the agency believes the action will provide a net benefit). *Id.* § 1508.27(b)(1). The agency must also consider the unique characteristics of the geographic area, the cumulative effects of each individual part of the action, and any impact on endangered or threatened species or their habitats. *Id.* § 1508.27(b)(3), (7), (9).

a. Fish Passage

The Commission's NEPA analysis backhanded the significant and deadly impact that the Project's operation threatens for indigenous fish populations as they attempt to navigate through the affected waterways. The Commission acknowledged that the project would result in large mortality rates for a number of species entrained (that is, killed) by Project turbines—as many as 1.3 million fish per year. Environmental Assessment at 101–102. The Commission, however, just shrugged off that death rate, deeming it insignificant because the entrained fish likely would be non-protected species or juveniles with high natural mortality rates. The Commission's Assessment then pointed out that the Project's reservoirs support robust sport and in some cases commercial fisheries, and they do not appear to be substantially affected by any turbine-related mortality. *Id.*

That analysis is rife with flaws. First, the Commission's only cited evidence for the amount of fish deaths was a more-than-decade-old-survey of fish entrainment studies and estimates provided by the license applicant itself, Alabama Power. No updated information was collected; no field studies were conducted. Nor was any independent verification of Alabama Power's estimates undertaken. Assuming Alabama Power's good faith, its estimates were entirely unmoored from any empirical, scientific, or otherwise verifiable study or source. The Commission also failed to take even the preliminary step of attempting to acquire recent or site-specific data against which Alabama Power's estimates *could* have been compared. The Commission's acceptance, hook, line, and sinker, of Alabama Power's outdated estimates, without any interrogation or verification of those numbers is, in a word, fishy. And it is certainly unreasoned.

The Commission points out that it reviewed a 1997 “summary of fish entrainment studies” to ground its findings and to cross-check Alabama Power’s estimates. Environmental Assessment at 102. But that then-twelve-year-old study did nothing more than “review[] the results of 43 fish entrainment studies conducted at hydroelectric projects” located in completely different regions of the United States. *Id.* (explaining that the summary reviewed other studies conducted in the early- to mid-1990s at hydroelectric projects located primarily in the Northeast, Southeast, and Midwest). An old review of even older and geographically remote projects is far too thin a reed on which to rest a conclusion that annually killing 11% of a fish population is of no environmental significance.

Second, NEPA demands far more analytical rigor than the Assessment’s breezy dismissal of the high fish mortality rate documented in its dated and unverified studies. *See Myersville*, 783 F.3d at 1322 (agencies cannot overlook a single environmental consequence if it is even “arguably significant”); *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304, 1310 (D.C. Cir. 2014) (agencies must comply with NEPA’s exacting procedural requirements to “the fullest extent possible”). By way of excuse, the Commission’s Assessment noted, almost in passing, that the entrained fish are of the sort that normally “experience high natural mortality in fish populations unaffected by hydro operations.” Environmental Assessment at 102.

The Commission seems to assume that this is a substantive answer, as though the Venn diagram of fish killed through entrainment and natural attrition is a perfect circle. Not so. The Project would compound the death rate. Those fish that manage to run the gauntlet of youth and natural mortality factors will now emerge only to face a high rate of death in

hydropower turbines and other lethal aspects of the Project. The Commission's NEPA analysis has to grapple with that.

Third, the Commission's cheery assurance that "excellent" human-operated sport and commercial fisheries remain downstream is just whistling past the graveyard. Environmental Assessment at 97, 99. The Commission, for its part, made no effort to explain how downstream, human-operated sport and commercial fisheries are relevant bellwethers for environmental impacts in the upstream Coosa River. After all, the nearby presence of a nice zoo has never been a relevant answer under NEPA to high species mortality in nature.

