

FOR PUBLICATION
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

PACIFIC COAST FEDERATION OF
FISHERMEN'S ASSOCIATIONS;
INSTITUTE FOR FISHERIES RESOURCES;
NORTHCOAST ENVIRONMENTAL
CENTER; KLAMATH FOREST
ALLIANCE; OREGON NATURAL
RESOURCES COUNCIL; THE
WILDERNESS SOCIETY;
WATERWATCH OF OREGON;
DEFENDERS OF WILDLIFE;
HEADWATERS,

Plaintiffs-Appellants,

and

MIKE THOMPSON, Representative,
Plaintiff,

v.

UNITED STATES BUREAU OF
RECLAMATION; NATIONAL MARINE
FISHERIES SERVICE,

Defendants-Appellees,

KLAMATH WATER USERS
ASSOCIATION; TULELAKE IRRIGATION
DISTRICT; WILLIAM HEINEY; AMOS
HOYT,

*Defendant-Intervenors-
Appellees,*

v.

YUROK TRIBE; HOOPA VALLEY
TRIBE,

Plaintiff-Intervenors.

No. 03-16718
D.C. No.
CV-02-02006-SBA
OPINION

Appeal from the United States District Court
for the Northern District of California
Saundra B. Armstrong, District Judge, Presiding

Argued and Submitted
February 16, 2005—San Francisco, California

Filed October 18, 2005

Before: Dorothy W. Nelson, William A. Fletcher, and
Raymond C. Fisher, Circuit Judges.

Opinion by Judge D.W. Nelson

COUNSEL

Kristen L. Boyles (argued), and Michael Mayer (on the briefs), Earthjustice, Seattle, Washington, for the appellants.

John A. Bryson (argued), and David C. Shilton, S. Jay Govindan (on the briefs), Department of Justice, Washington, D.C., for the appellees.

Robin Lee Rivett (argued), and Andrew T. Lloyd, Pacific Legal Foundation, Sacramento, California; Russell C. Brooks, Pacific Legal Foundation, Bellevue, Washington (on the briefs), for defendant-intervenor-appellees Klamath Water Users Association et al.

OPINION

D.W. NELSON, Circuit Judge:

Eight organizations representing environmental and fisheries interests sued the United States Bureau of Reclamation (BOR) and the National Marine Fisheries Service (NMFS) for injunctive and declaratory relief, alleging violations of the federal Endangered Species Act (ESA), 16 U.S.C. §§ 1531-1544. The lawsuit concerned the federal government's efforts to operate an irrigation project in accordance with its responsibilities under the ESA to protect the threatened Southern Oregon/ Northern California Coast (SONCC) coho salmon and its habitat. On appeal, the Pacific Coast Federation of Fishermen's Associations and the other plaintiffs (collectively referred to as Pacific Coast) contend that the government's actions are arbitrary and capricious, in violation of the ESA. They argue that the government's plan employs a phased approach but does not analyze how the first two phases, encompassing eight years of a ten year plan, will avoid jeopardy to the coho salmon. Appellees, the federal agencies, and defendant/intervenor Klamath Water Users Association (KWUA) urge that the plan reflects the agency's best judgment in the face of scientific uncertainty and contains sufficient analysis to support the NMFS's conclusion that its proposed action will avoid jeopardy to the coho. The district court struck down parts of the NMFS's original plan, but upheld the eight years of short-term measures that are the sole issue in this appeal. We conclude that the short-term measures are arbitrary and capricious, and remand the case to the dis-

strict court for the issuance of injunctive relief in accordance with this opinion.

I. Legal and Factual Background

A. *The Endangered Species Act*

This case requires us to review a biological opinion (BiOp) prepared by the NMFS as part of its obligations under the ESA to ensure that federal actions in the operation of a federal irrigation project do not jeopardize anadromous fish species.¹ We begin with a brief overview of the ESA and the consultation process so that the legal and procedural context of our review is clear.

The ESA obligates federal 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). Section 7 of the ESA establishes a consultation process to insure that “any action authorized, funded, or carried out by [a federal] agency . . . is not likely to jeopardize the continued existence of any endangered . . . or threatened species or result in the destruction or adverse modification of [critical] habitat” 16 U.S.C. § 1536(a)(2). When an action has the potential to affect an anadromous fish species, the NMFS has responsibility for consultation.

