IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

NATIONAL WILDLIFE FEDERATION, IDAHO WILDLIFE FEDERATION, WASHINGTON WILDLIFE FEDERATION, SIERRA CLUB, TROUT UNLIMITED, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS, INSTITUTE FOR FISHERIES RESOURCES, IDAHO RIVERS UNITED, IDAHO STEELHEAD AND SALMON UNITED, NORTHWEST SPORTFISHING INDUSTRY ASSOCIATION, SALMON FOR ALL, COLUMBIA RIVERKEEPER, AMERICAN RIVERS, INC., FEDERATION OF FLY FISHERS, and NW ENERGY COALITION, Plaintiffs, and STATE OF OREGON, Intervenor-Plaintiff, vs.	CV 01-640-RE (Lead Case) CV 05-23-RE (Consolidated Cases) OPINION AND ORDER

NATIONAL MARINE FISHERIES SERVICE,
U.S. ARMY CORPS OF ENGINEERS, and
U.S. BUREAU OF RECLAMATION,

Defendants,

and

STATE OF IDAHO, NORTHWEST IRRIGATION UTILITIES, PUBLIC POWER COUNCIL, WASHINGTON STATE FARM BUREAU FEDERATION, FRANKLIN COUNTY FARM BUREAU FEDERATION, GRANT COUNTY FARM BUREAU FEDERATION, NORTHWEST REQUIREMENT UTILITIES, PACIFIC NORTHWEST GENERATING COOPERATIVES, INDUSTRIAL CUSTOMERS OF NORTHWEST UTILITIES, ALCOA, INC., and INTERNATIONAL ASSOCIATION OF MACHINISTS & AEROSPACE WORKERS,

Intervenor-Defendants.

COLUMBIA SNAKE RIVER IRRIGATORS ASSOCIATION and EASTERN OREGON IRRIGATORS ASSOCIATION

Plaintiffs,

vs.

CARLOS M. GUTIERREZ, in his official capacity as Secretary of Commerce, NOAA FISHERIES, and D. ROBERT LOHN, in his official capacity as Regional Director of NOAA Fisheries,

Defendants.

REDDEN, Judge:

The matters before the court in this consolidated action are:

(1) In CV 01-640-RE, the motions for summary judgment of plaintiffs (collectively NWF) (doc. 759) and intervenor-plaintiff State of Oregon (doc. 762); the motion for summary judgment of intervenor-defendant State of Idaho (doc. 806); and the cross-motion for summary judgment of defendants National Marine Fisheries Service (NOAA)[1], the U.S. Army Corps of Engineers (Corps), and the U.S. Bureau of Reclamation (BOR) (doc. 821). This case is hereafter referred to as *NWF v. NOAA.*

(2) In CV 05-23-RE, the first motion for partial summary judgment (doc.12) of plaintiffs Columbia Snake River Irrigators Association and Eastern Oregon Irrigators Association (collectively Irrigators); the second motion for partial summary judgment of Irrigators (doc. 33); the motion for summary judgment of the State of Idaho (doc. 31); and the cross-motions for summary judgment of defendants Carlos M. Gutierrez, [2] NOAA, and Robert D. Lohn (NOAA) (doc. 46). This case is hereafter referred to as *Irrigators v. NOAA.*

Oral argument was held on April 27, 2005.

I

[1] National Marine Fisheries Service is a subagency of the National Oceanic and Atmospheric Administration (NOAA). It has now changed its name to NOAA Fisheries. National Marine Fisheries Service is referred to as "NOAA" throughout this opinion, even with reference to agency actions that occurred before the effective date of the name change.

[2] The Hon. Carlos M. Gutierrez was confirmed and sworn in as Secretary of Commerce after this action was filed, and is substituted as defendant for the former Secretary of Commerce, the Hon Donald L. Evans.

PROCEDURAL HISTORY

This opinion is the latest in a series of decisions issued by judges in this district since 1994, addressing various biological opinions issued by the federal government that attempted to balance the economic, commercial, and recreational interests in the Pacific Northwest, served by the ongoing operations of the Columbia and Snake River dams, with the conservation of salmon species listed under the Endangered Species Act (ESA), 16 U.S.C. § 1531 *et seq*. The 2004 biological opinion (2004BiOp) is the fourth opinion issued by NOAA covering operations of the Federal Columbia River Power System (DAMS) in the Columbia and Lower Snake Rivers. It replaced the biological opinion NOAA issued in December 2000 (2000BiOp). A brief description of the prior biological opinions is found in Attachment 2 entitled "Summary of 1993, 1995, and 2000 Biological Opinions."

The 2000BiOp had addressed the effects of the proposed action on 12 listed species in the Columbia River Basin. It concluded that the proposed action **would** jeopardize eight of the listed species **and** destroy or adversely modify critical habitat. Pursuant to the ESA and its regulations, NOAA proposed a reasonable and prudent alternative to avoid jeopardy and the destruction or adverse modification of critical habitat. NOAA issued an incidental take statement in conjunction with its reasonable and prudent alternative.

The 2000BiOp was challenged and on May 7, 2003, I granted motions for summary judgment invalidating that BiOp. *National Wildlife Federation v. NMFS*, 254 F.Supp.2d 1196 (D. Or. 2003). NOAA had relied on a reasonable and prudent alternative, but had included some mitigation measures that were not reasonably certain to occur and/or had not undergone section 7

consultation, both of which are required by the ESA and the regulations promulgated thereunder. I did not pass judgment on the Basinwide Salmon Recovery Strategy.

I granted NOAA's two motions for remand of the 2000BiOp for a total of 18 months. These remands were granted to allow NOAA the opportunity to engage in the required consultations and development of mitigation measures that were reasonably certain to occur.

NOAA engaged in a collaborative process with the states, Tribes, and other parties impacted by non-federal range-wide, off-site mitigation actions. I required quarterly reports on its progress. In January 2004, NOAA filed its second quarterly progress report, which included the 2003 Implementation Progress Evaluation Report required under the 2000BiOp. The second quarterly report opined that it was "making substantial progress toward completing the objectives of this remand by June 2, 2004." Second Quarterly Status Rpt., p. 2 (CV 01-640-RE, docket #430, filed 11-30-03).

On January 16, 2004, I met with the "steering committee" consisting of the parties, the attorneys, the action agencies, and interested members of the public. I commented on NOAA's second quarterly status report and the 2003 Implementation Progress Evaluation Report.

As to the quarterly status report:

1. NOAA had not yet reported their data on the salmon returns from the year 2001 or, at least, had not compiled the data for review.

2. NOAA indicated it was revisiting the jeopardy analysis to apply the "reasonably certain to occur" standard to future **harmful** activities, as well as to future **mitigation** activities. I expressed concern about the assumptions NOAA made to justify the delay in implementing a "safety net" plan. The justification was expressed as "the evidence of strong salmon returns in

recent years," without information to support that justification. I posited that reliance on the "reasonably certain to occur" standard is better directed to **mitigation** activities than **harmful** activities.

3. NOAA had not undertaken the necessary collaboration with government agencies, the states, or the Tribes. Time was running out.

As to the 2003 Implementation Progress Evaluation Report, answers to the several questions directed to the action agencies by NOAA were disappointing:

(1) The lack of funding to carry out the remand was delaying implementation of the reasonable and prudent alternatives.

(2) Monitoring programs had not been developed, although the biological opinion had been issued three years earlier.

(3) Performance standards necessary to implement the reasonable and prudent alternative had not been developed.

(4) Off-site mitigation plans, the focus of the May 2003 opinion, had not been developed. There were no details of results or progress on this key issue.

(5) No steps had been taken to develop habitat and hatchery performance standards.

This situation had not improved by the following summer. On June 4, 2004, I called the parties into court. NOAA then advised that it was consulting with the action agencies again, this time regarding yet another new biological opinion. NOAA's filing of the 2004BiOp on November 30, 2004, meant that the remanded 2000BiOp had been formally replaced.

Rather than implementing its promises on remand, NOAA had abandoned the approach of the 2000BiOp and instead the 2004BiOp relied on an analytical framework NOAA had not

used before. The 2004BiOp failed to follow the approach NOAA had used in prior biological opinions of adding the effects of the proposed action to the environmental baseline and any cumulative effects to determine whether, in light of the status of the species, the proposed action would cause jeopardy. In the 2004BiOp, NOAA concludes that the operation of the DAMS will not jeopardize the continued existence of **any** listed species nor destroy or adversely modify critical habitat for three of those species. These changes in interpretation of the ESA and regulations are significant, as is explained in the "Standard of Judicial Review" section of this opinion.

The following opinion details the facts and law that lead to my decision to invalidate the 2004BiOp.

II

THE LISTED SPECIES

The history of the 12 listed species of Columbia, Snake, and Willamette River salmon and steelhead is chronicled in NOAA's 1995, 2000, and 2004BiOps, and in the report of the West Coast Salmon Biological Review Team (Biological Review Team).[3] A.R. B-28. The 12 listed species are the Upper Columbia River Spring Chinook Salmon, Upper Columbia River Steelhead, Mid-Columbia River Steelhead, Snake River Spring/Summer Chinook Salmon, Snake River Fall Chinook Salmon, Snake River Sockeye Salmon, Snake River Steelhead, Lower

[3] The Biological Review Team consisted of a core group of scientists from the NMFS Northwest and Southwest Fisheries Science Centers, supplemented by experts on particular species from NMFS and other federal agencies. Biological Review Team Report, A.R. B-28 at 8.

Columbia River Chinook Salmon, Lower Columbia River Steelhead, Columbia River Chum Salmon, Upper Willamette River Chinook Salmon, and Upper Willamette River Steelhead.

In addition, because federal agencies must consult with NOAA on actions that are likely to jeopardize proposed species as well as listed species, NOAA's consultation included the Lower Columbia River Coho Salmon, proposed for listing as threatened on June 14, 2004. Unless otherwise indicated, all 13 species are referred to herein as the "listed species."

Attachment 1 to this opinion contains a summary of the historical, current, and projected population trends for the listed species taken from the 1995, 2000, and 2004BiOps and the Biological Review Team report.

Attachment 1 also includes a summary of the Biological Review Team's analysis of overall risks to the listed species. The majority of the Biological Review Team agreed the following listed species are **"in danger of extinction"**:

1. Upper Columbia River Spring Chinook;
2. Upper Columbia River Steelhead;
3. Lower Columbia River Coho; and
4. Snake River Sockeye.

In addition, the majority of the Biological Review Team agreed the following listed species are **"likely to become endangered in the foreseeable future"**:

(1) Snake River Fall Chinook;
(2) Snake River Spring/Summer Chinook;
(3) Lower Columbia River Chinook;
(4) Upper Willamette River Chinook;
(5) Snake River Steelhead;
(6) Middle Columbia River Steelhead;
(7) Lower Columbia River Steelhead;
(8) Upper Willamette River Steelhead; and
(9) Lower Columbia River Chum.

It is apparent that the listed species are in serious decline and not evidencing signs of recovery.

III

FRCPS OPERATIONS

The FCRPS is comprised of 14 sets of dams and their associated power houses and reservoirs: Bonneville, The Dalles, John Day, and McNary Dams in the lower Columbia River Basin; Chief Joseph, Grand Coulee and Banks Lake, Libby, Hungry Horse, and Albeni Falls Dams in the upper Columbia River Basin; and Ice Harbor, Lower Monumental, Little Goose, Lower Granite, and Dworshak Dams in the lower Snake River Basin.

Each of these DAMS and water projects was constructed and is operated pursuant to specific congressional legislation. Grand Coulee Dam and Hungry Horse Dam are managed by the BOR. The other 12 are managed by the Corps.

