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UNITED STATES DISTRICT COURT
DISTRICT OF OREGON
PORTLAND DIVISION

NATIONAL WILDLIFE FEDERATION, et al.,
Plaintiffs,

Civ. No. 01-0640-SI (Lead Case)
CV 05-0023-SI
(Consolidated Cases)

and

STATE OF OREGON,
Intervenor-Plaintiff,

SEVENTH SUPPLEMENTAL
COMPLAINT FOR
DECLARATORY AND
INJUNCTIVE RELIEF

v.

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

Defendants,

and

NORTHWEST IRRIGATION UTILITIES, PUBLIC POWER COUNCIL, WASHINGTON STATE FARM BUREAU FEDERATION, FRANKLIN COUNTY FARM BUREAU FEDERATION, GRANT COUNTY FARM BUREAU FEDERATION, STATE OF IDAHO, INLAND PORTS AND NAVIGATION GROUP, KOOTENAI TRIBE OF IDAHO, and STATE OF WASHINGTON,

Intervenor-Defendants.

COLUMBIA SNAKE RIVER IRRIGATORS ASSOCIATION, and EASTERN OREGON IRRIGATORS ASSOCIATION,

Plaintiffs,

v.

PENNY PRITZKER¹, in her official capacity as Secretary of Commerce, NOAA FISHERIES, and WILLIAM W. STELLE, JR.², in his official capacity as Regional Director of NOAA Fisheries,

Defendants.

INTRODUCTION

1. Pursuant to Fed. R. Civ. P. 15(d) and LR 15.1(b) and (c), plaintiffs, National Wildlife Federation, et al. (“NWF”), hereby amend their Sixth Supplemental Complaint for Declaratory and Injunctive Relief, filed September 8, 2010 (“Sixth Supp. Compl.”), with this Seventh Supplemental Complaint in order to address new circumstances and subsequent actions by defendants, the National Marine Fisheries Service (“NMFS” or “NOAA”), the U.S. Bureau of Reclamation (“BOR” or “Bureau”), and the U.S. Army Corps of Engineers (the “Corps”)

¹ Please note that pursuant to Fed. R. Civ. P. 25(d)(1), Penny Pritzker, Secretary of Commerce, is substituted as a defendant for Gary Locke.

² Please note that pursuant to Fed. R. Civ. P. 25(d)(1), William W. Stelle, Jr., Regional Administrator of NOAA Fisheries, is substituted as a defendant for Barry Thom.

(collectively “Federal Defendants”).

2. Specifically, on January 17, 2014, NOAA issued its Endangered Species Act—section 7(a)(2) Supplemental Biological Opinion for the Consultation on Remand for Operation of the Columbia River Power System (the “2014 BiOp”). The 2014 BiOp both incorporates and supplements two earlier biological opinions (the “2008 BiOp” and the “2010 BiOp”), which were the subjects of NWF’s Fifth and Sixth Supplemental Complaints, respectively, and updates the reasonable and prudent alternative (“RPA”) from these earlier opinions.³ In response to the 2014 BiOp, the Corps and BOR issued supplemental records of decision (the “2014 RODs”) on February 26 and 28, 2014, respectively, adopting and incorporating the 2014 BiOp’s revised RPA.

3. For the reasons set forth below, this supplemental complaint seeks review of the 2014 BiOp, as supplemented by the earlier 2010 and 2008 BiOps, and the acts and omissions of the Corps and BOR, including their 2014 RODs in response to the 2014 BiOp and their earlier records of decision adopting and relying on the reasonable and prudent alternative (“RPA”) from the 2008 and 2010 BiOps, for violations of the Endangered Species Act (“ESA”), 16 U.S.C. §§ 1531 *et seq.*, the National Environmental Policy Act (“NEPA”), 42 U.S.C. §§ 4321 *et seq.*, and the Administrative Procedure Act (“APA”), 5 U.S.C. §§ 551 *et seq.*

4. Because this action now seeks review of the combined 2014, 2010 and 2008 BiOps, and the BOR and Corps records of decision related to these BiOps, NWF sets out below a brief summary of the relevant law, facts, and proceedings regarding these agency actions. We then summarize the provisions of the 2014 BiOp as they relate to the 2008 and 2010 BiOps and the violations of law in these documents and the action agencies’ RODs.

³ At the Court’s request, NOAA has already provided a copy of the 2014 BiOp to the Court. It and related documents also are *available at* http://www.westcoast.fisheries.noaa.gov/fish_passage/fcrps_opinion/federal_columbia_river_power_system.html.

JURISDICTION AND VENUE

5. This Court has jurisdiction over this action under 5 U.S.C. §§ 701-706 (Administrative Procedure Act), 28 U.S.C. § 1331 (federal question), § 2201 (declaratory judgment), and § 2202 (injunctive relief), and the ESA, 16 U.S.C. § 1540(g). As required by the ESA, 16 U.S.C. § 1540(g), plaintiffs provided 60 days' notice of intent to sue the Corps and BOR on April 14, 2014. A copy of this notice is appended as Exhibit A.

6. Venue is properly vested in this Court under 28 U.S.C. § 1391(e) because members of the plaintiff organizations reside in this district and these members and organizations do business here. In addition, a substantial part of the events or omissions giving rise to the claims in this case occurred in this district, and the defendants maintain offices in the district.

PARTIES

7. The plaintiffs in this action are:

A. National Wildlife Federation ("NWF"), the nation's largest conservation advocacy and education organization. Founded in 1936, NWF is a non-profit organization with its headquarters in Reston, Virginia, and nine regional offices, including the Western Natural Resource Center in Seattle, Washington. NWF's mission is to educate, inspire, and assist individuals and organizations of diverse cultures to conserve wildlife and other natural resources and to protect the Earth's environment in order to achieve a peaceful, equitable, and sustainable future. As part of this mission, NWF and its over 4 million members and supporters are dedicated to protecting and restoring the Northwest's salmon runs, including those in the Columbia and Snake Rivers.

B. Washington Wildlife Federation, a non-profit conservation organization based in Olympia, Washington, with members throughout the State. Washington Wildlife Federation is dedicated to the preservation, enhancement, and perpetuation of Washington's wildlife and wildlife habitat through education and conservation.

C. Idaho Wildlife Federation, a non-profit organization with its principle place of business in Boise, Idaho. Idaho Wildlife Federation promotes citizen support of the conservation of Idaho's wildlife and natural resources for fishing, hunting, and outdoor recreation benefiting future generations.

D. Sierra Club, a national environmental organization founded in 1892 and devoted to the study and protection of the earth's scenic and ecological resources—mountains, wetlands, woodlands, wild shores and rivers, deserts, plains, and their wild flora and fauna. Sierra Club has some 60 chapters in the United States and Canada, including chapters in Washington, Oregon, and Idaho, and a principal place of business in San Francisco, California.

E. Pacific Coast Federation of Fishermen's Associations ("PCFFA"), the largest organization of commercial fishermen on the west coast, with member organizations from San Diego to Alaska representing thousands of men and women in the Pacific fleet. Many of PCFFA's members are salmon fishermen whose livelihoods depend upon salmon as a natural resource and who, until recent fisheries closures, generated hundreds of millions of dollars in personal income within the region. PCFFA has its main office in Sausalito, California, and a Northwest regional office in Eugene, Oregon.

F. Institute for Fisheries Resources ("IFR"), a non-profit corporation that constitutes the conservation arm of PCFFA and shares PCFFA's offices in Sausalito, California, and Eugene, Oregon.

G. Idaho Rivers United ("IRU"), a non-profit corporation organized under the laws of the State of Idaho with a principal place of business in Boise, Idaho. IRU and its approximately 3,500 members throughout the State of Idaho are dedicated to the protection and restoration of Idaho's rivers and river resources.

H. The Northwest Sportfishing Industry Association ("NSIA"), dedicated to

restoring and protecting the region's rivers, lakes, and streams, keeping them healthy and full of fish. NSIA is a trade association of several hundred sporting goods manufacturers, wholesalers, retailers, marinas, guides, and charter boat operators. About 60 percent of the member businesses are located in Washington, 30 percent in Oregon, and the remainder are national organizations. NSIA's principal place of business is Oregon City, Oregon.

I. Columbia Riverkeeper, a non-profit public interest organization, organized under the laws of the State of Washington, has a principal place of business in White Salmon, Washington, and an office in Hood River, Oregon. Columbia Riverkeeper, and its approximately 2,400 members and supporters, works to restore and protect the water quality of the Columbia River and all life connected to it from its headwaters to the Pacific Ocean.

J. American Rivers, a national conservation organization with its principal place of business in Washington, D.C. and a Pacific Northwest office in Seattle, Washington. American Rivers and its approximately 200,000 members, supporters, and volunteers are devoted to protecting and restoring the nation's outstanding rivers and their landscapes and are active in pursuing environmental safeguards in national hydropower policy.

K. International Federation of Fly Fishers ("FFF"), a national organization with approximately 14,000 members, dedicated to promoting fly fishing as a recreational use of aquatic resources and to preserving, protecting, and restoring aquatic resources, including water, fauna, and riparian lands. FFF has its principal place of business in Bozeman, Montana and regional councils or chapters that encompass Washington, Oregon, Idaho, Montana, and British Columbia.

L. Salmon for All, an organization representing a broad range of Columbia River interests including commercial fishermen and fish processors, consumers and lower river businesses, and salmon recovery advocates who support the viability of the lower Columbia

commercial fishery. Based in Astoria, Oregon, at the mouth of the Columbia, Salmon for All has been advocating for the responsible management of the salmon industry since 1958. Salmon for All represents about 300 active commercial fishermen, fish processors and salmon-supported businesses. Salmon for All is committed to providing ongoing education concerning the public harvest industry, taking active advocacy roles in legislative and agency fishery deliberations, and ensuring the health of the Columbia River and its responsible use by all user groups.

M. NW Energy Coalition (“NWECC”), an alliance of over 95 environmental, civic, and human service organizations, progressive utilities, and businesses from Oregon, Washington, Idaho, Montana, Alaska, and British Columbia. NWECC promotes energy conservation and renewable energy resources, consumer and low-income protection, and fish and wildlife restoration on the Columbia and Snake Rivers. NWECC’s headquarters are located in Seattle, Washington.

8. Plaintiffs and their members use the Columbia River and its tributaries throughout Idaho, Oregon, and Washington for recreational, scientific, aesthetic, and commercial purposes. Plaintiffs and their members derive or, but for the threatened and endangered status of salmon and steelhead in the Columbia River basin, would derive recreational, scientific, aesthetic, and commercial benefits from the existence of these species in the wild through wildlife observation, study and photography, and recreational and commercial fishing within the Columbia River basin and the Pacific Ocean. The past, present, and future enjoyment of these benefits by plaintiffs and their members has been, is being, and will continue to be irreparably harmed by NOAA and the action agencies’ disregard of their statutory duties, as described below, and by the unlawful injuries imposed on listed species by these actions.

9. The above-described aesthetic, conservation, recreational, commercial, scientific, and procedural interests of plaintiffs and their respective members have been, are being, and,

unless the relief prayed for herein is granted, will continue to be adversely affected and irreparably injured by NOAA's, the Corps' and the Bureau's failure to comply with the ESA and NEPA as described below. Plaintiffs have no adequate remedy at law.