Before undertaking any action, the federal agency must determine whether any threatened or endangered species might be present in the area of the proposed action. *Id.* at (c)(1). If such a species might be present, the agency must prepare a biological assessment to determine whether the species is likely to be affected by the proposed action. *Id.* The

¹“Anadromous” fish species, like the SONCC coho salmon, spend portions of their lives in both fresh and salt water. All such species spawn in fresh water. See <http://www.nmfs.noaa.gov/habitat/habitatprotection/anadfish/index.htm>.

biological assessment serves as a basis for the formal consultation with the NMFS.

During formal consultation, the NMFS must prepare a biological opinion, or BiOp, which determines the effects that the proposed action might have on the listed species or its critical habitat. *Id.* at (b)(3)(A). If the NMFS determines that the proposed activity might cause jeopardy to a listed species or adversely modify its habitat, the agency must suggest “reasonable and prudent alternatives” (RPAs) to the proposed action that would avoid jeopardy or adverse modification of habitat. *Id.* The implementing regulation defines RPAs as:

alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction, that is economically and technologically feasible, and that the Director believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat.

50 C.F.R. § 402.02. In this case, the NMFS determined that the BOR’s proposed activities — the operation of a federal irrigation system — would cause jeopardy to the SONCC coho salmon, and it therefore developed the RPA that is at the heart of this appeal.

B. The Klamath River Basin and the Klamath Project

The Klamath River basin straddles northern California and southern Oregon. At the center of this case is a fish population that is unique to the region, the SONCC coho salmon. The SONCC coho spawns and matures in the main stem and tributaries of the Klamath River.

The Klamath River basin supports a variety of agricultural activities that are possible in part because of irrigation water from the Klamath Project, a federally funded irrigation system established in the early 20th century. The Klamath Project consists of a number of dams and reservoirs. The coho salmon population populates the main stem and tributaries of the Klamath River until its passage is blocked by the Iron Gate Dam, which is the component of the Klamath Project closest to the Pacific Ocean. The flows past the Iron Gate dam into the Klamath River determine to a great extent the quantity of water available in the river. At issue in this appeal are the NMFS's determinations regarding the quantity of water that the BOR must release from behind the Iron Gate Dam to the Klamath River.

A number of factors make water management especially difficult in the Klamath River Basin. *See generally Pac. Coast Fed'n of Fisherman's Ass'ns v. BOR*, 138 F.Supp. 2d 1228, 1230-31 (N.D. Cal. 2001) ("*PCFFA I*"); *Kandra v. United States*, 145 F.Supp. 2d 1192, 1196-98 (D. Or. 2001). The primary reservoir is relatively shallow, and is home to populations of two different species of endangered fish, known as suckers, that require maintenance of certain minimum water levels. *Kandra*, 145 F.Supp 2d at 1196-98. Marshlands in two national wildlife refuges are irrigated by the Klamath Project to create bird habitat. *Id.* at 1196. Several tribes in the area have treaty rights to Klamath River fish, and the Department of Interior must meet the United States' fiduciary duty to maintain these resources. *Id.* at 1197. Numerous farmers have contracts for irrigation water that the BOR must supply each growing season. *PCFFA I*, 138 F.Supp. 2d at 1231. The Klamath Basin has been the focus of previous cases dealing with endangered species conservation and water use and management.²

²*See, e.g., Bennett v. Spear*, 520 U.S. 154 (1997) (regarding endangered suckers; holding related to standing); *Klamath Water Users Protective*

C. The SONCC Coho Salmon

The SONCC coho ranges throughout the North Pacific Ocean. During the twentieth century, populations of coho declined substantially in California and Oregon. The BiOp states that the number of wild coho in the Klamath River is “extremely low, and has been declining for most of the past two decades.” The population of the SONCC coho is estimated to have declined from an estimated range of 50,000 to 125,000 wild coho in the 1940s to fewer than 6,000 wild coho in 1996. The SONCC coho salmon was listed as a threatened species under the ESA in 1997.³ The major factors threatening the SONCC coho include logging, grazing, dams, and water withdrawal for irrigation. The facts below are drawn from the NMFS’s description of the SONCC coho’s life cycle and assessment of its habitat needs in the BiOp.