IV

STANDARD OF JUDICIAL REVIEW

Action agency consultations and the resulting issuances of biological opinions constitute final agency action under 16 U.S.C. § 1536 and are subject to judicial review. Because the ESA has no specific provision for judicial review of final agency actions, the scope of review is governed by the Administrative Procedures Act (APA), 5 U.S.C. § 701 *et seq.*

Under the APA, an agency action must be upheld unless it is found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A); *Friends of the Earth v. Hintz*, 800 F.2d 822, 830-31 (9th Cir.1986). To decide if an agency action is arbitrary and capricious, the court must determine whether the agency

considered the relevant factors and articulated a rational connection between the facts found and the choices made. *Pacific Coast Federation of Fishermen's Ass'n, Inc. v. NMFS*, 265 F.3d 1028, 1034 (9th Cir. 2001). As long as the agency decision was based on the relevant factors and there is no clear error of judgment, the reviewing court may not overturn the agency's action as arbitrary and capricious. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 378 (1989). *See also Arizona v. Thomas*, 824 F.2d 745, 748 (9th Cir. 1987).

Judicial review under this standard is to be "searching and careful," but remains "narrow," and a court should not substitute its judgment for that of the agency. *Mt. Graham Red Squirrel v. Espy*, 986 F.2d 1568, 1571 (9th Cir. 1993). An agency action should be overturned only when 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." *Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) "Deference to an agency's technical expertise and experience is particularly warranted with respect to questions involving . . . scientific matters." *United States v. Alpine Land and Reservoir Co.*, 887 F.2d 207, 213 (9th Cir. 1989), *cert. denied*, 498 U.S. 817 (1990). Nevertheless, the "presumption of agency expertise may be rebutted if the decisions, even though based on scientific expertise, are not reasoned." *Greenpeace v. NMFS*, 80 F.Supp.2d 1137, 1147 (W.D. Wash. 2000).

When an agency's interpretation of a regulation conflicts with its earlier interpretation, the new is "entitled to considerably less deference" than a consistently-held agency view. *Immigration and Naturalization Service v. Cardoza-Fonseca*, 480 U.S. 421, 446 n.30 (1987),

citing *Watt v. Alaska*, 451 U.S. 259, 273 (1981). In such a case, "[t]he agency will be required to show not only that its new policy is reasonable, but also to provide a reasonable rationale supporting its departure from prior practice." *Seldovia Native Ass'n, Inc. v. Lujan*, 904 F.2d 1335, 1345 (9th Cir. 1990). "Although the consistency of an agency's interpretation is **one** relevant factor in judging its reasonableness, an agency's interpretation . . . is nevertheless entitled to deference, so long as the agency acknowledges and explains the departure from its prior views." *Id*. (emphasis in original).

V

ENDANGERED SPECIES ACT

A. The ESA.

Congress enacted the ESA:

> [T]o provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.

16 U.S.C. § 1531(b). The mandate of the ESA is "that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this chapter." 16 U.S.C. § 1531(c).

In *Tennessee Valley Authority v. Hill*, the Supreme Court stated:

> As it was finally passed, the Endangered Species Act of 1973 represented the most comprehensive legislation for the preservation of endangered species ever enacted by any nation. . . . . Lest there be any ambiguity as to the meaning of this statutory directive, the Act specifically defined "conserve" as meaning "to use and the use of **all methods and procedures which are necessary** to bring **any endangered species or threatened species** to the point at which the measures provided pursuant to this chapter are no longer necessary.

437 U.S. 153, 180 (1978) (emphasis in original). "The plain intent of Congress in enacting [the ESA] was to halt and reverse the trend towards species extinction, whatever the cost." *Id*. at 184. The Court emphasized that "the legislative history undergirding § 7 reveals an explicit congressional decision to require agencies to afford first priority to the declared national policy of saving endangered species." *Id*. at 185.

Federal agencies are required to formulate a biological opinion as to whether a proposed action is likely to jeopardize the continued existence of the listed species or result in the destruction or adverse modification of critical habitat. 16 U.S.C. § 1536(a)(2) and (b)(3)(A); 50 C.F.R. § 402.02. If the biological opinion concludes the action will jeopardize a listed species, the opinion must include the reasonable and prudent alternatives to the agency's action plans. *Id*

A biological opinion "should address both the jeopardy and critical habitat prongs of Section 7 [of the ESA], by considering the current status of the species, the environmental baseline, the effects of the proposed action, and the cumulative effects of the proposed action." *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Service*, 378 F.3d 1059, 1063 (9th Cir. 2004) (citing 50 C.F.R. § 402.14(g)(2)-(3)).

B. Section 7 Consultation.

Under section 7 of the ESA, every federal agency "shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an 'agency action') is not likely to jeopardize the continued existence of the endangered or threatened species or result in the destruction or adverse modification of habitat of such species . . . unless such agency has been granted an

exemption for such action by the [Endangered Species] Committee . . . ." 16 U.S.C. § 1536(a)(2). "Section 7 and the requirements of this Part apply to all actions where there is discretionary Federal involvement or control." 50 C.F.R. § 402.03.

During a section 7 consultation, the consulting agency must "[e]valuate the effects of the action and cumulative effects on the listed species or critical habitat." 50 C.F.R § 402.14(g)(3). The agency must "[f]ormulate 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." *Id*.

"Cumulative effects" are "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." 50 C.F.R. § 402.02. "Effects of the action" are "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.

The environmental baseline "includes all past and present impacts [on listed species and their critical habitat] of all Federal, State, private, 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." 50 C.F.R. § 402.02.

C. <u>Consultation Handbook</u>.

In March 1998, NOAA and the U.S. Fish & Wildlife Service (FWS) jointly published an "Endangered Species Consultation Handbook - Procedures for Conducting Consultation and

Conference Activities Under Section 7 of the Endangered Species Act**.**" In chapter 4 of the Consultation Handbook, the agencies described the requirements of a jeopardy analysis, which include viewing the proposed action against "the aggregate effects of everything that has led to the species' current status, and, for non-Federal activities, those things likely to affect the species in the future." A.R. B-251, Consultation Handbook, p. 4-35. The Handbook addresses when a jeopardy conclusion is warranted:

> In a majority of cases[4], a **jeopardy** opinion is rendered when the total of the species' status, environmental baseline, effects of the proposed action, and cumulative effects lead to the conclusion that the proposed action is likely to jeopardize the continued existence of the **entire** species, subspecies, or vertebrate population as listed.

Id. at 4-36 (emphasis in original).

The Consultation Handbook describes what must be included in the conclusion section of a formal biological opinion:

> The conclusion section presents the Services' opinion regarding whether the aggregate effects of the factors analyzed under "environmental baseline," "effects of the action," and "cumulative effects" in the action area - when viewed against the status of the species or critical habitat as listed or designated - **are likely to jeopardize the continued existence of the species** or **result in destruction or adverse modification of critical habitat.**

Id. at p. 4-31 (emphasis in original). *See also Id.* at 4-29 and 29 (pertaining to ongoing water projects).

---

[4] The "exception" referred to in the Consultation Handbook has no bearing on any issue in this litigation. *See* A.R. B-251 at 4-36.

VI

NWF v. NOAA

NWF and the State of Oregon have challenged the 2004BiOp, specifically: (a) the segregation of the existence of the DAMS and nondiscretionary federal operations from discretionary operations; (b) the basic analytical framework used by NOAA in arriving at its no-jeopardy and critical habitat determinations; (c) the critical habitat determinations; (d) the segmentation of the action that resulted in a partitioning of FCRPS operations affecting the Columbia and Lower Snake Rivers from the BOR operations affecting the upper Snake River[5]; (e) the incidental take statement; and (f) NOAA's scientific and commercial data. NWF seeks a declaration that the 2004BiOp is invalid, an order requiring NOAA to withdraw the 2004BiOp and the incidental take statement, and additional injunctive relief. NOAA, the Corps, and BOR, and the intervenor-defendants have filed cross-motions for summary judgment.

I find that the 2004BiOp is **legally flawed in four respects**: (1) the improper segregation of the elements of the proposed action NOAA deems to be nondiscretionary; (2) the comparison, rather than the aggregation, of the effects of the proposed action; (3) the flawed critical habitat determinations; and (4) the failure to consult adequately on both recovery and survival in the jeopardy determination. Each of the above issues is independently dispositive and, therefore, I need not address other issues raised by the parties.

---

[5] This issue is also pending before this court in *American Rivers v. NOAA Fisheries*, CV 04-61-RE. A motion for summary judgment filed by plaintiffs is fully briefed. I determined the issues raised in the motion were moot because a new biological opinion regarding upper Snake River operations was to be issued in March 2005.

A. Segregation of Nondiscretionary Impacts.

The 2004BiOp states that "each of the dams already exists, and their existence is beyond the scope of the present discretion of the Corps and [BOR] to reverse." 2004BiOp at 5-5. NOAA says that the "Action Agencies were not required to consult" on any elements of the pre-existing project that are beyond their current discretion or control. Fed. Def. Memo., p. 18. NOAA then categorized the existing DAMS and nondiscretionary dam operations as part of the environmental baseline, together with all past and present impacts from discretionary operations. 2004BiOp at 5-5, 5-6. NOAA asserts that the proposed action is limited to "all of the Action Agencies' proposed **discretionary** operations of the FCRPS, associated projects, and coincident mitigation actions through 2014." *Id.* at 3-1 (emphasis added). NOAA acknowledges its jeopardy analysis calls for distinguishing the effects of the existence and **nondiscretionary** operations of DAMS from the effects of the proposed action, but claims the task is beyond its "technical ability" and "analytically impossible . . . without assuming some sort of operation . . . ." *Id.* at 5-5.

NOAA claims that the distinction between discretionary and nondiscretionary elements follows from a "fundamental principle" of section 7 consultation found in 50 CFR §402.03: "Section 7 and the requirements of this Part apply to all actions in which there is discretionary Federal involvement or control."

The plain language of § 402.03 does not eliminate consultation in situations where there is some meaningful discretionary involvement or control in the action.[6]

---

[6] The regulatory history of §402.03 demonstrates a consistent intention that section 7 applies when **some** meaningful discretionary control or involvement is retained by an action agency. NOAA and the FWS promulgated the final regulation § 402.03 in 1978 after resolution

The case law does not support NOAA's new approach. In *Natural Resource Defense Council v. Houston*, 146 F.3d 1118 (9th Cir. 1998), the court held the BOR violated the ESA by failing to consult prior to renewing water contracts with irrigation and water districts. The court pointed out that there was "**some discretion** available to the BOR during the negotiation process . . . even if the original contracts guaranteed the [districts] a right to a similar share of available water in the renewal contracts." *Id.* at 1126 (emphasis added).

In *Sierra Club v. Babbit*, 65 F.3d 1502 (9th Cir.1995), the Bureau of Land Management (BLM) was a party to an agreement reached prior to enactment of the ESA. The agreement had granted a right-of-way over BLM land to a private party. The agreement restricted the BLM's "continuing ability to influence the private conduct . . . to three factors unrelated to the conservation of the threatened spotted owl." *Id*. at 1508. The court held that "Congress did not intend for section 7 to apply to an agreement **finalized** before passage of the ESA where the federal agency **currently lacks the discretion** to influence the private activity for the benefit of the protected species." *Id.* at 1511-12 (emphasis added).

---

of concerns about issues of retroactivity. They stated the position that "as long as **some** Federal discretionary control or involvement remained that could avoid jeopardizing the listed species or adversely modifying or destroying its critical habitat, the degree of completion of a project was irrelevant." 43 F.R. 872 (emphasis added). In 1983, there were minor alterations to § 402.03 not dealing with "discretion." In the final regulation published in 1986, § 402.03 was modified to include the word "discretionary": "Section 7 and the requirements of this Part apply to all actions in which there is discretionary Federal involvement or control." The commentary says only that the provision, "which explains the applicability of section 7, implicitly covers Federal activities within the territorial jurisdiction of the United States and upon the high seas as a result of the definition of 'action' in § 402.02." 51 F.R. 19937. There was no comment about the added term "discretionary."

In *Environmental Protection Information Center v. The Simpson Timber Company*, 255 F.3d 1073 (9th Cir. 2001), the court held that the FWS was not required to **reinitiate** consultation to consider the effects of activities allowed under the incidental take permit on species listed as threatened **after** the permit was issued. The court reasoned that "the FWS [had] not retained discretionary control over Simpson's incidental take permit that would inure to the benefit of the marbled murrelet or the coho salmon." *Id*. at 1083.