10. Defendant National Marine Fisheries Service, also known as NOAA Fisheries, is an agency of the United States Department of Commerce responsible for administering the provisions of the Endangered Species Act with regard to threatened and endangered marine species, including the species of threatened and endangered salmon and steelhead that inhabit the Columbia River basin.

11. Defendant United States Army Corps of Engineers is an agency of the United States Army and the Department of the Defense that constructs and operates federal engineering projects throughout the United States, primarily in rivers, coasts, and wetlands. The Corps has primary management authority over the operation and maintenance of several dams, reservoirs, and associated facilities on the Columbia and Snake Rivers that are at issue in this case.

12. Defendant United States Bureau of Reclamation, an agency of the United States Department of the Interior that constructs and operates federal water projects throughout the United States. The Bureau has primary management authority over several projects on the Snake and Columbia Rivers that are at issue in this action.

STATUTORY FRAMEWORK

A. The Administrative Procedure Act

13. The Administrative Procedure Act ("APA") authorizes courts reviewing agency action to hold unlawful and set aside final agency action, findings, and conclusions that are arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law.

5 U.S.C. § 706(2)(A). Biological opinions issued by NOAA pursuant to section 7 of the ESA, are reviewed under this provision of the APA. *See, e.g., Bennett v. Spear*, 520 U.S. 154, 175 (1997). The Corps' and BOR's records of decision and whether they comply with NEPA are

also reviewed under this provision of the APA. *See San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 655 (9th Cir. 2014).

B. The Endangered Species Act

14. Section 7 of the ESA prohibits federal agency actions that may “jeopardize the continued existence” of a listed species or destroy or adversely modify its critical habitat.

16 U.S.C. § 1536(a)(2). Longstanding ESA regulations define “jeopardize the continued existence of” as:

to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.

50 C.F.R. § 402.02; *see also Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 524 F.3d 917, 931 (9th Cir. 2008) (confirming that “the jeopardy regulation requires NMFS to consider both recovery and survival impacts”). These regulations also define “destruction or adverse modification of critical habitat” as:

a direct or indirect 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.

Id.; *see also Gifford Pinchot Task Force v. FWS*, 378 F.3d 1059 (9th Cir. 2004).

15. Section 7 establishes an interagency consultation process to assist federal agencies in complying with their duty to avoid jeopardy to a species or destruction or adverse modification of its critical habitat. Under this process, a federal agency proposing an action that “may affect” a listed species, including salmon and steelhead, must prepare and provide to the appropriate expert agency, here NOAA, a “biological assessment” of the effects of the proposed action. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). The action agency’s biological

assessment must be complete and accurate in order to comply with the ESA and its implementing regulations. *Res. Ltd., Inc. v. Robertson*, 35 F.3d 1300, 1304-5 (9th Cir. 1993).

16. If an agency determines that its action “may affect” but is “not likely to adversely affect” a listed species or its critical habitat, the ESA regulations permit “informal consultation,” in which there is no requirement for a biological opinion so long as NOAA concurs in writing with the “not likely to adversely affect” determination. 50 C.F.R. § 402.13. If NOAA does not concur in this determination, or if the action agency determines that the action is “likely to adversely affect” the listed species, the agencies must engage in “formal consultation.” 50 C.F.R. §§ 402.02, 402.14(a).

17. For those actions that require formal consultation, NOAA must review all information provided by the action agency, as well as any other relevant information, to determine whether the proposed action is likely to jeopardize a listed species or destroy or adversely modify its designated critical habitat. 50 C.F.R. § 402.14(h)(3). This determination is set forth in a biological opinion. *Id.*; 16 U.S.C. § 1536(b)(3)(A).

18. In formulating its biological opinion and determining whether an action will jeopardize a species or destroy or adversely modify its critical habitat, NOAA must use the best scientific and commercial data available. 16 U.S.C. § 1536(a)(2). It also must evaluate the effects of the action, together with any cumulative effects and the environmental baseline, on the listed species. 50 C.F.R. §§ 402.14(g)(3)-(4); *see generally* 50 C.F.R. § 402.02.

19. If, based on an analysis of these factors and in light of the current status of the species, NOAA concludes that the proposed action is likely to jeopardize a listed species, or destroy or adversely modify its critical habitat, it must identify and describe any reasonable and prudent alternative (“RPA”) to the proposed action that it believes would avoid jeopardy and adverse modification. 16 U.S.C. § 1536(b)(3)(B). An RPA may only consist of measures that

are within the scope of the action agency's legal authority and jurisdiction, that can be implemented consistent with the purpose of the proposed action, and that will avoid jeopardy to the species and adverse modification of its critical habitat. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.02. The effects of an RPA must be analyzed under the same section 7 framework (described above) as an action proposed by an action agency. If NOAA believes that there is no reasonable and prudent alternative to the proposed action, its biological opinion must so state. 50 C.F.R. § 402.14(h)(3).

20. Once an action agency initiates consultation, it cannot make any irreversible or irretrievable commitment of resources to a proposed action that may foreclose the formulation or implementation of any RPA measures that could avoid jeopardy. *Id.* § 1536(d). This prohibition remains in effect until the completion of the consultation process and supplements, but does not supplant, the duty to avoid jeopardy imposed in § 1536(a)(2). 50 C.F.R. § 402.09.

21. In addition, even after the consultation process is complete and an action agency receives a biological opinion, the action agency has a continuing and independent legal duty to avoid any action that would cause jeopardy to a listed species. 16 U.S.C. § 1536(a)(2). An action agency's reliance on an inadequate, incomplete, or flawed biological opinion to satisfy its duty to avoid jeopardy is arbitrary and capricious. *See, e.g., Stop H-3 Ass'n v. Dole*, 740 F.2d 1442, 1460 (9th Cir. 1984); *Res. Ltd.*, 35 F.3d at 1304. The action agency's substantive duty to avoid jeopardy to listed species and/or adverse modification of their critical habitat remains in effect at all times and regardless of the status of the consultation.

22. Section 9 of the ESA prohibits "take" of endangered species by anyone, including federal agencies. 16 U.S.C. § 1538. "Take" means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect." 16 U.S.C. § 1532(19). NOAA has defined "harm" to include "significant habitat modification or degradation which actually kills or injures fish or wildlife by

significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding or sheltering.” 50 C.F.R. § 222.102. Under section 4(d) of the ESA, 16 U.S.C. § 1533(d), NOAA has the authority to issue regulations extending the take prohibition to threatened species. NOAA has adopted such regulations making the take prohibition of section 9 applicable to the threatened species of salmon and steelhead affected by FCRPS operations. 50 C.F.R. § 223.203(a); *id.* at § 223.102.

23. “Take” by federal agencies is permitted only to the extent the agency receives an incidental take statement (“ITS”) pursuant to ESA section 7(b)(4), upon completion of formal consultation. 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i)(5). If NOAA reaches a no-jeopardy/no-adverse modification finding for either a proposed action or an RPA under section 7, it may issue an incidental take statement for any take of a listed species that is likely to occur as a consequence of the action. 50 C.F.R. § 402.14(I).

24. The ESA provides for judicial review of citizen suits against federal agencies and others, including suits against the Corps and BOR, for violations of sections 7 and 9 of the statute. 16 U.S.C. § 1540(g)(1)(A). It also authorizes the Court “to enjoin any person . . . who is alleged to be in violation of any provision of this chapter or regulation issued under the authority thereof,” 16 U.S.C. § 1504(g), including a violation of sections 7 and 9.

C. The National Environmental Policy Act

25. NEPA “is our basic national charter for protection of the environment.” 40 C.F.R. § 1500.1(a). NEPA’s twin aims are to ensure that federal agencies consider significant aspects of the environmental impacts of their proposed actions, and to ensure that agencies inform the public about the potential environmental effects of a proposed course of action and alternatives to it before they make a decision.

26. NEPA requires federal agencies to prepare an environmental impact statement

(“EIS”) in connection with all “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). The EIS must detail, *inter alia*, “the environmental impact of the proposed action” and “alternatives to the proposed action.” *Id.* § 4332(2)(C)(i), (iii). NEPA further provides that agencies must “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” *Id.* § 4332(2)(E).

27. NEPA’s implementing regulations flesh out these statutory requirements. The regulations provide that agencies must discuss “the environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, [and] the relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity.” 40 C.F.R. § 1502.16. The duty to identify and analyze a range of alternative actions is “the heart of” the NEPA process, 40 C.F.R. §1502.14, and the failure to examine a reasonable and available alternative is fatal to the sufficiency of an EIS, *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1519 (9th Cir. 1992). As the NEPA regulations and case law make clear, an alternative need not be within an agency’s existing legal authority or a complete solution to the agency’s goals to warrant consideration and analysis. 40 C.F.R. § 1502.14(c); *Natural Res. Def. Council, Inc. v. Morton*, 458 F.2d 827, 836 (D.C. Cir. 1972).

28. Additionally, “[a]gencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” 40 C.F.R. § 1502.24. An agency’s failure to include and analyze information that is important, significant, up-to-date, available, or essential renders an EIS inadequate. 40 C.F.R. § 1500.1 (“The information must be of high quality.”). Moreover, NEPA and its implementing regulations impose a continuing duty on agencies to prepare a supplemental environmental

impact statement whenever “(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. §§ 1502.9(c)(1)(i), (ii).

29. The Ninth Circuit has held that a federal agency decision to adopt an RPA set forth in a biological opinion under section 7 of the ESA triggers the procedural requirements of NEPA and that the agency must prepare an EIS in connection with this decision. *San Luis & Delta-Mendota Water Auth.*, 747 F.3d at 655 (9th Cir. 2014) (“NEPA applies to Reclamation’s implementation of the BiOp because it is a ‘major Federal action [] significantly affecting the quality of the human environment.’”) (citations omitted).