The SONCC coho has a three-year life cycle, spending half its life in fresh water and half in salt water. Coho eggs typically hatch in March. Coho fry emerge two weeks after hatch-

Ass’n v. Patterson, 204 F.3d 1206 (9th Cir. 1999) (addressing contract issues relating to water allocation; holding that the BOR’s obligations under the ESA allow it to override rights of water users); *Moden v. U. S. Fish & Wildlife Serv.*, 281 F.Supp. 2d 1193 (D. Or. 2003) (holding that delisting of the fish residing in reservoir is not supported); *Kandra*, 145 F.Supp. 2d at 1192 (upholding the BOR’s implementation of conservation measures against challenge by irrigators); *PCFFA I*, 138 F.Supp. 2d at 1228 (overturning the BOR’s operation plan for failure to consult with the NMFS as required by the ESA).

³The NMFS recently reconfirmed the SONCC coho’s status as a threatened species in response to a lawsuit challenging the listing of a different subgroup of coho salmon. See *Alesea Valley Alliance v. Evans*, 161 F.Supp. 2d 1154 (D.Or. 2001), *appeal dismissed for lack of jurisdiction sub nom. Alesea Valley Alliance v. Dep’t of Commerce*, 358 F.3d 1181 (9th Cir. 2004). See Endangered and Threatened Species: Final Listing Determination for 16 ESUs of West Coast Salmon, and Final 4(d) Protective Regulations for Threatened Salmonid ESUs, 70 Fed. Reg. 37,160, 37,193 (June 28, 2005) (to be codified at 50 C.F.R. pts 223 and 224).

ing, and spend up to 15 months in fresh water. The fry's preferred habitat is shallow areas near stream banks. Fry become smolt after 15 months and migrate to the sea between March and June. After about three years, coho return to the same streams in which they were born to spawn, migrating upstream between September and February, and spawning between November and January. Sufficient water flows must be available in the main stem of the Klamath River to enable the fish to migrate upstream during September through February and to migrate downstream at maturity from March through June. Habitat conditions in the main stem are also important because degraded habitat or low flow in tributaries causes coho fry to seek additional habitat in the main stem.

During the spring months, March through June, newly hatched fry need shaded habitat near stream banks and migrating smolt need sufficient water in the river to leave tributaries and migrate to the sea. The BiOp makes clear that NMFS considers these the most critical months in which to provide an adequate amount of water in the main stem because of the needs of the fry and smolt. The NMFS reports that studies in other basins show that increased flow during these months resulted in "lower mortality due to migratory delay, predation, and exposure to potentially poor main stem habitat conditions." During the summer months, the primary concerns are to ensure that there is sufficient habitat in the main stem for juveniles displaced from tributaries by poor water quality or competition, and that the water temperatures are sufficiently cool. From October through February, the primary concern is maintaining sufficient water in the main stem for upstream migration and access to tributaries. The NMFS notes that in fall and winter water often flows freely past the Iron Gate Dam, resulting in "uncontrolled releases" of water.

D. Prior Scientific Assessments of the Klamath River Basin

The BiOp at issue here is the product of several iterations of scientific study and review, including two previous BiOps

and two government studies of the basin that reached conflicting conclusions. The NMFS issued the first BiOp for the Klamath Project in 1999. At this time, a government-commissioned scientific assessment of the flow needs of anadromous species in the Klamath River basin was released. Known as Phase I of the “Hardy Report,” that assessment provided interim recommendations on flow levels needed to support aquatic life.

In 2001, a severe drought limited water availability in the basin. *Kandra*, 145 F.Supp. 2d at 1198. Two BiOps, one for the SONCC coho and one for the other endangered fish that inhabit the reservoir, called for maintenance of high levels of water in both the reservoir and the main stem of the river. The BOR complied with the BiOps and, as a result, did not deliver water to irrigators. Significant agricultural losses followed.

Following the dry 2001 irrigation season, the National Research Council (NRC) was asked by the Department of Interior to “independently review the scientific and technical validity of the government’s biological opinions.” The NRC Report, released in February 2002, found that there was not scientific support for the flow recommendations in the NMFS’s coho salmon BiOp. The report reviewed existing scientific literature and data on coho in the Klamath River basin. It concluded that “incremental depletions beyond those that are reflected in the recent historical record could be accomplished only with increased risk to coho salmon. At the same time, the available information provides little support for benefits presumed to occur through the increase of flows beyond those of the last decade.” The conclusion questioned the validity of the 2001 BiOp. The NMFS requested clarification from the NRC, which responded that “the NRC committee did not conclude that NMFS must be wrong in its recommendations on main-stem flows.” In its BiOp, the NMFS attributed the conclusions of the NRC report to “lack of information on distribution and abundance of coho . . . and the lack of studies focused on coho and factors limiting its population in the

Klamath River Basin.” The NMFS did not dismiss the NRC Report, but it did not adopt its conclusions in full.