Ground Zero Ctr for Non-Violent Action v. U.S. Dept of the Navy, 383 F.3d 1082 (9th Cir.2004), is another case cited by NOAA. The case does not support NOAA's theory. There, the court ruled the Navy had limited discretion to reduce the risk of accidental non-nuclear explosion of Trident II missiles because (1) the siting decision for the missile program was made by the **President** and, therefore, any consultation with the **Navy** would have been meaningless, and (2) the Navy had completed the biological assessment of the Trident II Backfit Program, concluding that the program would have no adverse effect on this listed species. *Id*. at 1092 n.8.

In *Turtle Island Restoration Network v. National Marine Fisheries Service*, 340 F.3d 969, 975 (9th Cir. 2003), the court held that the relevant statute – the High Seas Fishing Compliance Act – "provides [the] Fisheries Service with ample discretion to protect listed species," so that its issuance of fishing permits falls under the ESA's consultation requirement.

I hold that NOAA must consult on the entire proposed action if the action agencies have meaningful discretion to operate the DAMS in a manner that complies with the ESA. Congress has provided the agencies with statutory authority and discretion to act for the benefit of listed species in operating the DAMS.

As early as 1958, Congress amended the Fish and Wildlife Coordination Act, authorizing the Secretary of the Interior to provide conservation assistance to federal agencies, among others, so that "wildlife conservation shall receive **equal consideration** and be coordinated with other features of water-resource development programs . . . . " 16 USC § 661 (emphasis added).[7]

In the 1980 Pacific Northwest Electric Power Planning and Conservation Act, Congress intended the Act's purposes, including hydropower development, "to be construed in a manner consistent with applicable environmental laws." 16 USC § 839. The Act was intended

> to protect, mitigate and enhance the fish and wildlife, including related spawning grounds and habitat, of the Columbia River and its tributaries, particularly anadromous fish which are of significant importance to the social and economic well-being of the Pacific Northwest and the Nation and which are dependent on suitable environmental conditions substantially obtainable from the management and operation of the Federal Columbia River Power System and other power generating facilities on the Columbia River and its tributaries.

Id. The Act established an affirmative conservation mandate for FCRPS agencies:

> Federal agencies responsible for managing, operating, or regulating Federal or non-Federal hydroelectric facilities located on the Columbia River or its tributaries shall--
>
> (i) exercise such responsibilities consistent with the purposes of this chapter and other applicable laws, to adequately protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat, affected by such projects or facilities **in a manner that provides equitable treatment for such fish and wildlife** with the other purposes for which such system and facilities are managed and operated.

16 USC § 839b(h)(11)(A) (emphasis added).

The Northwest Power Act places "fish and wildlife concerns on an equal footing with power production." *Confederated Tribes and Bands of the Yakima Indian Nation v. Federal*

---

[7] The term "wildlife" in the Fish and Wildlife Coordination Act includes "birds, fishes, mammals, and all other classes of wild animals."

Energy Regulatory Commission, 746 F.2d 466, 473 (9th Cir.1984), *cert. denied*, 471 U.S. 1116 (1985).

District courts have considered statutorily-mandated operations of the Missouri River dams by the Army Corps of Engineers and its obligations under the ESA. In *American Rivers v. Corps of Engineers*, 271 F.Supp.2d 230 (D. D.C. 2003), the court applied the rule that "if an agency has **any** statutory discretion over the action in question, that agency has the authority, and thus the responsibility, to comply with the ESA." *Id*. at 251 (emphasis added). In evaluating the governing statute, the court found that the Flood Control Act (FCA), 33 U.S.C. § 709 "does not deprive the Corps of all discretion in its management of the Missouri River Basin." *Id*. at 252. The court further found that the Corps' Master Manual on navigation "allows the Corps to consider a variety of factors" and thus "affords the Corp discretion in management of the Missouri River." *Id*. at 251-52. The court therefore held that the Corps must fulfill its ESA responsibilities.[8] *Id.*

Similarly, the court held in *In re: Operation of the Missouri River System Litigation*, 2004 WL 1402563 *3 (D. Minn., June 21, 2004), that the Corps was required to manage the Missouri River for multiple purposes, including flood control, irrigation, power, navigation, wildlife, and recreation. *Id*. at *3. The court emphasized that "[t]he Corps' prioritization of

[8] The court noted that "such ESA compliance can come at the expense of other interests, including navigation and flood control given the Supreme Court's conclusion that the ESA ''reveal[ed] a conscious decision by Congress to give endangered species **priority** over the 'primary missions' of federal agencies." *Id*., citing *TVA v. Hill*, 437 U.S. at 185 (emphasis by the *American Rivers* court).

river interests is discretionary" and "[t]he priority that the Corps gives the competing river interests is a discretionary function, and subject to the ESA." *Id.* at *4.

The congressionally-authorized operating purposes of all 14 Columbia Basin DAMS and water projects include hydroelectric power production, fish and wildlife protection, and recreation. The authorized operating purposes for 10 of the DAMS also include navigation; for six of the DAMS, irrigation; for five of the DAMS, flood control; and for two of the DAMS, water quality activities. *See* Defendant-Intervenor BPA Customer Group Summary Judgment Memo., Love Decl., Attach. B, setting forth the authorizing statutes, operation purposes and uses for each of the DAMS operated by the Corps. The action agencies have considerable discretion in their administration of the systems, allowing them to meet their mandates and yet adjust operations to fulfill multiple purposes, even though there may be some conflict among the purposes. Decisions in operating the DAMS to accommodate the divergent interests involve choices and the exercise of discretion. The Corps Statement of Decision implementing the 2004BiOp makes this clear:

> Traditionally, the Corps has been granted broad discretion by Congress in planning, constructing, and operating federal water resource projects. This discretion is based on Congressional reliance on Corps' experience and technical expertise. However, this discretion is not unconstrained; the authorizing legislation mandates the Corps provide for specified project uses. **The Corps is responsible for using its expertise in making decisions on how to operate and maintain the FCRPS projects for multiple uses based on principles of operating experience, public concerns, water supply, public health and safety, funding, international agreements, and the needs of the Pacific Northwest and the Nation.** The Corps operates the FCRPS projects . . . for multiple purposes, including flood control, hydropower generation, irrigation, navigation, fish, wildlife, water quality, municipal and industrial water, and recreation.

Record of Consultation and Statement of Decision, p. 2 (emphasis added).

The ESA contains but a single exemption for agencies that claim their statutory mandate to "authorize, fund, or carry out" a project leaves them with insufficient discretion to avoid jeopardizing a listed species. The exemption came into being when Congress amended the ESA after the Supreme Court's 1978 decision in *Tennessee Valley Authority v. Hill* to create the Endangered Species Committee. 16 U.S.C. § 1536(e)-(l). The exemption covers situations where agencies cannot insure an action is not likely to jeopardize the continued existence of the endangered species or threatened species or result in the destruction or adverse modification of habitat of such species. 16 U.S.C. § 1536(a)(2). For the exemption to apply, the Committee must find, among other things, that there are no reasonable and prudent alternatives to the proposed action; the proposed action is of regional or national significance; and the "benefits of alternative courses of action" that are "consistent with preserving the species or its critical habitat" are clearly outweighed by the benefits of the proposed action." 16 U.S.C. § 1536(h)(1)(A)(i)-(iv). "[T]he [Endangered Species] Committee is known as the God Squad" because "it is the ultimate arbiter of the fate of an endangered species. *Portland Audubon Soc. v. Endangered Species Committee*, 984 F.2d 1534, 1537, *as amended*, 988 F.2d 121 (9th Cir. 1993).

NOAA's current interpretation of § 402.03 would create a second exemption far broader than the only one thus far created by Congress. Under NOAA's interpretation, an action agency would be able to exempt itself from accountability by characterizing some, even lethal, elements of any proposed action as "nondiscretionary." The consequences would be, as in the 2004BiOp, a jeopardy analysis that ignores the reality of past, present, and future effects of federal actions on listed species. NOAA's interpretation conflicts with the structure, purpose, and policy behind the ESA. If Congress had meant to provide additional exemptions, it would have done so.

"[T]he scope of the agency action is crucial because the ESA requires the biological opinion to analyze the effect of the **entire** agency action." *Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir. 1988) (emphasis in original). *See also Pacific Rivers Council v Thomas*, 30 F.3d 1050, 1056 n.12 (9th Cir. 1994) ("[C]onsultation on the entirety of [Land Resource Management Plans] is required, not just an amendment to the LRMPs.") NOAA's approach would almost always limit the consultation to only a part of the action.

Finally, NOAA cites the recent decision in *NWF v. U.S. Army Corps of Engineers* ("*USACE*"), 384 F.3d 1163 (9th Cir. 2004), in support of its position that "the Action Agencies should not be considered to have 'violated' other laws where such apparent violations stem from the existence of the dams themselves or their non-discretionary operations." Fed. Def. Reply Memo. at 6. I find the *USACE* case does not relieve NOAA of its duty to consult on the entirety of the proposed action as required under section 7 of the ESA. In *USACE*, the court declined to find the Corps in violation of the Clean Water Act (CWA) for its failure to ensure that state water quality standards were met for water temperature in the lower Snake River. The court agreed with the Corps's determination that, while impoundments unavoidably created by mainstem dams had an effect, there were "no operational changes" the Corps could undertake "to significantly decrease river water temperatures." *Id*. at 1169, citing the Corps' 2001 Record of Decision. Unlike *USACE*, in this case the action agencies have not contended that "the sole cause" of salmon and steelhead decline is "the existence of the dams and not any discretionary method of operating" them. *Id*. Further, unlike *USACE* which turned on the question of compliance with state water quality standards incorporated in the CWA, this case involves compliance with the consultation provision of the ESA itself.

In this case, the operation of the DAMS includes both nondiscretionary and discretionary elements. The applicable statutes and case law do not support NOAA's new theory that § 402.03 insulates an action agency from accountability because of the nondiscretionary aspects of its proposed action. The segregation of discretionary and nondiscretionary elements in the 2004BiOp is a violation of law and is also arbitrary and capricious. NOAA has not demonstrated a reasonable rationale for its departure from its long-standing practices evidenced in 1995 and 2000BiOps. I give only limited deference to NOAA's interpretation. When an agency's new interpretation of a regulation conflicts with its earlier interpretations, the agency is "entitled to considerably less deference" than a consistently-held agency view. *Immigration and Naturalization Service v. Cardoza-Fonseca*, 480 U.S. at 446 n.30.

B. Comparison of Effects of Action.

NWF directly challenges NOAA's failure to use an aggregation of the impacts from the proposed action, the environmental baseline, and cumulative impacts as the basis for the jeopardy analysis.[9] NWF points to the definition of "effects of the action," which includes "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 CFR § 402.02 (emphasis added). NWF also cites sections of the Consultation Handbook that instruct agencies engaged in section 7 consultation to answer the question: "Whether the aggregate effects of the factors analyzed under 'environmental baseline,'

[9] NWF notes that if the 2004BiOp aggregated impacts in this way, then NOAA's "bifurcation of the proposed action into discretionary and nondiscretionary elements (and assigning the latter to the baseline) would not present as large a problem." NWF Reply Memo. at 25 n.20.

'effects of the action,' and 'cumulative effects' in the action area - when viewed against the status of the species or critical habitat as listed or designated -- are **likely to jeopardize the continued existence of the species or result in destruction or adverse modification of critical habitat**." NWF Reply Memo. at 15, citing A.R. B-251 at 4-31 (emphasis in original). *See also* Oregon Memo. at 8-10, citing A.R. B-251 at 4-28, 4-29, and 4-31.

NOAA's prior BiOps, summarized in Attachment 2, have indeed used the aggregation approach. Those BiOps did so to "insure" that listed species would be likely to survive in the long term with an adequate potential to recover (and so be removed from protected status). Under the aggregation approach, the impact of the proposed action is evaluated in a comprehensive context, thus minimizing the chance that a biological opinion will fail to account adequately for the impact of any related threat to listed species.