In short, with respect to the admitted killing of large numbers of fish in the Coosa River, the Commission's NEPA analysis was woefully light on reliable data and reasoned analysis and heavy on unsubstantiated inferences and *non sequiturs*. The record simply does not provide a rational connection between the licensing decision, the record evidence, and the finding of no significant environmental impact. Much more work is required of the Commission. Courts, after all, cannot evaluate the reasonableness of the unexplained.

b. Failure to Maintain Dissolved Oxygen Levels

Dissolved oxygen in the water is indispensable for aquatic animal life. Many of the aquatic species in the Coosa River Project area, including those listed as endangered or threatened under the Endangered Species Act, require well-oxygenated, flowing water to survive. As a general rule, dissolved oxygen levels can threaten "acute mortality" for many aquatic species if they fall below 4.0mg/L for any sustained period of time. *First Rehearing Order* at P 38. The Project's operations can

lead to low dissolved oxygen levels, especially in the warmer summer and early fall months, because streamflows decline, and large portions of tributary flows are captured and held in the reservoirs to maintain desired elevations. *Id.* at PP 19–22. Also during the summer, water in the Project’s reservoirs tends to separate into two layers: (1) a warm surface layer that is relatively rich in dissolved oxygen due to its proximity to the surface, which facilitates oxygen exchange with the ambient air, and (2) a colder bottom layer where decomposing organic material in the reservoir bed devours the dissolved oxygen, drastically reducing the level remaining to support life.

Dissolved oxygen levels in the tailraces—the waters downstream of the dams—are primarily influenced by the depth at which water is drawn from the reservoir during generation. *First Rehearing Order* at P 19 n.19. The Project’s intakes primarily draw water from the deeper portions of their respective impoundments. The release of these waters with low levels of dissolved oxygen through the Project powerhouses can suppress dissolved oxygen levels in the Project’s tailraces to well below the 4.0mg/L standard up to twenty percent of the time during warmer months.

Federal law prohibits the Commission from licensing a hydroelectric project unless the state water quality agency certifies the project’s compliance with state water standards. *See* 33 U.S.C. § 1341(a)(1), (d). The Alabama Department of Environmental Management conditioned its approval of the Coosa River Project on Alabama Power’s compliance with several state-law requirements, and those conditions were incorporated into the license the Commission issued.

As relevant here, the first condition initially required Alabama Power to ensure that the dissolved oxygen level at each of its seven developments remained above 4.0 milligrams

per liter. That requirement gave effect to the plain text of Alabama law. Ala. Admin. Code rr. 335-6-10-.09(2)(e)(4)(i), (3)(c)(4)(i), (5)(e)(4)(i) (“*In no event* shall the dissolved oxygen level be less than 4 mg/l due to discharges from existing hydroelectric generation impoundments.”) (emphasis added). Given that “clear” state-law command, the Commission’s Licensing Order was explicit that “Alabama Power must maintain no less than 4.0 mg/L of [dissolved oxygen] *at all times*, including during periods of non-generation.” *Licensing Order* at P 73 n.47 (emphasis in original).²

But on rehearing, the Commission muddied the waters by “clarify[ing],” *First Rehearing Order* at P 56, that the duty to maintain dissolved oxygen levels “at all times” actually meant only sometimes—that is, only during actual generation and certain minimum flow releases, *id.* at P 27 (Alabama Power only needs “to meet a 4.0 mg/L [dissolved oxygen] standard when the Project is discharging, i.e., during periods of generation and in its minimum flow releases from the Weiss and Jordan developments.”). In reaching that conclusion, the Commission noted that the Alabama Department of Environmental Management interpreted the state code to mandate 4.0 mg/L dissolved oxygen levels only during periods

² Alabama law actually sets a lower dissolved oxygen water quality standard for hydropower generators than for other users of “outstanding Alabama water.” Ala. Admin. Code rr. 335-6-10-.09(1). In response to a public comment concerning this variance for hydropower sources, Alabama interpreted its Code provision to “mean that during periods when there is no discharge from the impoundment the applicable dissolved oxygen criterion is 5.0 mg/l in waters with the Public Water Supply and Fish and Wildlife designated uses. The applicable dissolved oxygen criterion during periods when the impoundment is discharging is 4.0 mg/l.” J.A. 1355.

of actual generation. *Id.* at PP 26–27. The Commission also accepted Alabama Power’s submissions that it would be infeasible to maintain 4.0 mg/L dissolved oxygen minimums at all times even if various mitigation measures identified by Commission staff were implemented. *Id.* at PP 44–46.

The Commission’s authorization for Alabama Power to operate for substantial periods of time without maintaining the lowest level of dissolved oxygen identified in the text of Alabama’s statute and necessary to avoid “acute mortality,” *First Rehearing Order* at P 38, constituted a significant adverse environmental consequence without reasoned justification. As the Commission acknowledged at oral argument, non-generation periods constitute the “overwhelming majority” of time for the project. Oral Argument at 1:10:24–1:10:56.