Phase II of the “Hardy Report” was released in draft form in November 2001. Its conclusions about flow requirements conflict with those of the NRC.⁴ The Phase II report, calling itself the “best available science,” used site-specific habitat modeling and estimates of the unimpaired flows in the main stem to arrive at a recommendation for flows for each river reach. The report determined that flows lower than approximately 1000 cubic feet per second (cfs) during the late summer would likely expose the SONCC coho to dangerously high water temperatures, thereby increasing the risk of harm to the species.

E. The Current Biological Opinion

The process through which the current BiOp was created began when the BOR prepared its most recent long-range biological assessment in February 2002. The BOR proposed maintaining a flow regime that varied river flows by “water year type,” meaning that less water need be provided in years in which less precipitation has fallen in the region, reflecting natural variations in river flows. For each type of “water year” (for instance, dry or wet), the BOR used the historic average water flow for that type over the previous ten-year period to set its goals by type of year for the next ten years of operation. Any available water beyond that needed to meet the goal would be allotted for irrigation. In addition, the BOR would establish a water bank to store 100,000 total acre feet of water to meet the flow requirements.

When the NMFS reviewed the proposed operations plan in the BOR’s biological assessment to prepare the current BiOp, it determined that if the Klamath Project were operated as the

⁴The NRC report did not consider the Hardy Phase II report in making its findings because it was in draft form.

BOR intended, it would cause jeopardy to the SONCC coho and adversely modify its critical habitat. The NMFS was concerned that the BOR's use of the minimum flow over the past ten years as the planning target for establishing monthly flows would drive down the average flow in the Klamath River from below its ten-year average, which would lead to adverse effects to habitat and individual coho in the main stem. Among the NMFS's concerns were that decreased flows would reduce the amount of suitable coho fry habitat, make it more difficult for smolt to migrate downstream, and prevent adult coho from accessing tributaries during their upstream migration. In the BiOp, therefore, the NMFS developed an RPA to replace the BOR's proposed plan of operations. The RPA is the subject of the instant appeal.

The RPA covers operations for the Klamath Project from 2002 until 2012. An organizing principle of the RPA is that the BOR should bear responsibility only for the share of water losses caused by the Klamath Project. Because the project irrigates 57 percent of land in the basin, the RPA provided that the BOR would provide 57 percent of the water needed for the coho, and establish an intergovernmental workgroup to "develop the other 43 [percent] of the flows." The RPA permitted the BOR to use a "water bank" to provide its share of the water.

The RPA is divided into three phases. Phase I, lasting from 2002 through 2005, calls upon the BOR to gradually develop resources in the water bank, begin development of the intergovernmental task force, and conduct scientific studies. During Phase I, the BOR must provide, at a minimum, the flows that were established in its biological assessment, supplementing those flows in the spring and/or summer by use of the water bank.

Phase II, which is to last from 2006 to 2010, requires the BOR increase the water bank to 100,000 acre feet and provide

the greater of the 57 percent share or the flows proposed in the biological assessment.

During Phase III, which encompasses water years 2010 and 2011, NMFS anticipates that 100 percent of the salmon's flow needs will be met through the BOR's 57 percent share and the 43 percent contribution from unspecified sources. The discussion in this section explains how the NMFS calculated the long-term flow levels that it believed were necessary to avoid the likelihood of jeopardy to the coho. The agency determined that the species could withstand a 20 percent reduction in habitat from what it would have received under an unimpaired flow regime, and calculated the flows that must be provided to achieve this quantity of habitat. The agency also determined that in summer months, flows of less than 1000 cfs would threaten coho in the main stem with dangerously high water temperatures, and required maintenance of flows of 1000 cfs or greater.

F. The Proceedings Below

The litigation below began with an unsuccessful request by Pacific Coast for a temporary restraining order in response to interim measures initiated before the BiOp was finalized. The NMFS completed the final BiOp on May 31, 2002. After 33,000 chinook, coho, and steelhead salmon died in an unexplained fish kill in the Klamath River between September 20 and 27, 2002, Pacific Coast filed an amended complaint against the federal defendants.