NOAA argues that to interpret § 402.02 to require it to use, as the basis for its jeopardy determination, the aggregate impacts from all relevant sources "from the outset [would be] an illogical reading of the Statute and Regulations that leads to absurd results." Fed. Def. Reply Memo. at 8 n.13. NOAA posits such a requirement could lead to a situation where an impaired environmental baseline would result in a jeopardy finding even if the proposed action had highly beneficial effects, but where those benefits may be found inadequate to overcome the impaired baseline conditions. This hypothetical situation is not before the court as there is no dispute that ongoing operation of the DAMS is lethal to listed salmon and steelhead populations. If such a situation exists, § 402.14(a) provides an exception to the rule requiring formal consultation when an action "may effect" a listed species or its critical habitat. That is, if a federal agency "determines, with the written concurrence [of the relevant Services agency] that the proposed

action is not likely to adversely affect any listed species or critical habitat," then formal consultation is not required.[10] So, when a federal agency undertakes an action it believes to be wholly or largely beneficial, and so not likely to harm a listed species or its critical habitat, it can seek the concurrence of the agencies through informal consultation. Such informal consultation can avoid subjecting its largely beneficial proposed action to jeopardy analysis. A "may affect" but "not likely to adversely affect" determination ends the consultation process "and no further action is necessary." 50 CFR § 402.13(a).

NOAA is **not permitted** to restrict the basis of its jeopardy analysis by segregating from the proposed action all elements it deems nondiscretionary, thereby consigning the effects of these elements to the environmental baseline. What NOAA has in effect done in the 2004BiOp is compare the proposed action to the share of the proposed action it chose to re-categorize as part of the environmental baseline, rather than properly evaluating the proposed action in its entirety. NOAA then proceeded with an analysis it has not used in prior biological opinions: it attempted to model the impact of that portion of the expanded baseline, and then subtracted that from its estimate of impacts attributable to the action as a whole. It intended the result to be an estimate of the incremental impact to listed species of the proposed action standing alone. Only if that increment was found to overwhelm beneficial mitigation measures described in the proposed action would NOAA take the step of "factoring-in" the status of the species, the

[10] Two other exceptions to the formal consultation requirement are described in § 402.14: (1) if as a result of a biological assessment prepared pursuant to 50 CFR § 402.12, the agencies determine that the proposed action is "not likely to adversely affect any listed species or critical habitat;" and (2) if a "preliminary biological opinion, issued after early consultation under § 402.11, is confirmed as the final biological opinion."

baseline, and cumulative effects, in order to determine if the action "is likely to jeopardize the continued existence" of listed species." Fed. Def. Reply Memo. at 7.

Courts have rejected NOAA's comparative approach in jeopardy analyses. In *Kandra v. United States*, 145 F.Supp.2d 1192 (D. Or. 2001), the court concluded that "all human activities that impact the listed species must be considered in the environmental baseline. The effects of the proposed action are then addressed 'in conjunction with the impacts that constitute the baseline'." *Id*. at 1208, citing *Defenders of Wildlife v. Babbitt*, 130 F.Supp.2d 121, 127-28 (D. D.C. 2001). "The environmental baseline is part of the entire 'effects of the action' on the listed species or habitat that must be considered, rather than some concrete standard or condition to which other standards or conditions are compared." *Kandra* at 1208.

In *Defenders of Wildlife*, the court held the agencies cannot fulfill their consultation duty by "simply listing the relevant activities" of federal agencies that would impact an endangered species. The BiOp must "include an analysis of the effects of the action on the species when 'added to' the environmental baseline--in other words, an analysis of the total impact on the species." *Id*. at 128.

NOAA asserts that the clause "that will be added to the environmental baseline" means that at the conclusion of consultation (presumably after the proposed action goes into effect), the effects attributable broadly to the proposed action will "go into the environmental baseline."[11] Fed. Def. Reply Memo. at 17. NOAA takes a literal approach, arguing that nowhere in the ESA

[11] According to NOAA, the clause is an indication of how federal agencies may "keep track" of how much of an "allocable cushion" exists before a subsequent action may threaten jeopardy. Fed. Def. Reply Memo. at 17-18.

regulations is an agency expressly required to aggregate the effects attributable to the environmental baseline with the effects of the action, to make the jeopardy decision on the basis of that aggregation. NOAA says that though it does not aggregate all effects at the outset, it "does in fact consider the effects of the action together with the baseline and cumulative effects, if it finds a net reduction to the species' current status (*i.e.* status under the baseline), in determining whether there is an appreciable reduction in the likelihood of both survival and recovery." *Id.* at 7-8.

NOAA's comparative approach improperly circumscribes the effects of the action by basing the jeopardy decision on NOAA's estimate of the impacts attributable only to "discretionary" elements of the proposed action. This has the effect of substantially lowering the threshold required for the mitigation elements of the proposed action. The "net effects" analysis operates only on a portion of impacts properly attributable to the action as a whole, instead of needing to offset impacts attributable to the entirety of the action – discretionary and nondiscretionary elements alike.[12] Only a comprehensive approach to jeopardy analysis will

[12] Remarkably, in its "net effects" analysis, NOAA found there were no "appreciable" reductions in numbers, reproduction, or distribution of listed species, even though it found 10 of the 13 listed species in the Columbia basin had short-term reductions. 2004BiOp, Chapter 8. NOAA supports the finding with a non-peer reviewed study, published the same month the 2004BiOp was released, that opines that recent strong returns of adult spawners are indicative of a positive trend in the range-wide status of several of the species. 2004BiOp at 4-5. According to the study, populations of several listed species will weather increased short-term risk, at least through 2010. 2004BiOp, Chapter 8. This study was based on adult return data taken in two recent periods, 1996-2000 and 2000-2003. 2004BiOp at 4-5, which compare the most recent period to years of record low returns during the 1990s. This approach contrasts with the methodology NOAA employed in the 2000BiOp, wherein the first step was to "define the recent population trend, based on adult returns from 1980 through the most recent year available." 2000BiOp at A 3. Judge Marsh of this court previously rejected population-trend analyses whose selective reliance on data from certain periods ensures an overly-optimistic appraisal of the status of listed species. *IDFG v. NMFS*, 850 F. Supp. 886, 893-894 (1994). So do I.

meet the statutory mandate. 16 U.S.C. § 1536(a)(2); 50 CFR § 402.14(g). The approach of the 2004BiOp stands in sharp contrast to the aggregative approach NOAA used in prior BiOps, which was comprehensive enough to ensure an adequate jeopardy analysis without being so rigid as to foreclose consideration of non-quantifiable factors. NOAA's jeopardy analysis in the 2004BiOp is insufficiently comprehensive to "insure" that any action carried out by a federal agency is "not likely to jeopardize the continued existence" of a listed species. 16 U.S.C. § 1536(a)(2). I find NOAA's jeopardy analysis to be arbitrary and capricious and contrary to law. Again, I have given NOAA's current interpretation of § 402.02 little deference because the 2004BiOp's comparative approach represents a significant departure from NOAA's previous interpretations of § 402.02 as expressed in prior BiOps (see Attachment 2 to this opinion) and its own Consultation Handbook. *Cardoza-Fonseca*, 480 U.S. at 446 n.30.

C. Critical Habitat Determinations.

The ESA requires each federal agency to ensure that its actions are not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat. Neither "jeopardize the continued existence of" nor "destruction or adverse modification of critical habitat" are defined by the statute. However, ESA regulations do define both. "Jeopardize 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, number, or distribution of that species." 50 C.F.R. § 402.02. "Destruction or adverse modification of critical habitat" means: "a direct or indirection alteration that appreciably diminishes the value

of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical." 50 C.F.R. § 402.02.

Three listed species, Snake River Spring/Summer Chinook Salmon, Snake River Fall Chinook Salmon, and Snake River Sockeye Salmon, have designated critical habitat.[13] NOAA concludes that "the proposed action would not be likely to adversely modify or destroy designated critical habitat" for Spring/Summer Chinook Salmon and Snake River Sockeye Salmon. NOAA also concludes that the proposed action "would not be likely to adversely modify or destroy designated critical habit by appreciably diminishing the value of critical habitat for survival or recovery" for Snake River Fall Chinook Salmon. 2004BiOp at 8-8, 8-12, and 8-36.

As noted, the regulatory definition of jeopardy provides that, in order for an action to result in jeopardy, the action must cause either an appreciable reduction in the likelihood of both survival and recovery of a listed species in the wild by reducing the reproduction, number, or distribution of that species, or an alteration in habitat that appreciably diminishes its value for both survival and recovery. 50 C.F.R. § 402.02. "The regulatory definition reads the 'recovery' goal out of the adverse modification inquiry." *Gifford Pinchot Task Force v. U.S. Fish &*

---

[13] When the 2000BiOp was issued, critical habitat had been designated for 12 listed species. The critical habitat designation for nine of the 12 listed species was withdrawn following a successful 2002 court challenge to the designation. *See National Association of Home Builders v. Evans*, No. 00-CV-2799, 2002 WL 1205743 (D. D.C., Apr. 30, 2002). As a result, NOAA's 2004BiOp addressed critical habitat only for Snake River Spring/Summer Chinook Salmon, Snake River Fall Chinook Salmon, and Snake River Sockeye Salmon, the three remaining listed species that have critical habitat designation. Critical habitat has not yet been designated for Lower Columbia River Coho Salmon, a species proposed for listing as threatened in 2004. 2004BiOp at 4-1 n.1 and 4-2.

Wildlife Service, 378 F.3d 1059, 1069 (9th Cir. 2004). *Gifford Pinchot* explained that as to critical habitat the rules ". . . cannot be right. If the FWS follows its own regulation, then it is obligated to be indifferent to, if not to ignore, the recovery goal of critical habitat." *Id.* at 1070.

Accordingly, *Gifford Pinchot* requires NOAA to determine separately whether the proposed action would destroy or adversely modify critical habitat necessary for the recovery, as well as the survival, of listed species.

When NOAA issued the 2004BiOp, it was aware of the *Gifford Pinchot* decision. 2004BiOp at 1-5. Nevertheless, I conclude that NOAA's analysis was inadequate as to the recovery question. NOAA noted, for each of the three species, that critical habitat was poor and likely to be further degraded by the proposed action at least in the short term. *Id.* at 8-7, 8-8, 8-13, 8-36. According to NOAA, "safe passage . . . in the juvenile migration corridor" is an "essential feature of designated critical habitat," and spill provides a "safer route of passage than other routes" based on "in-river survival estimates." *Id.* at 6-61, 6-76. NOAA acknowledged, however, that spill rates in the proposed action would be lower than those hypothesized in the reference operation, at least for the short-term from 2004-2009. Therefore, "safe passage conditions" for each of the three listed species "will be impaired" during that time period. *Id.*

To offset the short-term degradation of critical habitat for Snake River Spring/Chinook Salmon, NOAA relies substantially on the proposed installation of "surface passage structures" such as removable spillway weirs, that would improve critical habitat between 2010 and 2014. NOAA "expected" these improvements would "result in juvenile passage conditions through the FCRPS that are at least as safe as those associated with the reference operation". *Id.* at 6-61, 6-62. NOAA applies the same rationale to Snake River Sockeye Salmon, except that NOAA

notes the "sockeye found within the hydro system are the result of a hatchery program." *Id.* at 8-36.

To offset most of the short-term degradation of the critical habitat for Snake River Fall Chinook Salmon, NOAA relies on programs between 2010 and 2014 that reduce bird and fish predation and improve cover and shelter in the estuary. *Id.* at 6-90. NOAA notes "only a small proportion of the Fish within this ESU actually complete their juvenile migration entirely in-river" because of the fish transportation program, and many of the rest "die as a result of dam or reservoir passage." *Id.* at 8-12.