STATUS OF THE SPECIES

A. Overview of Threats to Salmon and Steelhead

30. Steelhead and salmon are anadromous fish. They are born and rear in fresh water tributaries of the Columbia River as far east as central Idaho, migrate downstream through the Columbia River to the Pacific Ocean where they grow and live as adults, and return to their natal streams and lakes to spawn and die. The Columbia River, its tributaries, and estuary historically provided habitat for chinook, sockeye, chum, and coho salmon, as well as steelhead. A century ago, between 10 and 30 million salmon returned to the Columbia each year. As of 1991, 67 stocks of Columbia River salmonids were extinct and 76 stocks were at risk of extinction.⁴

⁴ In order for an imperiled species to enjoy the ESA’s protections, it must first be placed on the Act’s “threatened” or “endangered” species lists. 16 U.S.C. § 1533(c). A “species” that may be listed for protection under the ESA includes “any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.” 16 U.S.C. § 1532(16). When deciding whether to list populations of Pacific salmon for protection as a “distinct population segment” under this definition, NOAA employs the concept of “evolutionarily significant unit” (“ESU”). A population of Pacific salmon is an ESU if it is “(1) . . . reproductively isolated from other population units of the same species, and (2) . . . an important component in the evolutionary legacy of the biological species.” 64 Fed. Reg. 14,308 14,310 (Mar. 24, 1999). In 2006, NOAA revised listings for all west coast steelhead populations

31. During the course of their juvenile and adult lives, the few remaining Columbia River salmon and steelhead face numerous artificial obstacles to successful migration, reproduction, and rearing. Chief among these obstacles are the effects of multiple federal hydroelectric, irrigation, and navigation dams and their associated reservoirs, facilities, and operations on the Columbia and Snake Rivers. All of these facilities, individually and together, severely and adversely affect ESA-listed salmon and steelhead in a variety of ways, including but not limited to the following: (1) operation of these facilities alters the hydrograph of the Snake and Columbia Rivers, reducing and shifting river flows in ways that directly and indirectly kill and injure juvenile and adult salmon; (2) juvenile salmon migrating down the Snake and Columbia Rivers are killed and injured in significant numbers at the dams themselves, regardless of the route they take to pass each dam, although some dam passage routes are more lethal than others; (3) even before juveniles reach each dam, passage through the reservoirs created by the dams and operated as part of the federal facilities on these rivers takes a high toll on survival through mechanisms including exposure to poor water quality and high water temperatures, altered habitat, increased risk of disease, predation, trapping and stranding, disorientation, and stress; (4) once past these federal facilities, the toll the system imposes on juvenile salmon through reduced fitness and survival is still high even in the estuary and ocean, especially for juvenile fish captured and bypassed or transported downstream around the federal dams and reservoirs by truck or barge. Returning adult salmon and steelhead also must face upstream passage through these federal facilities risking injury, death, and reduced reproductive success through a variety of system-imposed mechanisms ranging from delays at upstream fishway facilities, to fallback (leading to repeated passage of the same dam), disorientation, straying,

applying the joint Distinct Population Segment (“DPS”) policy developed by NOAA and the U.S. Fish and Wildlife Service in 1996. *See* 71 Fed. Reg. 834 (Jan. 5, 2006) (revised steelhead listings); 61 Fed. Reg. 4,722 (Feb. 7, 1996). Though the ESU and DPS policies are consistent, there are differences in emphasis between them. These differences are not relevant here.

trauma, and disease.

32. While some of the Columbia River basin salmon and steelhead listed under the ESA are affected to a lesser extent by this system of dams and reservoirs, those salmon and steelhead ESUs/DPSs that must successfully pass the four Lower Snake River hydropower projects, as well as the four mainstem Columbia River projects, on their way to and from the ocean are particularly hard hit. These ESUs/DPSs include Snake River spring/summer chinook, Snake River fall chinook, Snake River sockeye, and Snake River steelhead. The Upper Columbia River spring chinook and steelhead also are hard hit by passage through hydropower projects because they must navigate both the four federal mainstem Columbia River projects and as many as five additional federally-licensed mainstem projects to reach the ocean or return to their spawning streams. All of the above direct and indirect adverse effects on these ESUs/DPSs are exacerbated by dams on both the Columbia and Snake Rivers that lie upstream of federal and federally-licensed projects that block salmon and steelhead passage altogether.

33. In addition, Columbia River basin salmon and steelhead face other obstacles to successful migration, reproduction, and rearing including, but not limited to: habitat loss and degradation due to human activities such as development, logging, grazing, farming, irrigation, and mining; disease and adverse effects to the genetic pool of wild fish caused by hatchery fish, as well as competition from hatchery fish for food and shelter; and commercial and recreational harvest for human consumption.

B. Recent Analyses of Salmon and Steelhead Population Viability

34. As a consequence of these and other obstacles, populations of salmon and steelhead in the Columbia River basin have declined precipitously since the advent of European settlement. Before European settlement and the development of the Columbia River basin for hydroelectric power and other purposes, Snake River spring/summer chinook numbered over 1.5

million returning adult fish per year; Snake River fall chinook were once the most important fall chinook stock in the entire Columbia River basin; Upper Columbia spring chinook once had access to thousands of miles of spawning and rearing habitat that have been rendered inaccessible by the construction of Grand Coulee and Chief Joseph dams; and Snake River sockeye, with the longest and steepest migration route of any salmon in the world, once thrived in high-elevation lakes in central Idaho.

35. The remarkable historic productivity, abundance, and diversity of these fish has now collapsed: an analysis of the status of the Upper Columbia spring chinook ESU, performed by the Interior Columbia Basin Technical Recovery Team (“ICTRT”),⁵ notes for each of the three populations in this ESU that still exist the “population is not currently meeting viability criteria. Of particular concern is the high risk rating with respect to abundance and productivity. The population cannot achieve any level of viability without improving its status . . . for both . . . abundance and productivity.” *See, e.g.*, Summary of Wenatchee population at 10, *available at* http://www.nwfsc.noaa.gov/trt/trt_documents/wenatchee_river_chinook07.pdf.

36. In a separate paper evaluating the change in survival rates for these populations that would be needed to achieve the Team’s productivity and abundance criteria, the ICTRT found that population survival rates would need to improve by 105% from current rates for the Wenatchee population (even without error buffering), 144% for the Entiat population, and 175% for the Methow population. ICTRT, Required Survival Rate Changes to Meet Technical

⁵ The Technical Recovery Teams are multi-disciplinary science teams chaired by NOAA’s Northwest or Southwest Fisheries Science Center staff. These teams were tasked with providing science support to recovery planners by developing biologically based viability criteria, analyzing alternative recovery strategies, and providing scientific review of draft plans. The Interior Columbia Basin Technical Recovery Team (“ICTRT”) was one of eight of such teams. Its work addresses seven of the Snake and Upper Columbia River salmon and steelhead ESUs/DPSs addressed in the 2008 BiOp. The ICTRT’s work products are *available at* <http://www.nwfsc.noaa.gov/trt/columbia.cfm>.

Recovery Team Abundance and Productivity Viability Criteria for Interior Columbia Basin Salmon and Steelhead Populations at 22 (Nov. 30, 2007) (“Survival Rate Change Memo”).

37. For Snake River spring/summer chinook, the picture is much the same. Both the ICTRT analysis and a comprehensive status review for these fish conclude that for virtually all of the remaining populations in this ESU, viability risks are high. 2008 BiOp at 8.3-47 (Table 8.3.2-1) (summarizing ICTRT analysis); 2014 BiOp at 71 (Table 2.1-1) (2011 status review indicates all populations of this ESU are at “High Risk”).

38. Despite several recent years of increased returns, the long-term picture for Snake River fall chinook is similar. As the ICTRT notes, there is only one remaining population in this ESU located in the mainstem and tributaries below the Hells Canyon Complex dams. ICTRT, Survival Rate Change Memo at 25. “The extirpated mainstem populations above the Hells Canyon dam complex were relatively large and productive, dominating production for this ESU.” *Id.* In addition, over 100 miles of Snake River fall chinook spawning habitat was lost for these fish when it was inundated by the construction of the four Lower Snake River dams, limiting its remaining spawning habitat to a small fraction of its historic scope. Because this ESU currently consists of only one population, the ICTRT viability criteria would require it to be very secure, with a 100-year viability risk of 1% or less, in order for the ESU to be considered viable. ICTRT, Viability Criteria for Application to Interior Columbia Basin Salmonid ESUs (Review Draft) at 8, 13 (Mar. 2007) (explaining that for an ESU like Snake River fall chinook with only one MPG and only one extant population, that population must be “highly viable” with a viability risk of 1% or less). This would require a sustained and consistent improvement in survival rates for this species of between 20% and 41% after incorporating an error buffer. ICTRT, Survival Rate Change Memo at 26. “Available data clearly indicates that the hydropower system has a major affect [sic] on migration and rearing survivals for Snake River

fall Chinook.” *Id.* at 25. According to NOAA’s most recent Five-Year Status Review, the ten-year average of natural-origin spawners remained below this threshold and the ESU viability risk is still far greater (5-25%) than the TRT’s thresholds for a species with only a single population. *See* National Marine Fisheries Service, “5-Year Review: Summary & Evaluation of Snake River Sockeye, Snake River Spring-Summer Chinook, Snake River Fall-Run Chinook, Snake River Basin Steelhead” (2011) (“2011 Status Review”) at 29, *available at* http://www.nmfs.noaa.gov/pr/pdfs/species/snakeriver_salmonids_5yearreview.pdf.

39. Snake River sockeye face perhaps the bleakest future of all. Returns of adult sockeye to Redfish Lake in Idaho have been in the low single digits, or occasionally in the low double digits—with several years where no adults made it back to spawn at all—for most of the past two decades. These fish are now—and have been for years—sustained largely by a captive breeding and hatchery program at Redfish Lake in Idaho, with few natural-origin returns. For example, only four adult fish returned to Redfish Lake in 2007. In 2012, only 53 adult natural-origin sockeye returned to Redfish. According to NOAA’s most recent status review, Snake River Sockeye “remain[] at a high risk of extinction. Recent returns are still a fraction of historic abundance and substantial increases in survival rates across all life-history stages must occur in order to re-establish sustainable natural production.” 2011 Status Review at 25.

C. The 2008 BiOp’s Population Performance Predictions and Subsequent Results

40. In the 2008 BiOp (dated May 5, 2008), NOAA predicted that the productivity of the individual populations of ESA-listed salmon and steelhead would improve by specific numeric amounts that would be sufficient to avoid jeopardy as a result of a combination of past and ongoing actions and the actions described in the 2008 RPA. NOAA portrayed these survival improvements using three measures of population productivity (R/S, lambda, and BRT trend) analytically untethered from recovery abundance levels or time frames which it called the

“trending towards recovery” metrics, and by calculating extinction risk as measured by the probability of extinction over a 24-year period. *See* 2008 BiOp, Chapter 7 (describing and discussing methods for determining jeopardy); *id.*, Chapter 8 (providing specific population-by-population performance predictions). These predictions of survival improvements were essential to the no-jeopardy finding for the 2008 RPA for each listed species in the Interior Columbia Basin. *Id.* Chapter 8.

41. NOAA’s predicted increases in population productivity, and reductions in extinction risk, relied on specific predicted survival improvements for a “base-to-current” period for each population as a result of actions under prior biological opinions. *See, e.g.*, 2008 BiOp at 8.3-52 (Table 8.3.3-1) (adjustment for Snake River spring/summer chinook results in 21-68% survival increases over the base-period depending on the population). The 2008 BiOp explained that these survival increases are predicted to occur because of “ongoing and completed management activities that are likely to continue into the future.” *Id.* at 7-11. NOAA explained further that these base-to-current survival increases were appropriate because the benefits of these past and ongoing actions were not yet fully reflected in adult returns but were expected to be reflected in improved returns—and hence productivity increases—after 2008 as out-migrating juveniles that benefited from these actions returned as adults. *Id.* (citing ICTRT’s use of similar adjustment for recent hydro actions, which cautions that “[f]uture returns will allow us to evaluate whether these improvements have been realized.”).⁶

42. NOAA also predicted *additional* survival improvements from the prospective actions under the 2008 RPA and calculated survival multipliers for these actions. *See, e.g.*, 2008 BiOp at 8.3-54 (Table 8.3.5-1) (predicting Snake River spring/summer chinook survival

⁶ “Required Survival Rate Changes to Meet Technical Recovery Team Abundance and Productivity Viability Criteria Interior Columbia Populations” at 4 *available at* http://www.nwfsc.noaa.gov/trt/col_docs/IC_TRT_Memo_Survival_Changes_5-17-06.pdf.

increases from RPA of 15-62%, depending on the population) (column for “Total current-to-future survival multiplier). The agency then concluded, based on this quantitative analysis of predicted survival improvements from both the RPA and prior actions and other qualitative considerations, that the listed salmon and steelhead populations would be on a “trend towards recovery” and face a sufficiently low risk of extinction to avoid jeopardy. *See, e.g., id.* at 8.3-39 to 8.3-46 (conclusions for Snake River spring/summer chinook).