The parties filed cross-motions for summary judgment, on which the district court ruled on July 14, 2003. The district court overturned a significant aspect of the RPA, finding the requirement that the BOR provide only 57 percent of the long-term flows to be arbitrary and capricious. The court concluded that the NMFS had inappropriately considered the effects of actions that were not "reasonably certain to occur" when it determined that the coho would receive 100 percent

of the flows through a collaborative process. The federal defendants do not appeal this ruling, nor does Pacific Coast challenge the long-term flow levels established for Phase III.

At issue in this appeal is the district court's determination that Phases I and II of the RPA, or the short-term measures, were not arbitrary and capricious. Pacific Coast challenged the flow levels established in Phases I and II, arguing that the Phase I flows were the same flows rejected by the NMFS as insufficient in its review of the BOR's biological assessment and that the Phase II flows provided only 57 percent of the flows that the NMFS recognized the coho required. The court acknowledged that the RPA "does not explicitly engage in an analysis of what effect the water flows in Phases I and II, with the addition of the available water from the water bank, will have on the coho salmon or their critical habitat." However, the court found that the NMFS had determined that providing less water during the short-term would not jeopardize the coho. The court reasoned:

[T]he statements by the NMFS do not reflect a conclusion that it is necessary to consistently provide 100% of the long-term target flows throughout each phase of the program in order to avoid jeopardy to the salmon. In fact, implicit in the RPA's phased approach is the ultimate conclusion that maintaining a percentage of the long-term flow rates with the additional water provided by the water bank during Phase I and II will not jeopardize the salmon or adversely modify their critical habitat, provided that the long-term flow rates are eventually met by Phase III of the program.

The court ordered the NMFS to revise its BiOp to address the deficiencies identified in Phase III of the RPA, but specified that the BiOp and the RPA would remain in effect until a revised BiOp was issued. Pacific Coast timely filed the instant appeal. The federal defendants initially cross-appealed

the decision to strike down Phase III, but voluntarily dismissed the appeal prior to briefing.

II. Discussion

A. Standard of Review

The district court's grant of summary judgment is reviewed de novo. *Buono v. Norton*, 371 F.3d 543, 545 (9th Cir. 2004). The BiOp is a final agency decision subject to review under § 706 of the Administrative Procedure Act (APA). *Bennett v. Spear*, 520 U.S. 154, 178-79 (1997). Such decisions may be set aside if "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). Review under this standard is narrow; the reviewing court may not substitute its judgment for that of the agency. *Marsh v. Ore. Natural Res. Council*, 490 U.S. 360, 375-76 (1989). We will sustain an agency action if the agency has articulated a rational connection between the facts found and the conclusions made. *Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). "Even when an agency explains its decision with 'less than ideal clarity,' a reviewing court will not upset the decision on that account 'if the agency's path may reasonably be discerned.'" *Alaska Dep't of Env't'l Conserv. v. EPA*, 540 U.S. 461, 497 (2004) (quoting *Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc.*, 419 U.S. 281, 286 (1974)).

While our review is deferential, our inquiry must "be searching and careful." *Marsh*, 490 U.S. at 378. We must determine whether the agency's decision was "based on a consideration of the relevant factors and whether there has been a clear error of judgment." *Id.* Courts defer to the evaluations of agencies when the evidence presents conflicting views because "an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." *Id.* However:

if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered 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

the agency action may be overturned as unlawful. *Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43.

B. The RPA's Short-Term Flow Requirements Are Arbitrary and Capricious

The BiOp and its RPA govern the BOR's actions for ten years. However, the BOR is not required to provide the full quantity of water that the NMFS deems necessary for the coho until year nine. During the first eight years of implementation, the BOR is required to provide at most 57 percent of the species' total water needs. We must determine whether the NMFS's decision to delay the provision of the full quantity of water for eight years is supported by the record before us. We conclude that it is not. The BiOp contains no analysis of the effect on the SONCC coho of the first eight years of implementation of the RPA, and thus we cannot sustain the agency's decision.

1. Phases I and II Cannot be Sustained on the Basis of Implicit Reasoning

The district court reasoned that the agency had implicitly considered, in imposing the three-phase RPA, that all phases would ensure against jeopardy to the coho. The federal defendants assert that the district court properly found that the adoption of the phased approach implicitly recognized the agency's determination that such an approach would avoid jeopardy.