NOAA expects the short term degradation of critical habitat caused by the proposed action will be offset by improvements to be in place by 2014, and concludes from this that the proposed action will not destroy or adversely modify critical habitat necessary for survival or recovery.

In *Pacific Coast Federation of Fishermen's Associations, Inc. v. NMFS*, 265 F.3d 1028 (9th Cir. 2001) (*PCFFA*) the court considered NMFS' failure to adequately assess the short-term impacts of proposed timber operations on the likelihood of survival and recovery of a listed fish population. In *PCFFA*, NMFS considered degradation of critical habit inconsequential unless it persisted for more than a decade. The court stated:

> This generous timeframe ignores the life cycle and migration cycle of anadromous fish. In ten years, a badly degraded habitat will likely result in the total extinction of the subspecies that formerly returned to a particular creek for spawning.

> NMFS predicts that more trees will grow within the watershed during the ensuing decade than are cut in the proposed project and, therefore, concludes that the "short-term" and "localized" effects of the logging will be naturally mitigated by regrowth. This optimism may be justified for the purpose of counting trees, but for the purposes of counting anadromous fish it is wholly unrealistic.

265 F.3d at 1037-38. The court therefore NMFS' assessment to be arbitrary and capricious.

NOAA's optimism that long-term improvements in critical habit will offset the degradation of the habitat necessary for survival or recovery in the first five years of the 2004BiOp is unrealistic. First, NOAA does not analyze the significant degradation in the already poor condition of critical habitat, in the context of the life cycles and migration patterns of the three species. Second, as to Snake River Spring/Summer Chinook and Sockeye Salmon, the action agencies have not committed to install the removable spillway weirs that NOAA relies on to offset the short-term reduction in critical habitat. Third, as to Snake River Fall Chinook, NOAA is at best "uncertain" as to whether the short-term degradation of critical habitat will be offset by long-term habitat improvements. *Id.* at 6-90. Finally, as to each of the species' prospects for recovery in light of the degraded critical habitat, NOAA states "[t]he purpose of safe passage, relative to 'survival or recovery' of listed species, is survival through the migratory corridor at a rate sufficient to support increasing populations up to at least a recovery level." NOAA, however, acknowledges it does not know "[t]he in-river survival rate necessary for recovery." *Id.* at 8-7, 8-8.

NOAA was arbitrary and capricious in arriving at its critical habitat determination as to the three affected species. NOAA (1) did not analyze the short-term negative effects of the proposed action in the context of the species' life cycles and migration patterns, (2) relied on uncertain long-term improvements to critical habitat to offset the short-term degradation of

critical habitat that will occur as a result of the proposed action, and (3) determined that the species' critical habitat was sufficient for purposes of recovery even though NOAA did not have the information on in-river survival rates to make that determination.

D. Omission of Recovery from Jeopardy Determination.

Unlike the 1995 and 2000BiOps, the 2004BiOp excludes from its jeopardy analysis consideration of whether the proposed action appreciably reduces the likelihood of species' recovery. Those earlier BiOps included analysis of whether the proposed action left a listed species with at least "a moderate to high likelihood that its population will achieve" a moderate to high likelihood of recovery. 2000BiOp B-156 at 1-9 (quoting 1995BiOp at 14). The 2004BiOp, in contrast, focuses almost exclusively on the question to what extent a proposed action, compared to the reference operation, will reduce the reproduction, numbers, or distribution of a listed species.

Prior biological opinions attained the implicit requirement of 50 CFR § 402.02 of analyzing whether an action may jeopardize a species by appreciably reducing the species' prospects of recovery as well as survival. The regulation defines "jeopardize the continued existence of" to include "engag[ing] 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 . . . . " (emphasis added).

The Consultation Handbook confirms that "[t]he final [jeopardy] analysis looks at whether, given the aggregate effects, **the species can be expected to both survive and recover** . . . . " A.R. B-251, Consultation Handbook at 4-35 (emphasis added). Further, the Consultation Handbook defines survival in part to include recovery:

> **Recovery:** . . . Recovery is the process by which species' ecosystems are restored and/or threats to the species are removed so self-sustaining and self-regulating populations of listed species can be supported as persistent members of native biotic communities.
>
> **Survival:** the species' persistence, as listed . . . beyond the conditions leading to its endangerment, with sufficient resilience to allow recovery from endangerment. Said another way, **survival is the condition in which a species continues to exist into the future while retaining the potential for recovery**.

Id. (emphasis added). Both regulation § 402.02 and NOAA's own Consultation Handbook require that listed species be protected from any appreciable reduction in their likelihood of recovery.[14] The reasoning in *Gifford Pinchot* applies to the jeopardy analysis in a biological opinion, as well as to critical habitat determinations. Recovery must be considered separately. The likelihood that recovery and survival will occur is reduced when the likelihood of either is reduced. In smaller populations, the likelihood of survival is even more dramatically affected by the likelihood of recovery. NOAA's jeopardy analysis is contrary to law, because it does not address the prospects for recovery of the listed species. It is also arbitrary and capricious, because NOAA fails to provide a reasonable rationale for its significant departure from inclusion of recovery in the 2004BiOp, as it had in the 1995 and 2000BiOps. I give only limited deference to NOAA's interpretation. When an agency's interpretation of a regulation conflicts with the agency's earlier interpretations, it is "entitled to considerably less deference" than a consistently-held agency view. *Immigration and Naturalization Service v. Cardoza-Fonseca*, 480 U.S. at 446 n.30.

---

[14] This does not mean that a jeopardy analysis must include the formulation of a specific recovery plan. Recovery planning is governed by section 4 of the ESA, 16 U.S.C. § 1533(f).

VII

Irrigators v. NOAA

The Irrigators have filed two motions for summary judgment. The first addresses the Irrigators' contention that NOAA applied an improper jeopardy standard under section 7(a)(2) of the ESA. The second motion addresses the Irrigators' contention that NOAA failed to consider the best available scientific data in grossly overestimating the effects of the DAMS on the listed species.

A. Standing.

NOAA challenged the Irrigators' standing to bring this action. To have standing, a plaintiff (1) must have suffered an actual injury to a legally protected interest; (2) the injury must be traceable to the challenged action; and (3) it must be likely that the injury will be redressed by a favorable decision. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992).

Dr. Darryl Olson, Irrigators' Board Representative, swears in his declaration that many irrigators are "direct pumpers" who draw water directly from the Columbia River. They cannot do so when the "minimum irrigation pool" is reduced for the benefit of the salmon.

Dr. Olson's declaration sufficiently establishes that the Irrigators have a legally protected interest and that their alleged injuries are fairly traceable to the proposed action. Further, such alleged injury may be redressed by a decision favorable to the Irrigators, should they prevail. I find that the Irrigators have standing to bring this action.

B. Environmental Baseline.

NOAA's jeopardy analysis must include an analysis of the environmental baseline and the cumulative effects of future state and private activities on the listed species. 50 C.F.R. §§ 402.02 and 401.14(g).

The Irrigators raise the issue of the impact of the tribes' annual in-river harvests and state-managed harvests on NOAA's jeopardy analysis. They urge that tribal in-river harvests are federal actions the effects of which should not have been included in the environmental baseline because they have not undergone separate section 7 consultations. They also assert NOAA should not have included the effects of state-managed harvests as cumulative effects in the jeopardy analysis.

1. Tribal In-River Rights.

NOAA points out that tribal fishing rights will always affect the status of the listed species. It also correctly points out that if NOAA "did not factor tribal fishing rights into the environmental baseline, the effects of the proposed action would be measured against a false picture of the species status." Fed. Def. Memo. at 9-10.

The Tribes are entitled to "up to 50 % of the harvestable surplus of fish that pass through the Tribes' usual and accustomed fishing grounds." *See Sohappy v. Smith*, 529 F.2d 570, 573 (9th Cir. 1974). Treaty fishing rights are under the continuing jurisdiction of the United States District Court for the District of Oregon. *U.S. v. Oregon*, CV 68-513-KI (D. Or.). The amount of the harvestable surplus changes from year-to-year and is subject to negotiation under the auspices of *U.S. v. Oregon*. 2004BiOp at 5-47. Harvest management has been governed by a long-term agreement known as the Columbia River Fish Management Plan, which expired in

1998. *Id.* at 5-48. Since then, the harvests have been managed by a series of interim agreements negotiated as part of settlements by the parties in *U.S. v. Oregon. Id.*

NOAA points to section 7 consultations determining the treaty tribes' harvest impact on the listed species. A biological opinion on the 2001 spring agreement provided that "this consultation applies to future fisheries so long as they are managed subject to the terms of the interim agreement and current fishery proposals." A.R. C-15 at 4. In the 2004 fall agreement, the parties negotiated harvest rates for listed species applicable to the fall harvest. That agreement, which expired in 2004, underwent section 7 consultation and was in effect when the 2004BiOp was issued. NOAA directs the court to the administrative record when the 2004BiOp was issued.[15] The record, as of November 30, 2004, demonstrates that it had consulted on harvest decisions, and had made rational assumptions as to future harvests sufficient to satisfy the consultation requirements of section 7 of the ESA.

NOAA's inclusion of the effects of future tribal harvests in the environmental baseline for purposes of the jeopardy analysis was consistent with law because those harvests had undergone formal or early section 7 consultation.

2. State-Managed Harvests.

The Irrigators contend NOAA improperly added "cumulative effects" of state-managed recreational harvests to the "effects of the action" in its jeopardy analysis. NOAA responds that it applied ESA regulations specifically requiring consideration of cumulative effects in reaching

[15] According to NOAA, a new three-year agreement has been negotiated to include all spring, summer, fall, and winter fisheries. Fed. Def. Memo. at p. 12 n.6. NOAA has recently issued a biological opinion based on that agreement. *Id.*

its jeopardy conclusion. NOAA argues that the Irrigators' assertion amounts to a direct facial challenge to the regulation, which is barred by the applicable statute of limitations.

NOAA also argues that even if the Irrigators' challenge is not so barred, it properly considered cumulative effects of state-managed recreational harvests.

ESA regulations prescribe the step-by-step approach NOAA was required to use in its consultation on the FCRPS:

> (1) Review all relevant information . . .;
>
> (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 the 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)(1)-(4) (emphasis added). "Cumulative effects" are:

> [T]hose effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal Action subject to consultation.

50 C.F.R. § 402.02. On its face, this regulation unambiguously requires NOAA to add cumulative effects to the effects of the action in order to make a jeopardy determination.

In the 2004BiOp, NOAA set forth each of the steps it took in undertaking its jeopardy analysis of the proposed action. 2004BiOp at 1-5, 1-6. NOAA says it followed the steps required by the regulation.

The Irrigators, however, claim they are not challenging the promulgation of the regulation. Rather, they are challenging the application of the regulation in the 2004BiOp. The Irrigators argue that

> the only construction of the regulation consistent with the statute would permit defendants to assess jeopardy of the species more broadly (including "cumulative effects"), but **would restrict defendants from issuing a "jeopardy" opinion unless the "effects of the action" alone (albeit broadly defined) jeopardize the continued existence of the fish**.

Irrigators Memo. at 17-18 (emphasis in original). According to the Irrigators, the regulation should be construed to include a *caveat* that the addition of cumulative effects cannot be the cause of a jeopardy finding. "An agency action that by itself does not jeopardize the continued existence of listed species, but merely pushes them somewhat closer to the brink, over which a future, unrelated action then pushes the listed species, simply has not **caused** jeopardy in the sense set forth in the [ESA]." *Id*. at 18 (emphasis in original).

The Irrigators therefore urge the addition of the *caveat* is necessary to "rationally assess cause and effect as intended by Congress." *Id.* This argument demonstrates the Irrigators' seek to add words neither expressly included in the regulation nor suggested by implication. The Irrigators' premise is that the June 3, 1986 regulation is irrational. That argument amounts to a challenge to the regulation itself and I conclude the challenge is time-barred.