43. In the 2010 BiOp (dated May 20, 2010), NOAA provided updated population performance information for populations of the listed species where two or more years of additional population data had become available since the analyses of the 2008 BiOp. *See* 2010 BiOp at 2-10 to 35 & Appendices A through D. This information portrayed the same “trending towards recovery” metrics again analytically untethered from recovery levels or time frames, and the extinction risk metric employed in the 2008 BiOp. It revealed, however, that for almost every species, for almost every population, *population productivity*, especially as measured by recruits per spawner (“R/S”), had not only failed to increase as predicted in the 2008 BiOp, it had actually declined. *See, e.g., id.* at 2-18 (“[updated] [b]ase period estimates of mean R/S declined 3-35% for 11 of 12 populations and remained unchanged [for one]” for Snake River spring/summer chinook), *id.* (“[updated] base period R/S estimates decreased 11-21% for all three populations” of Upper Columbia River spring chinook for which data were available); *id.* at 2-19 (for Snake River fall chinook where the 2008 BiOp employed two base periods, one starting in 1977 and one starting in 1990, “[updated] base period R/S estimates increased 1% for the time period beginning in 1977 and decreased 14% for the time period beginning in 1990”); *id.* (for Mid-Columbia steelhead, for the four populations where new data was available, “[updated] base period R/S increased 2-13% for two populations and decreased 2-18% for two populations”); *id.* (“[updated] base period R/S decreased 6-29% for the four populations” of

Upper Columbia River steelhead for which new data was available).

44. Likewise, in the 2014 BiOp, NOAA once again updated these population metrics with additional years of data that have become available since the 2010 BiOp. As the 2014 BiOp also states, “new point estimates of average R/S were lower than estimates in the 2008 BiOp for most populations (18 of 27 Chinook and 12 of 19 steelhead populations).”⁷ 2014 BiOp at 89. In the 2008 BiOp, NOAA explained that the R/S productivity metric “provides the most realistic assessment of the likelihood that a population” will avoid jeopardy (as NOAA defined it). 2008 BiOp at 7-23.

45. Much of the discussion of these declines in both the 2014 and the 2010 BiOps attempts to explain why this evidence of declining productivity for most of the ESA-listed populations does not indicate a problem with NOAA’s analysis in the 2008 BiOp, a failure of the RPA from the 2008 BiOp to avoid jeopardy, or at least a need to change substantially the RPA. *See, e.g.*, 2014 BiOp at 84-134 & App. C; 2010 BiOp at 2-3 to 2-35. The explanation NOAA identifies, considers, and analyzes to account for these consistent productivity declines is that virtually all of the listed salmon and steelhead populations are exhibiting a “density dependent” response in which an increase in mean population abundance (which NOAA has described for many populations) suppresses productivity because of carrying capacity limits in the individual

⁷ One of the other population productivity metrics from the 2008 BiOp, “lambda,” showed a pattern of declining productivity similar to the R/S metric, as it did in the 2010 BiOp. For example, the new population specific estimates for the lambda metric, when hatchery fish are assumed to be ineffective spawners, “were lower than in the 2008 BiOp for many populations,” 2014 BiOp at 94, while the new estimates of lambda where hatchery fish are assumed to spawn as effectively as naturally-produced fish, also “were lower than in the 2008 BiOp for many populations” and lower than the 2008 BiOp’s target growth rate of 1.0 for over half of the chinook populations for which this metric could be calculated and two-thirds of the steelhead populations for which it could be calculated, *id.* at 99. The third population productivity metric, “BRT Trend,” showed productivity estimates for a number of chinook and steelhead populations that were unchanged from the 2008 BiOp, and others that were either somewhat higher or somewhat lower. *Id.* at 104; *see also* 2010 BiOp 2-104 to 108 (describing a similar pattern for these metrics).

population's tributary habitat. 2014 BiOp at 109-119; *see also* 2010 BiOp at 4-8 (relying on density dependence to explain the broad and marked declines in productivity). NOAA's analysis of density dependence omits a number of relevant factors and fails to consider alternative and less favorable reasons for the documented declines in productivity.

D. The Southern Resident Killer Whale Population

46. In the 2008 BiOp, NOAA reported that the endangered Southern Resident Killer Whale population consists of 87 individuals. By September 2013, the population had declined to 81 whales. 2014 BiOp at 481. The latest population count (January 2014) shows a decline to only 80 individuals. The "effective population size" (the number of whales who can contribute offspring) is now less than 30. *Id.* NOAA found in the 2010 BiOp that there is no need to "change the assessment of the status and trends of this small population reported in the 2008 BiOp," 2010 BiOp at 2-35, but did not otherwise seriously address the factors affecting this species. *See infra* at ¶¶ 96-99 (discussing failure of 2014 BiOp to comply with the ESA for orcas). Despite these further declines and other new evidence, NOAA in the 2014 BiOp again concludes that the continued decline of these whales "does not modify the assessment of the status and trends of this small population reported in the 2008 BiOp." 2014 BiOp at 482. Consequently, it does not further consider the impacts of dam operations and the RPA on this species. *Id.* at 486-487.

PROCEEDINGS LEADING TO THE 2014 BIOP

47. NWF has successfully sought review of the 2000 and 2004 BiOps for operation of the Federal Columbia River Power System or "FCRPS". The proceedings related to these biological opinions are described in ¶¶ 43-60 of NWF's Fifth Supplemental Complaint, including the Court's merits, injunction and remand orders. *See NWF v. NMFS*, CV-01-640-RE, Fifth

Supp. Compl. at ¶¶ 43-60 (Dkt. 1492).⁸

A. The 2008 BiOp

48. After NOAA issued the 2008 BiOp (following remand of the 2004 BiOp), NWF filed its Fifth Supplemental Complaint seeking review of that BiOp and the Corps' and BOR's RODs adopting the RPA. During the course of proceedings on this supplemental complaint, Federal Defendants agreed to continue the spill provisions of the Court's June and December 2005 injunction orders. *See NWF v. NMFS*, Joint Order for 2009 Spring Operations (Dkt. 1694). On March 6, 2009, the Court heard oral argument on cross-motions for summary judgment. Shortly after this hearing, Federal Defendants requested an in-chambers meeting with the Court. *See id.*, Federal Defendants' Letter to the Court (Dkt. 1697-3), NWF Letter to Court (Dkt. 1697-7). Soon after that meeting, Federal Defendants sought an opportunity for the then-new "administration leadership" to "more fully understand all aspects of the BiOp." *Id.*, Federal Defendants' Letter to Court (Dkt. 1697-2).

49. The Court granted this request and allowed a sixty-day review period (that was subsequently extended). On May 18, 2009, in response to a request by plaintiffs, the Court also issued a letter to the parties outlining its initial views about the adequacy of the 2008 BiOp to help inform the administration's review. *See id.*, Memorandum from Court to Counsel (Dkt. 1699). This letter explained that the 2008 BiOp likely was "arbitrary, capricious, and contrary to law." *Id.* at 1. Specifically, the Court observed that while it "still [had] serious reservations about whether the 'trending toward recovery' standard complies with the Endangered Species Act, its implementing regulations, and the case law, [e]ven if 'trending toward recovery' is a permissible interpretation of the jeopardy regulation, the conclusion that all 13 species are, in fact, on a 'trend toward recovery' is arbitrary and capricious because:

⁸ Hereinafter citations to material from the docket in this case are in the form "*NWF v. NMFS*, [document name] (Dkt. xxxx)."

(1) Federal Defendants improperly rely on speculative, uncertain, and unidentified tributary and estuary habitat improvement actions to find that threatened and endangered salmon and steelhead are, in fact, trending toward recovery;

(2) Federal Defendants' own scientists have concluded that many of the proposed estuary mitigation measures (and the assumed benefits) are unsupported by scientific literature;

(3) Federal Defendants assign implausible and arbitrary numerical survival improvements to tributary habitat actions, even though they have not identified specific habitat actions beyond 2009, and there is no scientific data to support those predictions;

(4) The BiOp does not identify any performance standards to measure whether the proposed habitat improvements actually result in the predicted survival improvements which are necessary to ensure that the species avoid jeopardy (*i.e.*, "trend[] toward recovery");

(5) The BiOp does not articulate a rational contingency plan for threatened and endangered species in the event that the proposed habitat improvements and other remedial actions fail to achieve the survival benefits necessary to avoid jeopardy; and

(6) Federal Defendants do not provide a rational explanation, based on the best available science, for their decision to curtail both spring and summer spill."

Id. at 1-2.

50. The Court went on to "urge federal defendants to consider implementing some or all of the following measures as part of [an] adaptive management process:

- committing additional funds to estuary and tributary habitat mitigation, monitoring, and evaluation;
- identifying specific tributary and estuary habitat improvement projects beyond December 2009;
- providing periodic reports to the court, and allowing for independent scientific oversight of the tributary and estuary habitat mitigation actions;
- committing additional flow to both the Columbia and Snake Rivers;
- developing a contingency plan to study specific, alternative hydro actions, such as flow augmentation and/or reservoir drawdowns, as well as what it will take to breach the lower Snake River dams if all other measures fail (*i.e.*, independent scientific evaluation, permitting, funding, and congressional approval); and

- continuing ISAB’s recommended spring and summer spill operations throughout the life of the BiOp.”

Id. at 2-3.

51. On September 15, 2009, Federal Defendants filed with the Court the results of their review of the 2008 BiOp and their response to the Court’s letter of May 18, 2009. This response included a new Adaptive Management Implementation Plan (“AMIP”) but Federal Defendants did not otherwise materially amend or modify the 2008 BiOp or respond to the Court’s specific findings and recommendations. Instead, they asked the Court to consider the AMIP and other new material in its review of the existing 2008 BiOp. Following briefing in which NWF and others explained both that the AMIP did not cure any of the shortcomings of the 2008 BiOp and that it and other new material was not properly before the Court in any event, the Court offered Federal Defendants an opportunity for a voluntary remand to reconsider the 2008 BiOp. *See id.*, Court’s Letter to Counsel at 1 (Dkt. #1749).

52. In suggesting such a remand, the Court observed that Federal Defendants “cannot rely exclusively on materials that support one position, while ignoring new or opposing scientific information,” and urged Federal Defendants “to seize this opportunity to produce a stronger RPA/AMIP,” to “re-examine the court’s previous concerns regarding the lack of specificity and certainty (*i.e.*, funding) in both the 2008 BiOp/RPA and the AMIP [and] to consider some of the parties’ suggestions for improving the AMIP.” *Id.* at 2. In short, the Court noted that the agencies can and should “do more.” *Id.*

B. The 2010 BiOp

53. On February 19, 2010, Federal Defendants indicated they would pursue a voluntary remand and the Court accordingly entered such an order. *Id.*, Order (Dkt. 1750). Ninety days later, on May 20, 2010, NOAA issued the 2010 BiOp which adopted the 2008 BiOp and supplemented it by incorporating the AMIP, and adding a handful of research projects to the

2008 BiOp's RPA. On June 11, 2010, BOR and the Corps issued supplemental RODs in which they committed to implement the updated 2008 RPA as set forth in the 2010 BiOp.