What is more, the record documented an extensive and troubling pattern during which dissolved oxygen levels in the Project area frequently plummeted below the lowest tolerable level, threatening “acute mortality” for many aquatic species. *First Rehearing Order* at P 38. A comprehensive analysis of the Project’s dissolved oxygen levels for much of 1999–2014 revealed that hourly dissolved oxygen levels during generation periods fell below the minimum 4.0mg/L standard more than 25% of the time across all Coosa developments.

For example, in 2014, records revealed that, at numerous Alabama Power sites, dissolved oxygen levels routinely dropped below 4.0 mg/L in the warmer months, at the following frequency: 13.6% of generation time at H. Neely Henry, 10.2% at Weiss, 5.8% at Logan Martin, and 1.2% at Mitchell. *First Rehearing Order* at P 32.

Mean daily levels of dissolved oxygen during non-generation periods—exactly what the Commission

greenlighted—were far worse. The percentage of non-generation time when dissolved oxygen dropped below 4.0 mg/L was: 57.8% at Logan Martin, 50.4% at Lay, 37.1% at H. Neely Henry, 11.5% at Mitchell, and less than 1% at Weiss. *First Rehearing Order* at P 33.

To put a finer point on it, the Commission's own licensing record establishes that the Coosa River Project regularly and predictably violates the water quality license conditions during generation periods and blows right past the water-quality standard codified in Alabama law during times of non-generation, threatening lethal consequences for water species. Indeed, in 2005, the Fish and Wildlife Service expressed its "very serious concerns" to the Alabama Department of Environmental Management about "repeated non-compliance with state water quality standards (pursuant to section 401 of the Clean Water Act) by [Alabama Power]'s facilities subject to this relicensing as well as inconsistent data reporting[.]" J.A. 635. Yet the Commission took no account of the environmental impact of these deadly low levels of dissolved oxygen in its NEPA analysis.

Instead, the Commission hangs its hat on the license's requirement that Alabama Power install oxygen diffuser aeration systems. These aeration systems are generally designed to pump additional oxygen into the water during generation periods. That sounds like a promising approach. At least, if the aspiration were matched with substance. But it is not on this administrative record. The licensing record is devoid of information about what aeration system will be implemented, or when, or how it will perform. Alabama Power never provided any details or specifications about its proposed aeration system before the Commission reflexively embraced it as a sufficient mitigation measure. On top of that, the Commission allowed Alabama Power an additional six

months after the license issued before even *disclosing* its anticipated aeration measures to the Commission and another year to put them in place. The Commission also gave Alabama Power another six months from license issuance to file its proposals for water quality monitoring enhancements, so that they too could—hopefully—be implemented within eighteen months of licensing.

Also curiously absent from the Commission's analysis is what would happen to the water if the proposed aeration system or other mitigation measures fell short and were disapproved by the Commission. That was a distinct possibility given that the Commission had already found that two of Alabama Power's existing aeration systems failed to meet the 4.0 mg/L bare minimum at the time of relicensing. *See First Rehearing Order* at PP 29–35. And the Commission ignored altogether the impact on the Coosa River habitat and aquatic life of at least eighteen months of dangerously depleted dissolved oxygen levels across almost the entire Project.

Because Alabama Power gave the Commission nothing in this record to support its judgment, the Commission pointed in its First Rehearing Order to an aeration system apparently being used at the Yadkin-Pee-Dee Project in North Carolina to maintain appropriate dissolved oxygen levels. That hurts rather than helps. Remember, by the time the Commission issued its First Rehearing Order, three years had elapsed from the licensing decision. If Alabama Power had been timely implementing the aeration systems as promised in the Licensing Order, the Commission would have had no need to look to an unrelated project in North Carolina to prop up its decision. Plus, if the Commission was aware of a successful aeration system available for Alabama Power to use, then it should have required that Alabama Power use that system or

its equivalent rather than give the Company an 18-month (or perhaps now three-year) blank check.

What is more, the administrative record does nothing to back-up the Commission's reliance on Yadkin-Pee-Dee. The record is devoid of evidence or data indicating that whatever aeration system used there would have the same results in the Coosa River given the configuration of its hydroelectric systems and already-fragile and degraded conditions. Also missing is any analysis of how long the dissolved oxygen levels persist before dissipation, the conditions under which the aeration system performed in North Carolina, or even evidence that the proffered levels of dissolved oxygen actually ever materialized at Yadkin-Pee-Dee. The Commission just blithely assumed that (i) a buffer level of 6.0 mg/L of dissolved oxygen would be consistently attained, and (ii) it would be enduring enough to perpetuate at least the minimum 4.0 mg/L throughout the entire non-generating period. *First Rehearing Order* at P 51.