[1] We cannot adopt the district court’s reasoning. It is a basic principle of administrative law that the agency must articulate the reason or reasons for its decision. *See, e.g., Motor Vehicle Mfrs.*, 463 U.S. at 43; *SEC v. Chenery Corp.*, 332 U.S. 194, 196-97 (1947); *Gifford Pinchot Task Force v. U.S. Forest Serv.*, 378 F.3d 1059, 1072 n.9 (9th Cir. 2004); *Ariz. Cattle Growers Ass’n. v. U.S. Fish & Wildlife Serv.*, 273 F.3d 1229, 1236 (9th Cir. 2001). Although “ ‘a decision of less than ideal clarity’ ” may be upheld “ ‘if the agency’s path may reasonably be discerned,’ we cannot infer an agency’s reasoning from mere silence. . . . Rather, ‘an agency’s action must be upheld, if at all, on the basis articulated by the agency itself.’ ” *Beno v. Shalala*, 30 F.3d 1057, 1073-74 (9th Cir. 1994) (quoting *Motor Vehicle Mfrs.*, 463 U.S. at 43, 50, 57). The agency is obligated to “articulate[] a rational connection between the facts found and the choices made.” *NRDC v. Dep’t of Interior*, 113 F.3d 1121, 1126 (9th Cir. 1997) (internal citations omitted).

[2] Thus, the RPA cannot be sustained, as the district court held, by reliance on the agency’s unstated assumptions about the effects of Phases I and II. In a recent ESA case, we rejected a similar assertion that an agency “implicitly recognized the central role of recovery in its critical habitat analysis,” because when reviewing a biological opinion, we rely only “on what the agency *actually said*” in the BiOp to determine whether the agency considered the appropriate factors. *Gifford Pinchot Task Force*, 378 F.3d at 1072 & n.9 (internal quotation marks omitted). Indeed, in an ESA case where we approved the use of a phased approach, we noted specifically that the agency’s analysis revealed that it “considered the relevant factors and reasonably found that the [species] could survive the loss of habitat” during a four-year period in which an agency gradually acquired replacement habitat. *S.W. Ctr. for Biological Diversity v. BOR*, 143 F.3d 515, 523 (9th Cir. 1998). To permit an agency to “implicitly” conclude that a species would not be jeopardized by a proposed activity, and not require the agency to articulate a basis for its conclusion,

“would reject the bedrock concept of record review.” *Gifford Pinchot Task Force*, 378 F.3d at 1072 n.9. We thus examine the BiOp in its entirety to determine whether “the agency’s path” to its conclusion that Phases I and II of the RPA would avoid jeopardy to the coho “may reasonably be discerned.” *Motor Vehicles Mfrs.*, 463 U.S. at 43.

2. The Analysis of Phases I and II does not Provide a Reasoned Explanation for the Agency’s Decision

[3] Our review of the BiOp has been “searching and careful,” as we have attempted to identify the basis for the agency’s conclusions that the coho will not be jeopardized during the first two phases of the RPA. *Marsh*, 490 U.S. at 378. The agency’s analysis of the beneficial effects of the long-term flows, in combination with the absence of analysis of the effects of the substantially lower short-term flows, lead us to conclude that the reasoning behind the agency’s plan cannot be reasonably discerned. In fact, the agency’s decision appears to conflict with the analysis in the BiOp. The BiOp contains no analysis that suggests that the agency determined that, during the eight-year period encompassed by Phases I and II, the coho would receive sufficient protection against jeopardy under the proposed plan of operations.

Even the sections of the BiOp relied on by the federal defendants in their briefing and at oral argument to support their assertion that the agency provides “extensive analysis” of the effect of the RPA over the full ten-year period provide only minimal support for their argument. Almost all of the analysis in the RPA is concentrated on justification of the long-term flow requirement, and there is little substance to the discussions of Phases I and II.

The federal defendants assert that the BiOp “explains NMFS’ rationale for concluding that the short-term and long-term measures will avoid the likelihood of jeopardy.” The section that defendants cite (1) describes the RPA; (2) dis-

cusses how the RPA attempts to strike a balance between the NRC and Hardy Reports; and (3) details negotiations between the NMFS and the BOR on development of the RPA. The closest this section comes to providing any analysis that the RPA will not jeopardize the coho is the following:

Given that coho are primarily tributary spawners, that main-stem spawning and rearing habitat is likely not limiting at the current population size, and recognizing the importance of the main stem as a migratory corridor for adult and down-stream migrating smolts, NMFS thinks that the approach contained in this RPA sufficiently addresses the adverse effects of the Klamath Project to the SONC[C] coho salmon and its critical habitat by incrementally improving smolt migration habitat over conditions that would be achieved in the [biological assessment] and those suggested in the NRC interim report.