54. The 2010 BiOp did not correct or address the gaps, omissions, and arbitrary conclusions on which NOAA relied to reach a no-jeopardy finding for the RPA in the 2008 BiOp. *See, e.g., NWF v. NMFS*, Fifth Supp. Compl. at ¶ 92 (Dkt. 1492) (summarizing a number of these problems from the 2008 BiOp); *see also id.*, NWF SJ Br. at 20-40 (Dkt. 1499) (describing these flaws in the 2008 BiOp in some detail), NWF SJ Reply at 15-38 (Dkt. 1595) (same), nor did it modify in any way the illegal jeopardy standard the agency used in the 2008 BiOp. NOAA's incorporation of the AMIP into the revised RPA in the 2010 BiOp did not resolve these shortcomings for the reasons NWF has described in addressing the AMIP and the 2010 BiOp. *See id.*, NWF AMIP Br. at 8-31 (Dkt. 1723), NWF Supplemental SJ Brief at 25-35 (Dkt. 1794). In addition, the 2010 BiOp does not correct the legally flawed and arbitrary determination in the 2008 BiOp that the RPA (even as amended) will not destroy or adversely modify critical habitat for ESA-listed salmon and steelhead. *See id.*, Fifth Supp. Compl. at ¶ 93 (Dkt. 1492), NWF SJ Br. at 42-46 (Dkt. 1499), NWF SJ Reply at 38-44 (Dkt. 1595).

55. On September 8, 2010, NWF filed its Sixth Supplemental Complaint challenging the 2010 BiOp. *See NWF v. NMFS*, Sixth Supp. Compl. (Dkt. 1793). On August 2, 2011, the Court issued an opinion in which it concluded that the combined 2008 and 2010 BiOps were "arbitrary and capricious for their *entire* ten year terms." *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 839 F. Supp. 2d 1117, 1128 (D. Or. 2011) (emphasis in original). The Court explained that "NOAA Fisheries' analysis fails to show that expected habitat improvements—let alone the expected survival increases—are likely to materialize," *id.* at 1127, and that "[t]hus far, Federal Defendants have not implemented the habitat actions necessary to avoid jeopardy [and] there is no indication that they will be able to identify and implement the actions necessary

to catch up,” *id.* at 1128. The Court also specifically noted that “the lack of scientific support for NOAA Fisheries’ specific survival predictions is troubling,” *id.* at 1129, and that the government’s own scientists, “the independent experts who reviewed [the plan], and the Independent Scientific Advisory Board (“ISAB”)[,] have expressed skepticism about whether those benefits will be realized,” *id.* at 1130. Overall, the Court found that “[c]oupled with the significant uncertainty surrounding the reliability of NOAA Fisheries’ habitat methodologies, the evidence that habitat actions are falling behind schedule, and that benefits are not accruing as promised, NOAA Fisheries’” approach to these issues is “neither cautious nor rational.” *Id.* at 1128.

56. Once again, the Court remanded a BiOp to NOAA and the action agencies to prepare an opinion that would comply with the ESA. *Id.* at 1130-32. The Court’s Opinion and Order of Remand set a deadline of January 1, 2014, for completing a new biological opinion “that reevaluates the efficacy of the RPAs in avoiding jeopardy, identifies reasonably specific mitigation plans for the life of the biological opinion, and considers whether more aggressive action, such as dam removal and/or additional flow augmentation and reservoir modifications are necessary to avoid jeopardy.” *Id.* at 1130. The Court subsequently extended this deadline to January 24, 2014. *See NWF v. NMFS*, Order (Dkt. 1913).

57. Although the Court did not vacate the 2008/2010 BiOps during the remand, it concluded “that irreparable harm will result to listed species as a result of the operation of the FCRPS” under the BiOp and continued its injunction requiring Federal Defendants to provide additional spring and summer spill at the eight federal dams on the Snake and Columbia Rivers. *Nat’l Wildlife Fed’n*, 839 F. Supp. 2d at 1130-31.

C. The 2014 BiOp Does Not Cure the Defects in the 2008 and 2010 BiOps.

58. Despite the Court's decision rejecting the 2008/2010 BiOps and its direction to NOAA on remand, on January 17, 2014, NOAA issued the 2014 BiOp and RPA with little or no change from the prior BiOps. The structure and analysis of the 2014 BiOp closely tracks the approach in the 2010 BiOp and continues to rely on the jeopardy standard and analysis from the 2008 BiOp. Changes to the RPA actually reduce spring and summer spill the Court had enjoined the Corps and BOR to provide in order to limit the risk of harm to listed salmon and steelhead. RPA changes also eliminate an action in the estuary that was supposed to improve estuary survival (the "pile dike removal program"), and the revised RPA promises, once again, to develop a plan to reduce predation by double-crested cormorants, predation that has increased dramatically and that was not addressed in the 2008 BiOp. *See* 2014 BiOp at 37-40 (summary of changes to RPA). In short, the new BiOp disappointingly compounds the flaws of the prior BiOps.

1. *The 2014 BiOp Jeopardy Standard and Analysis Are Arbitrary and Contrary to Law.*

59. Like the 2010 BiOp, the 2014 BiOp does not address or alter in any way the legally-flawed jeopardy standard developed exclusively for the 2008 BiOp. The 2014 BiOp also does not modify in any way the arbitrary jeopardy analysis in the 2008 BiOp that predicted and relied on numerically precise, but highly uncertain, survival improvements from tributary, estuary, and other actions across the life cycle of listed salmon and steelhead. Achieving these predicted survival improvements remains essential to the no-jeopardy conclusion for both the original and the revised RPA. *See, e.g.*, 2008 BiOp at 7-45 ("NOAA Fisheries' analysis of the effects of the habitat Proposed Actions is based on the assumption that *all* estimated life-stage and population-specific survival benefits (or ESU/DPS for the estuary) . . . *will be realized* as a result of implementing actions to improve overall habitat quality" (emphasis added)); 2014 BiOp

at 471 (“[n]ew information indicates no significant change in the effects of the RPA at the population level, compared to the estimated effects relied up in the 2008 BiOp”).

a. NOAA’s Flawed Jeopardy Standard

60. NOAA continues to employ the legally-flawed “trending toward recovery” jeopardy standard it used for the first time in the 2008 BiOp.⁹ This standard has the effect of appearing to dramatically (and artificially) reduce the amount of harm caused by FCRPS operations under the RPA, and hence, it arbitrarily reduces the survival improvements the RPA must achieve in order to avoid jeopardy. Regardless of the other analytic and legal problems in the 2014 BiOp—including NOAA’s attempt to twist even this defective standard to explain away unfavorable data showing continued population declines, *see infra* at ¶¶ 66-70—NOAA’s unwavering reliance on this novel jeopardy standard is fatal to the 2014 BiOp.

61. Analyzing whether an action (here, continued operation of the FCRPS under the RPA) will jeopardize the continued existence of salmon and steelhead requires NOAA to evaluate the effects of that action on both survival and recovery. 50 C.F.R § 402.02; *Nat’l Wildlife Fed’n*, 524 F.3d at 932-33 (9th Cir. 2008). To evaluate recovery impacts, NOAA asked whether the RPA would cause a population to “trend toward recovery.” *Id.* NOAA defined this phrase, which does not appear in the ESA or its implementing regulations, to mean that a population must be growing at some detectable rate, no matter how small, relative to its *current* (threatened or endangered) size. *Id.* at 7-24 to 7-25. NOAA portrayed three population growth metrics to gauge whether a population would be “trending towards recovery.” *See id.* at 7-20 to 7-29 (describing metrics and methods). Under NOAA’s approach, each metric would show a trend towards recovery if a population’s growth rate is at or above 1.0, or at or above 1:1

⁹ NWF has described in detail why this “trending toward recovery” standard violates the ESA and its implementing regulations. *See NWF v. NMFS*, NWF SJ Br. at 6-17 (Dkt. 1499), NWF SJ Reply at 2-9 (Dkt. 1595), NWF Surreply Br. at 1-6 (Dkt. 1671) & NWF AMIP Br. at 3-8 (Dkt. 1723).

replacement of each adult member of the current population with a new adult on a continuing basis. *Id.* at 7-22 to 7-26.

62. The effect of the new “trending towards recovery” standard is to substitute any currently detectable population growth for “an appreciable reduction in the likelihood of . . . recovery.” 50 C.F.R. § 402.02. This substitution works a substantive change in the ESA regulations that NOAA has no authority to make: it addresses jeopardy to recovery not from the perspective of impacts to recovery as the regulations require, but from the perspective of whether there will be as many fish—or perhaps one more—tomorrow as there are today. This is not the standard the ESA sets, *see Idaho Dept. of Fish & Game v. Nat’l Marine Fisheries Serv.*, 850 F. Supp. 866, 899 (D. Or. 1994) (rejecting an argument for a similar standard in a prior FCRPS biological opinion), because it effectively eliminates any consideration of the FCRPS’s effects on the likelihood of species recovery.¹⁰ In fact, when applying this “trending towards recovery” standard, NOAA has found that, for many populations and metrics, no further survival improvements are required to satisfy the recovery component of the jeopardy regulation because the current “baseline” population survival rate already meets its “trending towards recovery” standard, a remarkable finding since these same populations also currently are at a high risk of extinction.¹¹ Fundamentally, NOAA’s “trending toward recovery” standard fails to address

¹⁰ Contrary to NOAA’s persistent mischaracterization, *see, e.g., NWF v. NMFS*, NOAA Supp. SJ Opp. at 14 (Dkt. 1806), NWF has not confused recovery under section 4 of the ESA with jeopardy under section 7, *see, e.g., id.*, NWF SJ Reply at 3-12 (Dkt. 1595).

¹¹ For example, the survival gap for the Wenatchee population of Upper Columbia chinook in the 2008 BiOp analysis, after the base-to-current adjustment and using the trending toward recovery metrics, ranges from 0% (for the R/S metric) to 14% (for the BRT metric) or 4.5% to 32% (for these same metrics), depending on assumptions. For the Methow population, this gap is 0% for all metrics at the upper end of the base-to-current adjustment to about 5% for each metric at the lower end. *See* 2008 BiOp at 8.6-9 (providing base-to-current adjustment factors), 8.6-37 (Table 8.6.2-4) (providing survival gaps for the “trending towards recovery” metrics for base period survival). The 2011 Status Review, however, indicates that each of these populations is at “High Risk.” 2014 BiOp at 71 (Table 2.1-1).

elements of a jeopardy analysis that the regulations identify as necessary and that are scientifically essential to determining whether an action appreciably reduces a species' likelihood of recovery.