The Irrigators' second argument is that NOAA was arbitrary and capricious in considering the state-managed recreational harvests as cumulative effects to be added to the jeopardy analysis and, therefore, contrary to law. This challenge is to the application of the regulation and, as such, is not time-barred. NOAA's decision became part of the final agency

action when the 2004BiOp was issued. The Irrigators' challenge on this ground is brought within the six-year limitation period.

NOAA included the effects of state-managed recreational harvests as cumulative effects in its jeopardy analysis. The Irrigators argue such effects are not cumulative effects because the harvests are regulated by the federal government and, therefore, constitute federal actions. As federal actions, such effects cannot be included in the jeopardy analysis without section 7 consultation.

NOAA does not disagree with the Irrigators on this point. Under section 10 of the ESA, 16 U.S.C. § 1539(a)(1)(B), any take of fish authorized under state-managed harvests requires an incidental take permit (section 10 permit). Such a permit constitutes major federal action for purposes of the National Environmental Policy Act. *Ramsey v. Brown*, 96 F.3d 434, 444 (9th Cir. 1996).

NOAA's Consultation Handbook requires that non-federal proposed actions requiring section 10 permits must undergo section 7 consultation. *See* Consultation Handbook, A.R. 251 at 4-30, 4-31. NOAA, however, notes that the effects of such future non-federal proposed actions are considered "cumulative effects" for purposes of the jeopardy analysis "until the section 7 consultation for the section 10 permit is completed, at which time the effects of those projects become part of the environmental baseline for future consultations." *Id.*

I conclude that the ESA regulations and NOAA's Consultation Handbook appropriately require NOAA to consider the effects of future state-managed harvests in any jeopardy analysis because such harvests are reasonably certain to occur and undoubtedly impact the status of the listed species. It is not arbitrary and capricious, but rational, to consider the effects of such

future harvests as cumulative effects until the section 10 permit process is completed. When the section 10 permit is issued, it is not arbitrary and capricious to consider the matter a federal action for which consultation is required. Once consultation is completed, the effects of the then-permitted harvest are appropriately assigned to the environmental baseline as the effects of a federal action. Further, whether the effects of the harvests are accounted for in the jeopardy analysis as "cumulative effects," or as part of the environmental baseline is not the key issue. The key issue is that the effects be accounted for one way or another in order to provide an accurate picture of the current status of the listed species which, after all, is the purpose of the exercise.

I conclude NOAA's inclusion of the effects of future tribal treaty harvests in the environmental baseline and the effects of future state-managed harvests as cumulative effects for the purposes of the jeopardy analysis in the 2004BiOp is not arbitrary and capricious and not contrary to law.

3. Recovery Planning.

The Irrigators also argue NOAA improperly included recovery planning in the 2004BiOp. They say that although NOAA must prepare a separate recovery plan, it should not be part of the biological opinion. Section 4 of the ESA requires NOAA to develop a recovery plan with:

> (i) a description of such site-specific management actions as may be necessary to achieve the plan's goal for the conservation and survival of the species;
>
> (ii) objective, measurable criteria which, when met, would result in a determination in accordance with the provisions of this section, that the species be removed from the list; and

> (iii) estimates of the time required and the cost to carry out those measures needed to achieve the plan's goal and to achieve intermediate steps toward that goal.

16 U.S.C. § 1533(f)(1)(B).

Here, the Irrigators rely on a single example in the Administrative Record supporting the 2004BiOp, in which the Irrigators claims that NOAA demanded additional off-site mitigation actions "as the price for a 'no jeopardy' opinion":

> Order of priority for mitigation: habitat first, hatcheries second, harvest on a case-by-case basis. This does not mean that all the habitat potential must be achieved before the hatchery programs are considered, but opportunities to improve habitat should be considered first.

A.R. C-110 at 3.

NOAA responds that the above guidance was merely to advise the action agencies "regarding selecting the mitigation actions necessary to avoid jeopardy in the FCRPS Biological Opinion Remand." A.R. C-110 at 1.

NOAA argues it did not engage in recovery planning in the 2004BiOp but properly addressed the likelihood of recovery of the listed species in the jeopardy analysis. As noted, I agree with NWF and others that NOAA did not adequately address the likelihood of the species' recovery in the 2004BiOp. Accordingly, I certainly agree with NOAA that it did not engage in the far more detailed process of recovery planning in the 2004BiOp, as charged by the Irrigators.

For these reasons, I deny the Irrigators' first motion for summary judgment.

C. <u>Second Motion for Summary Judgment</u>.

The Irrigators' second motion for summary judgment addresses one issue - the science used by NOAA in the 2004BiOp. I decline to address this issue for the same reasons I did not

address it in *NWF v. NOAA*. In any event, since I have concluded the 2004BiOp is invalid for reasons other than the science used by NOAA, the Irrigators' second motion for summary judgment is moot.

VIII

CONCLUSION

For the reasons discussed above, in CV-01-640-RE, the court **GRANTS** the motions for summary judgment of plaintiff NWF and intervenor-plaintiff State of Oregon (docs. 759, 762), and **DENIES** the motions for summary judgment of NOAA, the Corps, and BOR, and intervenor-defendant State of Idaho (docs. 821, 806).

In CV-05-23-RE, the court **DENIES** the Irrigators' first motion for partial summary judgment (doc. 12) and **DENIES AS MOOT** the Irrigators' second motion for partial summary judgment (doc. 33). The court **DENIES** the cross-motion for summary judgment of defendants Carlos M. Gutierrez, NOAA Fisheries and Robert D. Lohn (doc. 46), and the motion for summary judgment of intervenor-defendant State of Idaho (doc. 31).

This is not a final order as to all claims and all parties for purposes of Fed. R. Civ. P. 54(b). If a party should file an appeal from this non-appealable order, this court is not divested of

jurisdiction. *Estate of Conners v. O'Connor*, 6 F.3d 656, 658 (9th Cir. 1993); *United States v. Garner*, 663 F.2d 834, 838 (9th Cir. 1981).

IT IS SO ORDERED.

Dated this 26th day of May, 2005.

/S/ James A. Redden
James A. Redden
United States District Judge

ATTACHMENT 1

Sources

1995 BiOp: NMFS. 1995. Endangered Species Act Section 7 Biological Opinion on the Reinitiation of Consultation on 1994-1998 Operations of the Federal Columbia River Power System and Juvenile Transportation Program. NMFS, Hydro Program, Portland, Oregon.

2000BiOp: NMFS. 2000. Endangered Species Act – Section 7 Consultation, Biological Opinion, Reinitiation of Consultation on Operation of the Federal Columbia River Power System, Including the Juvenile Fish Transportation Program, and 19 Bureau of Reclamation Projects in the Columbia Basin. National Marine Fisheries Service, Northwest Region, Portland, Oregon.

2004BiOp: NOAA Fisheries. 2004. Formal Biological Opinion: Consultation on Remand for Operation of the Columbia River Power System and 19 Bureau of Reclamation Projects in the Columbia Basin (Revised and reissued pursuant to court order, NWF v. NMFS, Civ. No. CV 01-640-RE (D. Oregon), 11/30/2004.

Report of West Coast Salmon Biological Review Team: July 21, 2003. Updated status of federally listed west coast salmon and steelhead. Northwest Fisheries Science Center and Southwest Fisheries Science Center, Seattle, WA and Santa Cruz, CA. (A.R. B-28).

Biological Review Team – Analysis of Overall Risk

The Biological Review Team analysis of overall risk to an evolutionary significant unit (ESU) used categories that correspond to definitions in the ESA: in danger of extinction, likely to become endangered in the foreseeable future, or not likely to become endangered. The overall risk assessment reflects professional judgment by each Biological Review Team member. To allow for uncertainty in judging the actual risk facing an ESU, the Biological Review Team adopted a "likelihood point" method, often referred to as the "FEMAT" method (Forest Ecosystem Management Assessment Team) because it is a variation of a method used by scientific teams evaluating options under President Clinton's Forest Plan. In this approach, each Biological Review Team member distributes ten likelihood points among the three ESU risk categories, reflecting their opinion of how likely that category correctly reflects the true ESU status. This method has been used in all status review updates for anadromous Pacific salmonids since 1999.

Short-term and long-term trends in abundance were calculated from time series of the total number of adult spawners. Short-term trends were calculated using data from 1990 to the

most recent year, with a minimum of 10 data points in the 13-year span. Long-term trends were calculated using all data in a time series.

The following table presents the tally of FEMAT vote distribution regarding the status of each ESU:

ESU	At Risk of Extinction	Likely to Become Endangered	Not Likely to Become Endangered
Upper Columbia River spring-run	79	67	4
Upper Columbia River steelhead	75	62	3
Lower Columbia River coho	88	42	0
Snake River sockeye	130	0	0
Snake River fall-run chinook	38	91	21
Snake River spring/summer-run chinook	30	102	18
Lower Columbia River chinook	25	107	18
Upper Willamette River chinook	32	105	13
Snake River steelhead	14	103	23
Middle Columbia River steelhead	1	71	68
Lower Columbia River steelhead	10	110	30
Upper Willamette River steelhead	7	106	37
Lower Columbia River chum	44	82	4

Summary of Historical, Current, and Projected Population Trends

1. Snake River Spring/Summer Chinook Salmon.

Historically, the Snake River Spring/Summer Chinook Salmon spawned in virtually all accessible and suitable habitats in the Snake River system. During the late 1880s, total Snake River adult production probably exceeded 1.5 million in some years. By the mid-1900s, abundance of adults declined to about 125,000 per year during 1950-1960. Since the 1960s, adult Snake River Spring/Summer Chinook Salmon have continued to decline in abundance. The Snake River Spring/Summer Chinook Salmon include current runs to the Tucannon River, the Grande Ronde River system, the Imnaha River, and the Salmon River system. During the recent base period of 1980-1999, NOAA estimated that the median population growth rate ranged from 0.96 to 0.80, where 1.00 would equal parent replacement and a stable population. The 1997-2001 geometric mean return of natural-origin Chinook exceeded 3,700 fish. In spite of higher than average production in 2002 and 2003, where hatchery fish constituted 69 percent

of the return, the Biological Review Team concluded that this threatened species is likely to become endangered in the foreseeable future. A.R. B-28 (A.2.1., Table A.3.1.).

NOAA concluded there will be a net adverse impact on critical habitat from 2004 to 2009 because the negative impacts from reduced spill will not be fully offset by a predator removal program, *i.e.*, "the magnitude of the survival improvement associated with the pikeminnow program in the proposed action is less than the magnitude of the survival reduction associated with the proposed spill operation." 2004BiOp at pp. 6-76. From 2009 to 2014, "an improvement in the functioning of critical habitat affecting various life stages of the species is expected." *Id*. at 77.

2. <u>Snake River Fall Chinook Salmon</u>.

No reliable historic estimates of abundance are available for Snake River Fall Chinook Salmon. Estimated returns of Snake River Fall Chinook Salmon declined from 72,000 annually between 1938 and 1949, to 29,000 from 1950 through 1959. Further declines occurred upon completion of the Hells Canyon complex which blocked access to primary production areas in the late 1950s. Estimated returns of naturally-produced adults from 1985 through 1993 ranged from 114 to 732 fish. Returns classified as natural origin exceeded 2,600 in 2001. Approximately 80 percent of historical spawning habitat was lost with the construction of a series of DAMS on the mainstem Snake River. Currently, natural spawning is limited to the area from the upper end of Lower Granite Reservoir to Hells Canyon Dam, and the lower reaches of the Imnaha, Grande Ronde, Clearwater and Tucannon rivers. Even though recent long- and short-term trends in productivity are at or above replacement, NOAA currently lists this species as threatened, and the Biological Review Team concluded that the ESU is likely to become an endangered species within the foreseeable future. A.R. B-28 (A.2.1., Table A.3.1).

NOAA concludes this species' safe passage critical habitat will be impaired from 2004-2009 because of reduced flow. In addition, the reduced flow will impair this species' shallow-water rearing habitat in the estuary to a "relatively minor" degree. 2004BiOp at 6-89. NOAA also notes the "nutrient cycling in spawning and rearing areas" will be affected by a reduction "in the number of adult salmon returning to their natural spawning and rearing areas." The reduction in the number of returning adults results from the loss of juvenile salmon in the hydrosystem. *Id.* at 6-89, 6-90.