To sum up, the Commission relicensed the Coosa Project despite known violations of minimum dissolved oxygen levels based on its sight-unseen acceptance of Alabama Power's anticipated-but-unidentified mitigation measures, the specifics of which did not even have to be submitted for examination until six months after the license issued, or installed for eighteen months. *See Environmental Assessment* at 222–223. Given the exceptional importance of maintaining minimum dissolved oxygen levels to the aquatic ecosystem, it was irrational for the Commission to cast those significant environmental impacts aside in reliance on some sort of mitigation measures, which the Commission was content to leave as “TBD.”

2. Consideration of Cumulative Impacts

NEPA requires that the agency's Environmental Assessment wrestle with the cumulative environmental impact of a proposed action. Implementing regulations prohibit agencies from gaming the system by artificially segmenting significant actions into piecemeal, and individually insignificant, components. *See* 40 C.F.R. § 1508.7. Cumulative impacts are “the incremental impact of the action [on the environment] when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” *Id.* As the NEPA regulations explain, cumulative impacts include “individually minor but collectively significant actions” that occur over a length of time. *Id.* Effects include both direct effects that “are caused by the action and occur at the same time and place,” and indirect effects that the action foreseeably causes, but that are removed from the action in time and location. 40 C.F.R. § 1508.8.

Put simply, an agency's Environmental Assessment “must give a realistic evaluation of the total impacts and cannot isolate a proposed project, viewing it in a vacuum.” *Grand Canyon Trust v. FAA*, 290 F.3d 339, 342 (D.C. Cir. 2002). In so doing, the “incremental impact of the action [at issue] must be considered when added to other past, present, and reasonably foreseeable future actions.” *Id.* (alteration in original; internal quotation marks omitted). In other words, “[i]t makes sense to consider the ‘incremental impact’ of a project for possible cumulative effects by incorporating the effects of other projects into the background data base of the project at issue.” *Coalition on Sensible Transp., Inc. v. Dole*, 826 F.2d 60, 70–71 (D.C. Cir. 1987) (internal quotation marks omitted). Indeed, the Commission agreed that the NEPA

cumulative-effects analysis had to account for all past impacts of the dams' construction and operation, including the enduring or ongoing effects of past actions.

The Conservation Groups' challenge to the Commission's cumulative impact analysis under NEPA largely mirrors their objections to the Fish and Wildlife Service's Biological Opinion. *See supra* Section III.A. That makes sense because the Environmental Assessment itself relies heavily on the Service's Biological Opinion in establishing the current operation of the Coosa Project as the baseline for measuring environmental impacts. *Licensing Order* at P 100. As a result, the Service's failure to factor the damage already wrought by the construction of dams into the cumulative impacts analysis fatally infected this aspect of the Commission's NEPA decision as well. The Commission gave scant attention to those past actions that had led to and were perpetuating the Coosa River's heavily damaged and fragile ecosystem. Nor did it offer any substantive analysis of how the present impacts of those past actions would combine and interact with the added impacts of the 30-year licensing decision. The Commission's cumulative impact analysis left out critical parts of the equation and, as a result, fell far short of the NEPA mark.

C

Finally, we note that in this case, the question of whether the Commission complied with its statutory obligations under the Federal Power Act's licensing provisions is subsumed by questions concerning its compliance with countervailing statutory restrictions imposed by NEPA and ESA. The propriety of the Commission's decision under the Federal Power Act, on these facts, thus stands or falls on the merits of

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the NEPA and ESA inquiries. In light of the foregoing, it must fall.

* * * * *

For the foregoing reasons, we dismiss the first petition for review, and grant the second petition for review on the ground that the Service's Biological Opinion, adopted by the Commission, and the Commission's Environmental Assessment under NEPA were arbitrary and capricious, insufficiently reasoned, and unsupported by substantial evidence. Because those errors fatally infected the Licensing Order, the Commission's decision renewing Alabama Power's license for thirty years also violated the Commission's obligations under Sections 797 and 803 of the Federal Power Act. We accordingly vacate the licensing decision, and remand to the agency for further proceedings.

So ordered.