63. The express language of the jeopardy regulations necessarily requires consideration of (a) the probability of achieving recovery that is necessary in order to avoid appreciably reducing the likelihood of recovery, (b) time frames for reaching recovery, and (c) a definition of what would constitute a recovered ESU/DPS in order to evaluate whether the FCRPS may “reduce appreciably the likelihood of ... recovery ... in the wild.” 50 C.F.R. § 402.02 (defining “jeopardize the continued existence of”); *see also id.* (defining “recovery”). The first element defines the level of risk to recovery that would constitute an “appreciable” reduction in the likelihood of achieving recovery, the second and third identify what “recovery” means for the specific species (a recovered population status and time frames for reaching it) in order to provide the reference points for gauging the magnitude of the action's effects. *See* 50 C.F.R. § 402.02; *cf.*, *Nat'l Wildlife Fed'n*, 524 F.3d at 936 (“NMFS inappropriately evaluated recovery impacts without knowing the in-river survival levels necessary to support recovery. It is only logical to require that the agency know roughly at what point survival and recovery will be placed at risk before it may conclude that no harm will result from ‘significant’ impairments to habitat that is already severely degraded”). Indeed, NOAA understood the need for these analytical components 14 years ago: the recovery prong of the 2000 BiOp jeopardy standard set (a) the probability of achieving recovery that was necessary in order to avoid appreciably reducing the likelihood of recovery, (b) time frames for reaching recovery, and (c) a definition of what would constitute a recovered ESU/DPS. 2000 BiOp at 1-9, 1-14.¹² The scientific information necessary to address each of these elements in a jeopardy analysis has already been

¹² A copy of that BiOp is *available at* http://www.nwd-wc.usace.army.mil/tmt/wqnew/biops/2000/combined_nmfs.pdf.

developed and was available to NOAA for the 2014 BiOp but its “trending towards recovery” standard improperly avoids any need to use this information.

b. NOAA’s Flawed Jeopardy Analysis

64. Rather than change the jeopardy standard to comply with the ESA, and prepare a new jeopardy analysis that rationally addresses the uncertainty and speculation in the 2008 analysis, the centerpiece of the 2014 BiOp—like the 2010 BiOp—is a further update of population performance for the three analytically untethered “trending towards recovery” metrics and the extinction risk analysis that were the key metrics of the jeopardy standard in the 2008 BiOp, *see* 2014 BiOp at 84-119 (analysis of metrics for interior Columbia Basin salmon and steelhead), together with a further update for a geometric mean population abundance metric that NOAA now favors, *id.* at 79-83, even though it decided not to use such a metric as part of its jeopardy standard for the 2008 BiOp, 2008 BiOp at 7-27 to 29. Based on these updated calculations, NOAA states that its renewed “no-jeopardy” finding for the amended RPA in the 2014 BiOp is based on its conclusion that new information and calculations “indicate no significant changes in 2008 BiOp expectations for effects of the RPA” 2014 BiOp at 468; *see also id.* at 471 (finding “no significant change in effects of the RPA at the population level compared to the estimated effects relied upon in the 2008 BiOp”); *id.* at 89, 94, 104 (“All new estimates were within the 2008 BiOp’s 95% confidence intervals, indicating that the results are within the range of statistical uncertainty described in the 2008 BiOp”).

65. NWF has described in detail the flaws in the jeopardy *analysis* for the RPA in the 2008 BiOp. At bottom these boil down to an attempt to create the appearance of a numerically precise analysis, the conclusions of which are essentially meaningless because of the uncertainty of the specific predictions about the projected survival improvements from the actions in the RPA, compounded by the uncertainty of multiplying together many of these highly uncertain

predictions and adding them to equally—if not more—uncertain calculations of the current population status. *See NWF v. NMFS*, NWF SJ Mem. at 29-40 (Dkt. 1499), NWF SJ Reply at 27-34 (Dkt. 1595). In addition to this flawed analysis for other species, NOAA did not even conduct a jeopardy analysis for endangered Snake River sockeye salmon. *See id.*, NWF SJ Br. at 28-29 (Dkt. 1499), NWF SJ Reply at 37-38 (Dkt. 1595). NOAA’s jeopardy analysis in the 2014 BiOp, like its analysis in the 2010 BiOp, makes no attempt to correct these problems. *See, e.g.*, 2014 BiOp at 32 (noting that NOAA conducted its analysis with ‘continued reliance on the determinations of the 2008 BiOp’); *id.* at 33-34 (describing NOAA’s inquiry as limited to whether new information on species’ status or RPA implementation would affect previous conclusions).

66. Instead, like the analysis in the 2010 BiOp, the analysis in the 2014 BiOp is largely based on whether the updated information on population and species survival is “within the range” expected or anticipated in the 2008 BiOp and whether there are any “significant deviations” from the survival improvements predicted for the RPA in 2008. *See* 2014 BiOp at 84, 87, 94, 99, 104, 206, 462; *see also, e.g.*, 2010 BiOp at 4-8. For salmon and steelhead survival, a “significant deviation” means whether the new numeric point estimates for the three updated population productivity metrics for the “trending towards recovery” standard, for each population, fall within the bounds of the “95% confidence interval” calculated for both the base period point estimates for these metrics in the 2008 BiOp and for the extinction risk metric. *See, e.g.*, 2014 BiOp at 90 (Table 2.1-9) (for ESA-listed chinook, providing point estimates for the R/S metric and 95% confidence intervals for each point estimate from the 2008 BiOp, as well as updated point estimates and confidence intervals for this metric); *id.* at 89 (“[a]ll new estimates were within the 2008 BiOp’s 95% confidence intervals”); *see also* 2010 BiOp at 2-18 to 2-27 (indicating that this is the meaning of a “significant deviation”).

67. NOAA, however, never concluded in the 2008 BiOp that any value within these wide confidence intervals, when multiplied by the anticipated survival improvement multipliers in the 2008 BiOp, would avoid jeopardy, the position it effectively has taken in both the 2014 and 2010 BiOps. Instead, it concluded that a specific (albeit highly uncertain) base period point estimate within these intervals, when multiplied by the anticipated survival improvements projected at that time, would cause enough populations to grow at rates at or above 1.0 that the species as a whole would “trend towards recovery” and hence avoid jeopardy. *See, e.g.*, 2008 BiOp at 8.3-42 (explaining that NOAA’s quantitative conclusions are based on “mean results [that] represent the most likely future condition, but do not capture the range of uncertainty in the estimates”); *id.* at 8.3-56 (Table 8.3.6.1-1), footnotes 1-3 and 8.3-47 (Table 8.3.2-1), footnotes 2-4 (noting that calculation of improvements for the trending towards recovery metrics were based on mean or median point estimates for all three metrics).

68. The new “significant deviation” standard for assessing jeopardy in the 2014 and 2010 BiOps is arbitrary and inconsistent with the ESA’s institutionalized caution and even with NOAA’s flawed analysis in the 2008 BiOp because, for almost every population of almost every species, a value at the lower end of the confidence intervals NOAA calculated in 2008, when multiplied by the productivity multipliers NOAA used in the 2008 BiOp, would produce population growth rates *less* than 1.0, the minimum growth rate NOAA has articulated as necessary for a species to be “trending towards recovery” and meet its flawed jeopardy standard. *See NWF v. NMFS*, Declaration of Ed Bowles in Support of Oregon Motion for Summary Judgment at ¶¶ 55, 57 & Tables 9a-9c (Dkt. 1510) (illustrating this point for the 2010 BiOp). Stating that a new value falls within such wide intervals fails even to describe whether the population is growing or declining. And indeed, for the productivity metric NOAA has acknowledged as the most useful predictor of salmon survival, the R/S metric, NOAA’s new

point estimates for this metric, for almost all populations show *declining* productivity, *see supra* at ¶¶ 43-44 (summarizing the updates for this and the other productivity metrics), the opposite of the response NOAA predicted for the RPA.

69. NOAA has not explained, and cannot explain, how this new “significant deviation” approach is consistent with its prior analysis, let alone consistent with the requirements of the ESA. Instead, NOAA has attempted an extraordinary and unexplained sleight-of-hand: it seeks to transform the extensive uncertainty indicated by very broad confidence intervals around the 2008 point estimates for the base period population growth rates into an excuse to dismiss unfavorable new data on population productivity and to mask its failure to have any reliable basis for concluding that salmon and steelhead population survival is increasing and will continue to increase sufficiently to meet its announced jeopardy standard.

70. Rather than confront this fundamental problem, the 2014 BiOp, like the 2010 BiOp, focuses much of its attention on recent calculations of increases in mean salmon abundance, *see, e.g.*, 2014 BiOp at 79-84; *see also* 2010 BiOp at 3-9 (discussing recent abundance numbers), 4-12 (“[f]actors that indicate improvements from the description in the 2008 BiOp include [] [i]ncreased 10-year average abundance of all populations for which new data are available). NOAA evidently now prefers a recent average abundance metric over the evidence of broad *declines* for the productivity metrics it used in the 2008 BiOp because it believes productivity has been suppressed by a density-dependent response specifically in tributary habitat, *see* 2014 BiOp at 113-119; *id.* at App. C; *see also* 2010 BiOp at 2-32 (implying such a view), 4-8 (expressly stating such a view). But NOAA has arbitrarily failed to evaluate any other explanation for the population productivity declines even though (a) other credible explanations are available, (b) there is evidence to indicate these explanations are as, or more likely, to be the cause of productivity declines, (c) these explanations conflict with NOAA’s

view that the RPA is succeeding, and (d) ordinarily such explanations would be evaluated in order to rule them out before concluding that a bottleneck in tributary habitat is the sole source of the problem.¹³ Further, as with its new “significant deviation” standard, neither the 2014 BiOp nor the 2010 BiOp explain why an abundance metric is now NOAA’s preferred indicator that the RPA is working as anticipated to avoid jeopardy.

2. *The 2014 BiOp Fails to Rationally Address Climate Impacts.*

71. In the 2008 and 2010 BiOps, NOAA relied on overly-optimistic assumptions about future ocean conditions in the face of a warming climate, failed to use the best available science on the physical and biological effects of climate change in freshwater habitat, and double-counted measures that it was already taking to mitigate for the current adverse effects of FCRPS operations on salmon survival as also mitigating for any adverse impacts from global warming. *See NWF v. NMFS*, Fifth Supp. Compl. at ¶ 92 (Dkt. 1492); Sixth Supp. Compl. at ¶¶ 34-41 (Dkt. 1783) (providing additional detail).

72. In the 2014 BiOp, NOAA has again failed to analyze the impacts of new information and did not reconsider or change in any way its prior, inadequate analyses of the impacts of climate change. While NOAA devotes over 30 pages (and several appendices) to summarizing some of the significant, relevant and new information about the impacts of climate change on salmon and steelhead, including new watershed-specific models and new biological studies that were not available in 2008 or 2010, *see* 2014 BiOp at 152-184, the agency ultimately

¹³ Density-dependence is a widely recognized population response that involves a temporary decline in a population’s productivity which can occur when a population’s increased productivity leads to increased abundance to the point that competition for food, space, or other resources suppresses productivity. In the 2008 BiOp, NOAA expressly rejected using in its jeopardy analysis models that incorporate density dependence because these models were too complex and NOAA lacked sufficient data to use them. 2008 BiOp at 7-11, 7-30. Nonetheless it now claims to have discovered unequivocal evidence of density dependence effects in tributary habitat across salmon and steelhead populations.

concludes that all of the new data and studies are mere “additional detail,” that are “consistent with expectations in the 2008/2010 BiOps” or “within the range of expectations” of those BiOps. *See, e.g.*, 2014 BiOp at 180-183. NOAA fails to rationally explain the basis for these conclusions and mischaracterizes the new information and its previous treatment of climate change in the 2008 and 2010 BiOps.