Nevertheless, NOAA concludes the proposed action does not "appreciably diminish the value of the habitat for this [species] as it relates to . . . its recovery because the same rate of safe passage possible under the environmental baseline remains available in the future." *Id*. at 8-12. NOAA's reasoning is that only a small portion of the species actually complete in-river juvenile migration. "[A]bout half of the juvenile migrants are transported [by barges]. The remaining juvenile in-river migrants may volitionally rear in reservoirs, . . . die as a result of dam or reservoir passage, or survive to below Bonneville Dam." *Id*.

NOAA acknowledges "the essential features of critical habit" for this species are poor now, the proposed action will further degrade the critical habitat between 2004 and 2009, but that five years from now, passage improvements in the proposed action "will help offset that degradation." *Id.* at 8-13. NOAA also acknowledges the reduction in critical habitat necessary for recovery of this species is caused by an "operation that does not make maximum use of spillways, the safest route of in-river passage." *Id*. To mitigate this negative impact, NOAA posits that "the operation, however, does not reduce the future availability of spillways for safer passage. Since this capacity of existing critical habitat to safely pass fish is not reduced, the proposed action does not appreciably diminish the value of the critical habitat for recovery." *Id*.

3. <u>Snake River Sockeye Salmon</u>.

Historically, large numbers of Sockeye Salmon returned to tributaries of the Snake River. Some 75,000 were harvested one year by a single commercial fishing operation in Big Payette Lake, Idaho. During the early 1880s, Snake River Sockeye Salmon returns to Wallowa Lake, Oregon, were estimated at between 24,000 and 30,000 per year. During the 1950s and 1960s, adult returns to Redfish Lake numbered more than 4,000 fish. Although anadromous sockeye were abundant in a variety of lakes throughout the Snake River basin (Alturas, Pettit, Redfish, Stanley and Yellowbelly in the Sawtooth Valley and in Wallowa, Payette and Warm Lakes), the only remaining population resides in Redfish Lake. Only 16 naturally-produced adults returned to Redfish Lake since the Snake River sockeye species was listed as endangered in 1991. All 16 fish were taken into the Redfish Lake Captive Broodstock Program. Although the program has increased the number of adult returns in some years, it has yet to produce consistent returns. NOAA's assessment is that the artificial propagation program does not substantially reduce the extinction risk of the listed species. The Biological Review Team was unanimous in their conclusion that this ESU is in “danger of extinction. A.R. B-28 (D.2.1., Table D.3.1.).

NOAA acknowledges that, from 2004 until 2009, the "magnitude of the impairment" of critical habitat necessary for the recovery of this species as a result of the reduced flow in the proposed action is "significant." 2004BiOp at 6-136. Because of anticipated hydro passage improvement, however, "[t]he magnitude [of the impairment]" is smaller between 2010 and 2014. *Id*. NOAA also acknowledges the "in-river survival rate necessary for recovery" of this species is currently unknown." *Id*. at 8-36.

Notwithstanding this bleak assessment of the proposed action's impact on this species' critical habit, NOAA concludes "the relatively short-term impact to critical habitat resulting from the proposed action is not likely to appreciably diminish the value of critical habitat either for the survival or recovery of [this species]." *Id*. To reach this conclusion, NOAA relies on the efficacy of its hatchery program. Indeed, NOAA states "[c]urrently , almost all [of this species] found within the hydro system are the result of a hatchery program." *Id.*

4. <u>Snake River Steelhead</u>.

The Snake River Steelhead species includes all naturally spawning populations of steelhead in streams in the Snake River basin of southeast Washington, northeast Oregon, and Idaho. There are six major populations in this species: the Clearwater River, the Grande Ronde River, Hells Canyon, the Imnaha River, Lower Snake River and the Salmon River. No estimates of historical (pre-1960s) abundance specific to this species are available. In the early 1960s, returns to the Clearwater River system may have reached 40-60,000 and returns to the Grande Ronde River and the Imnaha River may have reached 15,000 and 4,000 steelhead per year, respectively. For the base period beginning in 1980 and including 1997 returns, NOAA estimated the median population growth rate ranged from 0.91 to 0.70. Of major concern is the large number of hatchery fish that are widespread and stray to spawn naturally throughout the region. In the 1960s, an average of 86 percent of adult steelhead passing Lower Granite Dam were of hatchery origin. Recent 5-year abundance and productivity trends (through 2001) were mixed. Five of the nine available data series exhibit positive long- and short-term trends in abundance. The majority of long-term population growth rate estimates for the nine available series were below replacement. The Biological Review Team concluded that this ESU is likely to become endangered. A.R. B-28 (B.2.1., Table B.3.1.).

5. Upper Columbia River Spring Chinook Salmon.

There are no estimates of historical abundance specific to this species prior to the 1930s. The drainages supporting this species are all above Rock Island Dam. At least six former populations from this species are now extinct, and within the current boundary of the species, spring Chinook are considered extirpated from the Okanogan drainage. Upper Columbia River Spring Chinook Salmon currently spawn in the Wenatchee, Methow, and Entiat River drainages. As late as 1998, average recent escapements of the species have been less than 5,000 hatchery fish plus wild Chinook salmon whose populations all consisted of less than 100 fish. All three existing populations have exhibited similar negative trends over the past 40 years. Analyses of data updated to include 1996-2001 returns indicate the long-term trend in spawning escapement since 1958 has declined 5.6 percent per year for the Wenatchee River, 4.8 percent for the Entiat River and 6.3 percent for the Methow River. Recent increases in escapement are encouraging, but have not been sustained for a full salmon generation. The Biological Review Team considers this species in danger of extinction. A.R. B-28 (A.2.5., Table A.3.1.).

6. Upper Columbia River Steelhead.

This species occupies the Columbia River Basin upstream of the Yakima River and includes the Wenatchee, Entiat, Methow and Okanogan rivers. Fish counts at Rock Island Dam from 1933 to 1959 averaged 2,600 to 3,700, suggesting a prefishery run size exceeding 5,000 adults. In a 1998 status review, the Biological Review Team expressed concern that major hatchery supplementation programs were supporting the species. Estimates of hatchery fish in spawning escapement are 65 percent for the Wenatchee River and 81 to 92 percent for the Methow and Okanogan Rivers. The major concern for this species was the clear failure of natural stocks to replace themselves. NOAA estimated that the median population growth rate over the base period of 1980 to 1996 ranged from 0.94 to 0.66. When data for 2001-2003 are

added to data from 1990-2000, the slope of natural-origin population trend increased from 0.97 to 1.06, reversing the decline. NOAA concluded that hatchery programs collectively mitigate the immediacy of extinction risk for this species. Assuming a relative effectiveness of hatchery spawners of 1.0, the risk of absolute extinction within 100 years is 100 percent. A.R. B-28 (B.2.2., Table B.3.1.).

7. Middle Columbia River Steelhead.

The Middle Columbia River Steelhead occupy the Columbia River Basin from above the Wind River in Washington and the Hood River in Oregon and continue upstream to include the Yakima River in Washington. Within this area are 15 populations in four major population groups: Cascades Eastern Slope Tributaries, John Day River, Walla Walla River, and Umatilla River. Populations in the White Salmon River and the Deschutes River above Pelton Dam are extinct. Estimates of pre-1960s abundance for the Yakima River indicated a run size of 100,000. Assuming comparable run sizes for other drainage areas for this species, the total historical run size may have exceeded 300,000 steelhead. For this species, NOAA estimated the median population growth rate over the 1980-1996 base period ranged from 0.88 to 0.75. There are seven hatchery steelhead programs in the Middle Columbia River species. NOAA concluded that these hatchery programs collectively do not substantially reduce the extinction risk of the species, but may provide slight benefit to species abundance. Assuming that hatchery fish spawn in the wild as effective as wild-origin fish, the Biological Review Team estimated the risk of absolute extinction within 100 years ranged from zero for the Yakima River to 100% for the Deschutes River. Estimated geometric mean of natural-origin steelhead equaled 17,553 during 2002-2003 compared to 7,228 for 1996-2000. The slope of the population trend for natural-origin fish increased from 0.99 to 1.05 when data for 2002-2003 are added to the 1990-2000 series, reversing the decline. A.R. B-28 (B.2.3., Table B.3.1.).

8. Lower Columbia River Chinook Salmon.

Historical records of Chinook salmon abundance in this species are sparse, but cannery records suggest a peak run of 4.6 million fish in 1883. The species includes all native populations from the mouth of the Columbia River to the crest of the Cascade Range, excluding populations above Willamette Falls. The Lower Columbia River Chinook species was listed as Threatened in 1999. Although fall-run Chinook salmon are present throughout much of their historical range, most current spawning adults are first-generation hatchery strays. Spring-run populations have been severely depleted throughout the species and extirpated from several rivers. NOAA estimates that the median population growth rate over the 1980-1997 base period ranges from 0.98 to 0.88, decreasing as the effectiveness of hatchery fish spawning in the wild (approximately 70 percent) increases compared to that of fish of wild origin. Of the historical populations, 8 to 10 were extirpated or nearly extirpated. Natural production occurs in approximately 20 populations, although as of 2001 only one population had a mean spawner abundance exceeding 1,000 fish. Although the slope of aggregate population trend increased from 0.76 to 1.03 when the dam count from 2001 was added to the 1990-2000 data series, the

majority of the Biological Review Team concluded that the species is likely to become endangered in the foreseeable future. A.R. B-28 (A.2.5., Table A.3.1.).

9. Lower Columbia River Coho Salmon.

Historical records of abundance of Lower Columbia River Coho Salmon were not available. There are only two extant populations in the Lower Columbia River Coho Salmon species with appreciable natural productivity, the Clackamas and Sandy river populations, down from an estimated 23 historical populations in the species. Approximately 40 percent of historical habitat is currently inaccessible, which restricts the number of areas that might support natural production, and further increases the species' vulnerability to environmental variability and catastrophic events. Estimates of long-term population growth rates ranged from 0.38 to 0.48 for the Clackamas River and 0.46 to 0.52 for the Sandy River. The paucity of natural-origin spawners is contrasted by the very large number of hatchery-produced adults. The numbers of hatchery Coho returning to the lower Columbia River in 2001 and 2002 exceeded one million and 600,000 fish, respectively. The Biological Review Team expressed concern that the magnitude of the hatchery production continues to pose significant genetic and ecological threats to the extant natural populations in the species. The majority of the Biological Review Team concluded that the species was "at risk of extinction" with a substantial minority believing the species is "likely to become endangered." A.R. B-28 (C.2.4., Table C.3.1.).

10. Lower Columbia River Steelhead.

The Lower Columbia River Steelhead species encompasses all steelhead runs in tributaries between the Cowlitz and Wind Rivers on the Washington side of the Columbia River, and the Willamette and Hood Rivers on the Oregon side. The species consists of both summer and winter runs of coastal steelhead. Not included in the species are steelhead runs in the Willamette River above Willamette Falls. For the larger runs, current counts have been in the range of 1,000 to 2,000 fish (Cowlitz, Kalama, and Sandy Rivers); historical counts, however, put these runs at more than 20,000 fish. Many populations of steelhead in the Lower Columbia River species are dominated by hatchery escapement. Roughly 500,000 hatchery-raised steelhead are released into drainages within this species each year. As a result, first-generation hatchery fish are thought to make up 50 percent to 80 percent of the fish counted on natural spawning grounds. For the Lower Columbia River steelhead species as a whole, NOAA estimates the median population growth rate over the base period ranges from 0.98 to 0.78, decreasing as the effectiveness of the hatchery fish spawning in the wild increases compared to that of fish of wild origin. The 2004 estimated aggregate abundance of Lower Columbia River Steelhead was equal to 4,429 during 2001 compared to 6,333 during the period 1996-2000, a 30 percent decrease in abundance. The slope of the aggregate population trend declined from 0.93 to 0.92, when the 2001 count was added to the 1990-2000 data series. The majority of the Biological Review Team concluded that steelhead in the Lower Columbia River species were at risk of becoming endangered in the foreseeable future. A.R. B-28 (B.2.4., Table B.3.1.).