Although this language suggests, as the district court indicated, that the agency believed that the RPA would avoid jeopardy to the coho, this assertion alone is insufficient to sustain the BiOp and the RPA. The agency essentially asks that we take its word that the species will be protected if its plans are followed. If this were sufficient, the NMFS could simply assert that its decisions were protective and so withstand all scrutiny.

[4] The federal defendants urge that the NMFS provided “a detailed evaluation of the effect of each phase of the RPA.” Although some of the discussion on the referenced pages is “detailed,” it does not discuss the effects of each phase on SONCC coho. The section on Phase I, for example, contains an extensive discussion of why the water year types in BOR’s proposal should be modified to better reflect natural variability, but does not describe the effect that the modification would have on salmon or its habitat.

Phase I also establishes the water bank requirement. It provides that each year, an increasing volume of water must be delivered via the water bank. The BiOp explains that this “should improve instream flows” and “could be used to . . . improve downstream smolt survival and improve coho fry survival.” This statement supports the NMFS’s assertion that it believed the RPA would protect the coho, but it does not show how the addition of water from the bank will affect water levels or water temperature in the main stem of the river.

The discussion of Phase II is even more conclusory. The section describes how the NMFS arrived at the BOR’s 57 percent responsibility, but it does not analyze how providing only 57 percent of the long-term flows will avoid jeopardy to the coho.⁵ Rather than explain how providing 57 percent of the long-term flows will avoid jeopardy to the salmon, the discussion of Phase II explains that the Project provides irrigation to 57 percent of the land in the upper Klamath Basin. The flow level appears to be justified solely on the basis of the Klamath Project’s share of responsibility for the water use. The proper baseline analysis is not the proportional share of responsibility the federal agency bears for the decline in the species, but what jeopardy might result from the agency’s proposed actions in the present and future human and natural contexts. *See Aluminum Co. of Am. v. Adm’r, Bonneville Power Admin.*, 175 F.3d 1156, 1162 n.6 (9th Cir. 1999); *see also Nat’l Wildlife Fed’n v. Coleman*, 529 F.2d 359, 373-74 (5th Cir. 1976). Nothing in this section shows that the agency considered the effect on the coho of providing only slightly

⁵The district court overturned the 57 percent requirement only of the long-term flows, holding that the RPA dependence on the participation of third parties to provide the remaining 43 percent of the flows needed to avoid jeopardy was not appropriate because the beneficial effects of the proposed collaborative effort were not “reasonably certain to occur.” 50 C.F.R. § 402.02 (defining “indirect effects” as those “reasonably certain to occur”).

more than half of the long-term flow needs for the first eight years of implementation.

When we compare the analysis of Phases I and II to that provided in the discussion of the long-term flow levels established in Phase III, the deficiencies of the Phase I and II analyses become more apparent. In the section establishing the long-term flow levels, the BiOp detailed by season how the coho will benefit from increased flows. The agency estimated the amount of habitat that would have been available under an unimpaired flow regime. From this, the NMFS determined that, in order to avoid jeopardy during the critical March through June period, the BOR must provide a water flow that would result in a loss of only 20 percent of the habitat that would have been available under unimpaired flow conditions. During the summer months, when increased water temperature is of great concern, the BiOp determined that a minimum flow of 1000 cfs must be provided to avoid the adverse effects of high water temperatures.

Notably, during dry and critically dry years, under the regime proposed in Phases I and II, the flows could be substantially lower during the summer. For instance, during a dry water year, in Phase I, the BOR must provide between 542 and 749 cfs of water in the months of July through September (and less in a critically dry year), while in Phase II the flows could be as low as 570 cfs (57 percent of the full 1000 cfs). Nothing in the discussion of Phases I and II explains why the coho population would not face jeopardy from these significantly lower flows during the summer months of the first eight years of implementation.

[5] The discussion of the long-term flows in Phase III contains the analysis that supports the long-term flow recommendations. It is clear how the agency determined that the flow levels would improve coho habitat and increase the likelihood of the species' survival. By contrast, the discussion of the flows called for in Phases I and II does not explain how the

agency determined that these flows would be protective. The kind of analysis provided in the discussion of Phase III is conspicuously absent from the agency's discussion of Phases I and II.