73. For example, NOAA catalogs recent data showing continuing increases in freshwater stream temperatures, 2014 BiOp at 163-167, decreases in stream flows, *id.* at 160-162, and changes to precipitation and runoff amounts and timing, *id.* at 169-70, data that was not available in 2008. The agency also recognizes that many of these impacts have increased in recent years. *See, e.g., id.* at 164-65 (water temperatures in the Lower Columbia River have increased by nearly 5 degrees Fahrenheit between 1949-2010); *id.* at 355-56 (detailing blockage of adult passage at Lower Granite Dam due to high water temperatures in 2013). Yet NOAA fails even to evaluate whether this information actually affects its analysis and conclusions in the 2008 BiOp. Instead, it arbitrarily dismisses this new information with the conclusory assertion that the information is consistent with its “implicit” assumptions and “qualitative expectations” about freshwater impacts in the 2008 BiOp. 2014 BiOp at 180.

74. NOAA, however, did not actually consider the impacts of climate change on freshwater habitat and the freshwater portion of the salmon lifecycle even “qualitatively” in the 2008 BiOp. As NOAA acknowledges in the 2014 BiOp, its consideration in the 2008 BiOp of the freshwater impacts of climate change consisted only of observing that the kinds of actions it hoped would occur in freshwater under the RPA were consistent with the types of actions the ISAB recommended to address climate impacts. 2014 BiOp at 435. That rationale was invalid even in 2008 because it double counted the benefits of freshwater habitat actions to mitigate for both adverse hydrosystem impacts and adverse climate effects without any assessment of

whether these actions were sufficient to do such double duty. The agency certainly cannot continue to rely on this approach now as a basis for disregarding new, significant, and more specific information about freshwater climate impacts and for refusing to engage in a rational assessment of this issue in the 2014 BiOp.

75. NOAA also justifies its continued failure to apply the best available data and fully evaluate the freshwater impacts of climate change because, it asserts, the worst effects of climate change will not manifest immediately. 2014 BiOp at 435 (citing 2008 BiOp at 7-14, where NOAA dismissed post-2018 climate change effects because the “full effects of climate change are unlikely to be realized during the period covered by this BiOp.”); *see also* 2010 BiOp, App. F at 33 (same). As the 2010 and 2014 BiOps confirm, however, this is also true for the *benefits* of many of the tributary habitat improvements on which NOAA *does* relies to produce the survival improvements necessary to avoid jeopardy during the term of the current BiOp. *See* 2008 BiOp at 7-30 (explaining that its analysis assumes all beneficial effects of the RPA will happen in one step and accrue at the time of the analysis); *but see, e.g.*, 2010 BiOp at 2-127 (noting that in many cases, the benefits of these habitat restoration actions cannot be detected for at least 20 and likely more than 30 years); 2014 BiOp at 244 (concluding that it is “unrealistic” to expect that salmon survival improvements from habitat actions will have occurred by 2018). NOAA cannot rationally continue to rely on the positive quantitative impacts of tributary habitat restoration that may not accrue or be detected for decades, if ever, while dismissing the available quantitative and other evidence of the negative effects of climate change that are already occurring and will increase over the same time period. Indeed, the available evidence shows that the declines in habitat productivity from climate impacts are likely to more than offset any benefits from many of the tributary habitat improvements NOAA has concluded are necessary to mitigate for the adverse effects of current hydrosystem operations in order to avoid jeopardy.

76. In the case of climate impacts to ocean conditions, NOAA optimistically asserts that the past few years of ocean conditions have been better for salmon than either its “current” or “warm” case scenarios in the 2008 BiOp. *See* 2014 BiOp at 152-160. NOAA’s continued use of optimistic assumptions to justify its refusal to consider more pessimistic scenarios for ocean conditions as climate impacts mount suffers from the same short-sightedness that plagued the agency’s analysis in the 2008 BiOp. Assuming that future conditions will be just like (or in this case, implying that they may even be better than) the recent past misses the point. The best available science demonstrates that the ocean impacts of climate change, even in the next few decades, will be far greater than what has been seen so far. Indeed, this was the point of the Independent Scientific Advisory Board’s review of assumptions similar to NOAA’s in the TRT’s analysis of climate change. In its critique of these assumptions (which substantially overlap those NOAA makes in the 2008 BiOp), the ISAB cautioned that the “pessimistic scenario may not be sufficiently pessimistic.”¹⁴

77. Moreover, as NOAA’s summary of new climate-related information recognizes, many of the actions that are occurring under the 2014 BiOp are not effective to address the increasing impacts of climate change. According to a recent overview of habitat actions, “habitat protection alone is insufficient to conserve” steelhead species in the face of climate change; instead, “landscape-scale” actions focused on “restoring connectivity of ... high-elevation habitats will be needed.” 2014 BiOp at 179. According to another study, not all habitat actions actually address harm from climate change. In streams where flow is determined by melting snow or rainfall, only those actions that address stream flow and flood plain connectivity are likely to contribute to ameliorating the effects of climate change. *Id.* Actions such as stream habitat complexity improvements, sediment or erosion control, and screening irrigation

¹⁴ Alldredge, Richard *et al.* 2008 Review of the Interior Columbia River Technical Recovery Team’s Analyses of Survival Changes Needed to Meet Viability Criteria, ISAB 2008-1 at 3.

diversions do not provide any mitigation for climate impacts. Yet NOAA never analyzes whether, or the extent to which, the RPA includes a sufficient number of the kinds of actions (whether already completed or to be taken in the future), and at a sufficient scale, to actually address the impacts of climate change, impacts the available scientific evidence indicates we can anticipate. Nor does it address whether any such actions are sufficient to both mitigate for the adverse effects of the hydrosystem *and* the additive adverse effects of climate change.

78. In short, despite the host of new information on both the severity and specificity of the impacts of climate change, NOAA does not convert its synopsis of recent climate change science for either freshwater or the ocean into any additional analysis of, or into a single new action to address, climate impacts in the 2014 BiOp because it “continues to conclude that sufficient actions consistent with the ISAB’s (2007b) recommendations for responses to climate change have been included in the RPA and are being implemented by the Action Agencies as planned.” 2014 BiOp at 442. NOAA still does not explain or consider how these actions can be credited as both necessary to mitigate for the current non-climate impacts of the hydrosystem and to mitigate for additional climate change impacts.

79. NOAA’s approach in the 2014 BiOp stands in stark contrast to the treatment of climate change in NOAA’s BiOp for federal water projects on the Sacramento River. That BiOp extensively analyzed climate change impacts, used that analysis to inform its jeopardy conclusions, and—significantly—proposed specific additional mitigation measures to address the predicted climate impacts. *See* “Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project” (“CVP BiOp”) (June 4,

2009).¹⁵ NOAA makes no attempt to explain why such an approach is unnecessary in the 2014 BiOp.

80. NOAA's failure to analyze or apply the significant climate change information it has condensed and reported in both the 2010 and the 2014 BiOps violates both the ESA's requirement that NOAA "use the best scientific and commercial data available" in a biological opinion, 16 U.S.C. § 1536(a)(2) (emphasis added), and the fundamental APA principle that NOAA consider all relevant factors and draw a rational connection between the facts in the record and its decision.

3. *The 2014 BiOp's Reliance on Estuary Habitat Restoration is Arbitrary and Contrary to Law.*

81. The 2014 BiOp, like its predecessors, also fails to disclose that implementation of the estuary habitat actions in the RPA have fallen far behind, that NOAA's methodology and model for estimating survival improvements from estuary actions cannot properly be used to predict specific survival benefits from particular actions in any event, and that the survival benefits NOAA is now predicting—even with improper use of its model—exceed the total *possible* benefits identified in that model.

- First, the action agencies' 2010-2013 Implementation Plan¹⁶ reported that the estuary habitat work the 2008 BiOp predicted would occur under the RPA for 2007-2009 resulted in only "approximately 26 percent of expected survival benefits for ocean-type fish and approximately 24 percent of expected survival benefits for stream-type fish because some of the projects proved to be infeasible or implementation was delayed." 2010-2013 Implementation Plan at 61. The 2014 BiOp now indicates that even this poor performance apparently overstates the results for estuary habitat actions—and for a much longer period: 2007-2013. 2014 BiOp at 331 (reporting that survival benefits for ocean-type fish for this period amount to 8.2 Survival Benefit Units ("SBUs") from a required

¹⁵ The CVP BiOp is *available at* http://www.westcoast.fisheries.noaa.gov/publications/Central_Valley/Water%20Operations/Operations,%20Criteria%20and%20Plan/nmfs_biological_and_conference_opinion_on_the_long-term_operations_of_the_cvp_and_swp.pdf

¹⁶ *Available at* <http://www.salmonrecovery.gov/Files/2010-2013%20FCRPS%20BiOp%20Implementation%20Plan%206%2010.pdf>.

total of 45, or just 18% of the RPA requirement, and that benefits for stream-type fish only amount to only 3.4 of a required 30 SBUs or only 10.6% of the RPA requirement). Rather than candidly address this shortfall and change course, NOAA devotes all of its attention to a vague discussion of how much the estuary program has evolved and how NOAA believes projected work in the future will meet RPA requirements based on new evaluation criteria, renewed commitments, and plans to identify more effective actions, including one “extremely large and technically complex” project identified only as “large dike breach—reach E,”—which will, of course, be replaced by yet another unidentified project if it proves infeasible. *Id.* at 336; *see also id.* at 325-331 & 336-340. Even then, these hoped for actions have not actually been reviewed, evaluated or scored by the technical team on which NOAA says it relies. *Id.* at 338 (the ERTG provided only “preliminary scores” for these projects at the “concept stage of development”).

- Second, the methodology NOAA and the action agencies employ to predict the survival benefits of estuary habitat actions—the ERTG expert panel and the estuary module—are not appropriate for predicting specific survival benefits from particular estuary actions. As the ISAB has recently concluded, “[t]he results and conclusions [of the ERTG scoring criteria] are only partially supported by available scientific information,” *see* ISAB, Review of the Expert Regional Technical Group (ERTG) Process for Columbia River Estuary Habitat Restoration at 2 (ISAB 2014-1),¹⁷ “the ability of projects to actually succeed in increasing the survival of salmon cannot be determined from the scoring criteria,” *id.*, and the ERTG scoring on which NOAA relies is only useful for ranking projects, not predicting specific survival increases, *id.* 2-3. These limitations on NOAA’s ability to predict estuary survival increases from RPA habitat actions have already been called to NOAA’s attention repeatedly, but the agency has ignored them.
- Finally, NOAA is now projecting more survival benefits from the RPA estuary actions than can feasibly be derived from the 2011 Estuary Module on which the ERTG and NOAA rely. The agency now predicts that projects completed through the end of the RPA in 2018 will provide a total of 82.7 SBU’s for ocean-type fish and 30.0 SBUs for stream-type fish. 2014 BiOp at 336. This is equivalent to relative survival improvements of 16.5% for ocean-type fish when the maximum *possible* survival improvement under the Estuary Module for these fish, if *all* of its elements were implemented, is 20%. In addition to the estuary habitat improvement element that NOAA has focused on exclusively, there are 23 elements of the Module, including improvements in flow regulation, reducing entrapment of sediments in reservoirs, reducing impacts from dredging, fertilizer and pesticides upstream, reducing industrial, commercial and public sources of pollution; reducing ship wakes, reservoir-related water temperature changes, and removing piling and pile dike structures. NOAA has done no assessment of whether these far-reaching actions have been implemented to a reasonable extent or at all (and most of them have not), or whether there are negative effects in some of these areas, such as increased ship traffic or increased agricultural runoff, for which it must account. And NOAA recognizes that the piling and pile dike removal element of the Module will not be implemented as part of the RPA, 2014 BiOp at 341-42, an action that was to have

¹⁷ The report is *available at* <http://www.nwcouncil.org/media/6937236/ISAB2014-1.pdf>.

provided 15% and 20% of the 9% and 6% estuary survival improvement targets under the RPA (although NOAA now claims that the difference can be made up by implementing other unspecified projects). The ISAB's review pointed out that the ERTG cannot assign more SBU's for a restoration element than the Module estimates: "The 2011 Estuary Module developed by NOAA constrains the quantity of SBU's that the ERTG can assign to restoration projects. . . . The ERTG cannot assign more SBU's for a restoration action than the Module delineates." ISAB 2014-1 at 1. NOAA and the action agencies do not explain how they can disregard these limitations.