11. Columbia River Chum Salmon.

Chum salmon in the Columbia River species spawn in tributaries and mainstem spawning areas below the Bonneville Dam. Chum Salmon in this species once numbered in the hundreds of thousands of adults and, at times, approached a million. Previously, Chum Salmon were reported in almost every river in the lower Columbia River basin, but most runs disappeared by the 1950s. Long- and short-term productivity trends for species populations are at or below replacement. The loss of off-channel habitats and the extirpation of approximately 17 historical populations increase the species' vulnerability to environmental variability and catastrophic events. The populations that remain are low in abundance and have limited distribution and poor connectivity. Recent geometric mean estimates of Chum Salmon in two index areas equaled 1,776 during 2001-2003 compared to 2,114 in 1996-2000, a 16 percent decrease. The slope of the aggregate population trend decreased 1.5% when the data for 2001-2003 were added to the 1990-2000 series. The majority of the Biological Review Team concluded that the Columbia River Chum Salmon species is likely to become endangered in the foreseeable future and a minority concluded that the species is currently in danger of extinction. A.R. B-28 (E.2.2., Table E.3.1.).

12. <u>Upper Willamette River Chinook Salmon</u>.

The Upper Willamette River Chinook species includes native spring-run populations above Willamette Falls and in the Clackamas River. There are no direct estimates of historical abundance, but adult run size may have approached 275,000 fish in the 1920s. Numbers passing Willamette Falls have remained relatively steady over the past 50 years, ranging from approximately 20,000 to 75,000 adults. Human activities have had enormous effects on the salmonid populations in the Willamette drainage. Rearing habitat has been reduced by as much as 75 percent, the construction of 37 DAMS in the basin has blocked access to over 700 km of stream and river spawning habitat, and since at least the 1920s the lower Willamette River has suffered municipal and industrial pollution. While hatcheries are responsible for up to 90 percent of production in the basin, NOAA concluded that hatchery programs do not substantially reduce the extinction risk of the species. Of the historical populations, 8 to 10 have been extirpated or nearly extirpated. Natural production currently occurs in approximately 20 populations, although only one population has a mean spawner abundance exceeding 1,000 fish. Recent data indicate that the slope of the aggregate population trend increased from 0.89 to 1.02 when the data from 2001-2003 were added to the 1990-2000 series. Despite recent improvements, long-term trends in productivity are below replacement for the majority of populations. A majority of the Biological Review Team concluded that this species is likely to become endangered. A.R. B-28 (A.2.6., Table A.3.1.).

13. <u>Upper Willamette River Steelhead</u>.

The Upper Willamette River Steelhead species occupies the Willamette River and tributaries upstream of Willamette Falls, extending to and including the Calapooia River. Native winter steelhead within this species have been declining since 1971 and have exhibited large fluctuations in abundance. The main hatchery production of winter steelhead occurs in the North

Fork Santiam River, where estimates of hatchery proportion in natural spawning areas range from 14 percent to 54 percent. All populations are relatively small, with the recent mean abundance of the entire species at less than 6,000 adults. Over the period of the available time series, most populations are in decline. For the Upper Willamette River Steelhead species as a whole, NOAA estimates that the median population growth rate over the 1980-1997 base period ranges from 0.94 to 0.87, decreasing as the effectiveness of hatchery fish spawning in the wild increases compared to that of fish of wild origin. The unanimous decision of the Biological Review Team was that the Upper Willamette River Steelhead species was at risk of becoming endangered in the foreseeable future. A.R. B-28 (B.2.5., Table B.3.1.).

ATTACHMENT 2

Summary of 1993, 1995, and 2000 Biological Opinions

1. 1993 Biological Opinion.

In 1992 NOAA issued its first biological opinion on the impact of hydropower operations on the listed species. This biological opinion, which concluded that the DAMS would not jeopardize the listed species, was challenged not by environmental interests but by power, industry and irrigation groups. Their claims ultimately were denied for lack of standing. *Pacific Northwest Generating Coop. v. Brown*, 822 F.Supp. 1479 (D. Or. 1993).

NOAA then issued another biological opinion in 1993 for operations covering the period April 1993 to January 1994. The 1993 biological opinion contained a two-step jeopardy analysis: (1) a "base period analysis" in which NOAA considered whether the proposed action would significantly reduce the level of human-induced mortality compared with the 1986-1990 base period, and (2) a "combined effects analysis," in which NOAA considered "the potential of the combined effects of all actions, using . . . life cycle models and other available information . . . ." 1993BiOp at 15.

NOAA concluded that the DAMS in the covered period were "not likely to jeopardize the continued existence" of the listed species. *Id*. at 64-66. In particular, the biological opinion predicted that the population of two of the listed species would stabilize over the next four life cycles. In addition, relative to the base period, NOAA predicted the proposed actions would decrease mortality by amounts ranging from between 2.5 and 11.4 percent for Snake River Spring/Summer Chinook and between 5.1 and 8.9 percent for Snake River Fall Chinook.

The State of Idaho challenged the 1993 biological opinion. In 1994, Judge Marsh of this court held the 1993 biological opinion to be invalid. *Idaho Dept. of Fish and Game v. NMFS*, 850 F.Supp. 886, 893 (D. Or. 1994), *vacated as moot*, 56 F.3d 1071 (9th Cir. 1995). Judge Marsh found specifically that the choice of the 1986-1990 baseline was arbitrary and capricious "because the agency failed to consider relevant facts such as the drought condition and low run numbers of the species during the base period," and because in its combined effects analysis "NOAA arbitrarily and capriciously discounted low range assumptions without well-reasoned analysis and without considering the full range of risk assumptions." *Id*. at 898. While Judge Marsh did not reject the two-step jeopardy framework, he found that NOAA had consistently erred in applying the framework in favor of the status quo when "the situation literally cries out for a major overhaul." *Id*. at 900. Thus, Judge Marsh noted that "NOAA focused on the system capabilities . . . rather than stabilization of the species." *Id*. at 893. Judge Marsh also found "NMFS should have fully considered the enhanced risks associated with small populations prior to discounting low range assumptions." *Id*. at 899.

On similar grounds, Judge Marsh also rejected the argument that any agency proposal found to result in improved survival as a matter of *law* could *not* be said to have "reduced both the likelihood of survival and recovery" so as to constitute jeopardy. *Id.* at 899. Among other reasons, Judge Marsh cited a potentially incongruous result in that, for example, if 100 fish are expected to survive downstream juvenile migration in 1993, and 99 survived in 1990, a no-jeopardy finding would be mandated – even though a 100 survival level may still be considered so low as to constitute a continued threat to the species' existence. *Id*.

2. <u>1995 Biological Opinion</u>.

NOAA's 1995 biological opinion covered dam operations in the 1994-1998 period. In it, NOAA unveiled a new jeopardy process that stressed "whether the species [could] be expected to survive with an adequate potential for recovery under the effects of the proposed or continuing action, the environmental baseline and any cumulative effects, and considering measures for survival and recovery specific to other life stages." 1995BiOp at 13.

The process involved (a) defining the biological requirements of the listed species; (b) evaluating the relevance of the environmental baseline to the species' current status; (c) determining the effects of the proposed or continuing action on the species; (d) determining whether the species can be expected to survive with an adequate potential for recovery under the effects of the proposed or continuing action, the environmental baseline, and any cumulative effects, and considering measures for survival and recovery specific to other life stages; and (e) identifying reasonable and prudent alternatives to a proposed or continuing action that is likely to jeopardize the continued existence of listed species. 1995BiOp at 10-15.

Under this jeopardy framework, NOAA concluded that the action agencies' proposal to operate the DAMS during 1994-1998 would be likely to jeopardize the continued existence of the listed salmon and adversely modify their critical habitat. *Id*. at 83-91. NOAA then offered a reasonable and prudent alternative to the proposed action involving "an adaptive approach to increasing survival and the probability of recovery of the listed salmon that involved immediate survival improvements, structural modifications and evaluations, and intermediate flow-improvements, spill initiatives, continued transportation, lowered Snake River pools, preparation for drawdowns of Snake River reservoirs, and comprehensive evaluations and ongoing studies. *Id.* at 91-127. NOAA concluded that with adoption of its reasonable and prudent alternatives, the dam operations were not likely to jeopardize the listed species. *Id*. at 128-136.

The 1995 biological opinion was challenged by a coalition of environmental groups. In 1997, Judge Marsh upheld the 1995 biological opinion, although he acknowledged that even under NOAA's reasonable and prudent alternative, the "picture is not that rosy. A lot is left to chance and it is the acceptance of that risk as part of the BiOp which forms the heart of the current controversy." *American Rivers v. NMFS*, CV 96-384-MA, 1997 WL 33797790 *10 (D. Or. 1997). In the process, the court again rejected the argument "that any improved survival rates necessarily satisfied the ESA." *Id*. at *10 n.4 (noting that the biological opinion expressed

concern that low populations of listed species pose a risk of compromising genetic variability even if the species or subspecies were later able to recover in numbers).

3. <u>2000 Biological Opinion</u>.

The 2000BiOp covered continuing dam operations. It utilized a jeopardy standard similar to the 1995 biological opinion, stating that mortality attributable to the proposed action, "when combined with mortality occurring in other life stages," must leave listed species with "a high likelihood of population survival and a moderate to high likelihood of population recovery." 2000BiOp, Appendix A, A-1. In other words, the proposed action would be deemed to cause jeopardy to a listed species if "the effects of the proposed or continuing action, the effects of the environmental baseline, and any cumulative effects, and considering measures for survival and recovery specific to other life stages" would leave the listed species with too low a likelihood of survival and recovery potential. *Id*. at 1-8.

To aid its analysis, NOAA identified "survival and recovery indicator criteria," including interim recovery abundance levels. *Id*. at 1-13 to 15. The proposed action was evaluated in relation to the population growth rate that was needed to insure that each listed species have at least a 95 percent likelihood of persistence over 100 years; and at least a 50 percent chance of meeting specified interim abundance levels within 48 years.[16] *Id*. at Table A-1.

Jeopardy analysis in the 2000BiOp: (a) defines the recent population trend as the median annual population growth rate, and mostly calculated from data on adult returns from 1980 through 1999 (*Id*. at A-2); (b) estimated the proportional change in that rate necessary to achieve the survival and recovery criteria (*Id*. at A-5); (c) adjusted the population growth rate based on its assessment of the impact of the proposed action and potentially different survival rates in other life stages (*Id*. at A-7); (d) constructed ratios to indicate the degree to which the proposed action would be expected to achieve the survival and recovery criteria (*Id*. at A-8); and (e) qualitatively evaluated the degree to which other factors – those that did not lend themselves to the quantitative analysis summarized above, including hatchery management and habitat improvements – would "reduce the additional necessary survival change" required to meet the criteria noted above. *Id.*

The 2000BiOp found that eight listed species would be jeopardized by the proposed operation of the DAMS. *Id.* at Chapters 6 and 8. NOAA therefore proposed reasonable and prudent alternatives to the proposed action, and analyzed whether, in conjunction with the environmental baseline and cumulative effects, these would increase survival rates enough to

---

[16] In conducting its analysis, NOAA also considered the probability of extinction in 24 years and, because recovery within 48 years "may be unrealistic to expect," the likelihood of recovery in 100-years. 2000BiOp at 1-14. However, the BiOp reported only the 100-year survival and 48-year indicator criteria because these are "always harder to meet." *Id*. at A-1.

enable the listed species to achieve the survival and recovery criteria. *Id*., Chapter 9. Finding these insufficient, NOAA also appraised the impact of off-site mitigations, including hatchery and habitat initiatives outlined in the Basinwide Salmon Recovery Strategy. *Id.* NOAA found these sufficient to improve survival rates so as to enable the listed species to avoid jeopardy. *Id*.