[6] The scant analysis in Phases I and II is more troubling when we consider the duration of each Phase and the three-year life cycle of the SONCC coho. Phase I spans 2002 through 2005; Phase II lasts from 2006 to 2009. Phase III — when the coho will be provided with 100 percent of NMFS's estimated flow needs — lasts only two years, from 2010 to 2011. Phases I and II occupy *eight years* of the ten-year plan. Five full generations of coho will complete their three-year life cycles — hatch, rear, and spawn — during those eight years. Or, if there is insufficient water to sustain the coho during this period, they will *not* complete their life cycle, with the consequence that there will be no coho at the end of the eight years. If that happens, all the water in the world in 2010 and 2011 will not protect the coho, for there will be none to protect. It is not sufficient for the agency to impose these flows without explaining how the flows will protect critical habitat and ensure that sufficient water is in the main stem for coho to survive during these first five generations.

In a previous ESA case involving salmon, we stressed that the agency must consider near-term habitat loss to populations with short life cycles, and faulted the agency for only considering the impact of its actions over a ten-year period. *Pac. Coast Fed. of Fisherman's Ass'ns. v. NMFS*, 265 F.3d 1028, 1037-38 (9th Cir. 2001). "Given the importance of the near-term period on listed species survival it is difficult to justify NMFS's choice not to assess degradation over a time frame that takes into account the actual behavior of the species in danger." *Id.* at 1038. Here, the agency's assertion that it determined that the RPA would not cause jeopardy to the coho is difficult to accept when it is evident that the agency "entirely failed to consider an important aspect of the problem" — namely, that the species it must protect will experience five

generational cycles over the time span governed by Phases I and II of the RPA. *Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43. An agency does not avoid the likelihood of jeopardy to a listed species when it disregards the life cycle of the species in crafting the measures designed to protect it. Nor can the agency provide only partial protection for a species for several generations without any analysis of how doing so will affect the species.

A repeated theme of the federal defendants' argument is that the BiOp represents the agency's best judgment in the face of the conflicting conclusions of the NRC report and the Hardy Phase II study. Defendants assert that the science is uncertain, and thus "there are no specific quantitative target flows that determine jeopardy because there is no specific scientific information relating coho salmon population size to specific quantities of main-stem habitat as represented by flow." However, Phase III clearly presents "specific quantitative target flows" that the NMFS concluded were necessary to avoid jeopardy. The federal defendants ask us to disregard their quantitative conclusions in favor of their assertions that the first eight years of the RPA will avoid jeopardy.

[7] The federal defendants argue that the agency is not required to provide quantitative analysis, and that the analysis for Phases I and II reflects NMFS's qualitative determination that the RPA would not jeopardize the SONCC coho. However, this court has held that "while the [NMFS] can draw conclusions based on less than conclusive scientific evidence, it cannot base its conclusions on no evidence." *Nat'l Ass'n. of Home Builders v. Norton*, 340 F.3d 835, 847 (9th Cir. 2003) (internal citations omitted); *see also Bennett*, 520 U.S. at 176 ("The obvious purpose of the requirement that each agency 'use the best scientific and commercial evidence available' is to ensure that the ESA not be implemented haphazardly, on the basis of speculation or surmise.") (quoting 16 U.S.C. § 1536 (a)(2)). In Phase III of the RPA, NMFS establishes necessary flow levels; for Phases I and II, the RPA reduces

those flows by nearly half, but does not explain why this reduction does not jeopardize the coho.

We remand the case to the district court for the issuance of appropriate injunctive relief. *See Sierra Club v. Marsh*, 816 F.2d 1376, 1384 (9th Cir. 1987) (holding that plaintiff was entitled to injunctive relief if the agency violated a substantive or procedural provision of the ESA). We emphasize that the interim injunctive relief should reflect the short life-cycle of the species. It is not enough to provide water for the coho to survive in five years, if in the meantime, the population has been weakened or destroyed by inadequate water flows.

CONCLUSION

[8] We conclude that the RPA is arbitrary and capricious because it fails to analyze the effects of eight of ten years of the proposed action on the SONCC coho, a species that has a three-year life cycle. The agency has not demonstrated that it has followed the mandate of the ESA to avoid the likelihood of jeopardy to the SONCC coho. We remand to the district court to craft appropriate injunctive relief.

REVERSED and REMANDED for the issuance of injunctive relief.