82. Despite these fundamental problems, NOAA's failures to consider relevant evidence, and the action agencies' well-documented failure to implement the 2008 RPA estuary actions, NOAA irrationally dismisses any possibility that the hoped-for estuary actions will not occur or produce their expected survival benefits. *See, e.g.*, 2014 BiOp at 330 (recasting the five-year failure of this program as a learning experience); *id.* at 339 (expressing NOAA's inexplicable "confiden[ce], based on the Actions Agencies' implementation record, that they will implement habitat improvement projects that meet the 9% and 6% survival improvement standards based on the ERTG's final scores"). NOAA and the action agencies' continued irrational reliance on estuary habitat actions that are not yet identified, not reasonably certain to occur, and/or are not likely to produce the predicted survival improvement needed to avoid jeopardy is arbitrary and capricious.

4. *The 2014 BiOp's Reliance on Tributary Habitat Restoration is Arbitrary and Contrary to Law.*

83. NOAA's approach to survival improvements from tributary habitat restoration is no more rational than its approach to estuary habitat work. First, there is no credible or reliable scientific basis for predicting the numerically precise survival improvements from specific tributary habitat actions that NOAA developed and relies on to conclude the RPA will avoid jeopardy. Second, even using NOAA's flawed and unreliable approach, the planned tributary habitat actions are inadequate to produce the predicted survival increases for many populations of salmon and steelhead. Third, even if the habitat projects have some beneficial survival effects for some populations, many of these effects will not accrue for years or even decades and NOAA

will not be able to detect them even then. In short, at the end of the 2014 BiOp's term in 2018, no one—and certainly not NOAA—will be able to tell whether the RPA tributary habitat actions have increased salmon survival by the predicted amount or—for the most part—at all. Checking back in 20 or 30 years to see if anyone can determine by then whether the RPA improved survival as predicted and avoided jeopardy is not an approach that complies with the ESA.¹⁸

84. As NWF pointed out in its comments on the draft 2014 BiOp, in reviewing tributary habitat actions that make up the bulk of the RPA habitat program, the ISAB has observed:

It is highly uncertain that habitat restoration will be successful as presently configured . . . quantitative objectives for habitat, an unambiguous assertion of biological potential, and a route to achieve the potential through habitat restoration actions, are not yet available, . . . it is important to further state that the biological potential is uncertain . . . and that the scope of restoration and improvement required to achieve the vision remains unknown

ISAB, Review of the 2009 Fish and Wildlife Program at 40 (Mar. 2013).¹⁹ NOAA seeks to dismiss this candid but unflattering scientific review by arguing that the ISAB was not reviewing the RPA tributary habitat actions but rather tributary habitat actions under the Northwest Power Council's Fish & Wildlife Program. NOAA Fisheries Response to Comments from the Sovereign review of the 2013 Draft Supplemental Biological Opinion ("NOAA RTC") at 25 (Jan. 17, 2014).²⁰ This is a distinction without a difference. Most of the RPA tributary habitat

¹⁸ As NWF has explained on numerous occasions, tributary habitat restoration is important and beneficial for salmon and steelhead populations, but it cannot fill the primary role in avoiding jeopardy that NOAA assigns to it in order to avoid directly addressing and directly mitigating for the harm caused by dam operations. Nor, as explained in text, can NOAA rationally support the numerically precise survival improvement predictions about tributary habitat restoration on which it relies in any event.

¹⁹ ISAB 2013-1, "Review of the 2009 Fish and Wildlife Program," *available at* <http://www.nwcouncil.org/media/5950466/isab2013-1.pdf>.

²⁰ *Available at* http://www.westcoast.fisheries.noaa.gov/publications/hydropower/fcrps/2013_Draft_Supplemental_FCRPS_BiOp_Response_to_Comments.pdf.

actions are funded by BPA through the Northwest Power Council's Fish & Wildlife Program. And, in fact, in response to a different comment, NOAA touts the scientific review of tributary habitat actions under the Council's Fish & Wildlife Program as evidence that RPA tributary habitat actions receive independent scientific review. *Id.* at 21 (responding to the comment that NOAA's approach for predicting specific survival improvements from tributary habitat actions has not received independent scientific review by asserting that when these actions are funded by BPA—as most are—they are reviewed by the Council's Independent Science Review Panel or “ISRP”).²¹ NOAA's continuing reliance on numerically precise predictions of survival improvements from habitat actions is arbitrary and without a credible scientific basis.

85. In addition, the RPA's tributary habitat program is far behind schedule and—even based on NOAA's unreliable predictions—has failed to provide the predicted survival increases for many populations. First, in 2010, the action agencies' Implementation Plan reported that many habitat projects had been delayed and that, “[p]rojects scheduled for completion in 2007-2009 that had implementation delays were carried forward to the 2010-2012 period.” 2010-2013 Implementation Plan at 54. The 2010 BiOp, however, never described or discussed these shortfalls or their implications for timely achievement of the precise survival improvements predicted in the 2008 BiOp. It only asserted that the agencies would do what they had not yet done, “continue to . . . ensure that all RPA and Accord actions are implemented as planned,” 2010 BiOp at 4-8; *see also* 2010-2013 Implementation Plan at 55 (despite failure to implement projects so far, “[s]ubstantial on-the-ground momentum has now been built in many areas to support fast-paced habitat project implementation in 2010-2018”).

²¹ ISRP review itself is limited, however, to evaluating whether a particular habitat project is well-designed and likely to be of some benefit to salmon. The review does not extend to assessment of whether specific survival improvements predicted for a particular action are reliable and likely to occur. *See NWF v. NMFS*, Amicus Mem. of Northwest Power & Planning Council at 5-6 (Dkt. 1594).

86. The 2014 BiOp is slightly more forthcoming about the extent of the problem while packaging its summary in positive terms: it reports that using NOAA’s analytic approach, habitat projects through 2011 have already achieved the habitat quality improvements NOAA believes are necessary to produce the survival increases the 2008 BiOp identifies as required to avoid jeopardy for 34 of 56 salmon and steelhead populations. 2014 BiOp at 276. Tables on subsequent pages, however, show that for most of the “priority” salmon and steelhead populations identified in the 2008 BiOp—14 of 18 populations—the RPA tributary habitat actions have provided *less* than 50% of the habitat improvements necessary to avoid jeopardy and for 8 of these 14, the RPA actions have produced less than 33% of the necessary improvements. *Id.* at 277-279 (Tables 3.1-2 through 1-4). As NOAA notes, the 50% threshold for habitat actions through 2011 is significant because 2011 marks the halfway point in the life of the RPA. *Id.* at 276. In fact, for six of the priority populations, the currently planned habitat actions will not produce the habitat quality improvements required to comply with the RPA. *Id.* at 281 (Table 3.1-5). In sum, habitat actions are not on track to avoid jeopardy for more than two-thirds of NOAA’s priority salmon and steelhead populations.²²

87. In the face of this shortfall in predicted habitat quality improvement—and hence shortfall in predicted survival improvements—NOAA falls back on its inexhaustible confidence that the RPA habitat actions will occur and will achieve the predicted survival increases. *See, e.g.*, 2014 BiOp at 282-284 (describing yet another suite of new tributary habitat actions that have yet to be developed and evaluated but are predicted to occur by 2018 and provide the missing survival benefits, which in many cases exceed by a substantial amount the benefits the agency asserts have occurred so far). Apparently, NOAA plans to rely on completing not one but a whole series of “Hail Mary” passes in the waning minutes of the game to accomplish its

²² *See* 2008 BiOp, RPA 44-46 (Table 5) (indicating priority populations).

tributary habitat-based survival improvements and avoid jeopardy. The ESA’s “institutionalized caution” and allocation of the burden of risk to the action, rather than to the species threatened with extinction, does not permit NOAA to rely on completing even one, let alone a whole series of, “Hail Mary” passes. *Sierra Club v. Marsh*, 816 F.2d at 1383, 1386 (9th Cir. 1987).

88. Finally, NOAA’s reliance on tributary habitat improvements as a centerpiece of the RPA faces an additional difficulty: NOAA and the action agencies cannot actually determine whether the tributary habitat actions they have implemented, and plan to implement (if they are implemented), are achieving the survival improvements on which the no-jeopardy finding for the RPA is based. And many of these improvements—if they occur at all—may not occur for decades. In the 2010 BiOp, for example, NOAA admitted that survival changes of 5% or less cannot be detected “even when 20 populations were employed and monitored over 30 years.” *See* 2010 BiOp at 2-127, 2-129; *see also NWF v. NMFS*, NWF SJ Br. at 25 & n.19 (Dkt. 1499) (discussing absence of effectiveness monitoring to determine whether the RPA is achieving the survival results necessary to avoid jeopardy); 2008 BiOp at 8.3-52 & 8.3-54 (Tables 8.3.3-1 & 8.3.5-1) (predicting survival improvements from tributary habitat actions both larger and smaller than 5%).²³

89. The best the 2014 BiOp can offer for its monitoring effort is that “*preliminary* [data] *appear* to support our *expectation* that the RPA habitat actions will result in increased fish population abundance and productivity.” 2014 BiOp at 229 (emphases added). Apart from the striking qualifiers that the available data is only preliminary and that even then it only appears to

²³ The 2014 BiOp proposes no measures to overcome this problem, even where tributary habitat survival improvements are larger than 5%, let alone where they are smaller. In addition, many of the populations proposed for the so-called intensive tributary habitat monitoring described in the 2008 BiOp RPA require survival increases from habitat actions that are below the 5% level, a level which NOAA now says cannot be detected through monitoring. *Compare* 2008 BiOp, RPA at 44-46 (table of required survival increases from tributary habitat actions) *with id.* at 83 (identifying certain streams and basins for “effectiveness pilot studies”).

support expectations for some kind of positive effect from tributary habitat actions, this statement offers no support for concluding that the population-specific and numerically-precise survival improvements from tributary habitat actions will be achieved. And no wonder because NOAA now says any expectation that actual survival improvements from tributary habitat actions would be observed by 2018 is “a misinterpretation of the temporal considerations in the 2008 BiOp analysis.” NOAA RTC at 30. NOAA goes on to explain that “more data are needed to determine whether changes in habitat status and trends and corresponding changes in fish production are occurring.” *Id.* It then adds that “implementation of habitat improvement actions is not date certain” due to a number of factors, that survival increases from these actions—if and when they occur—may take years to appear, that the data and methods to connect specific changes in habitat to specific increases in survival do not exist, and that, therefore, “it is most accurate to think of the expert panels’ estimates [of habitat quality improvements] as providing near-term and long-term estimates of change in limiting factor function as a result of habitat improvement actions.” *Id.* at 31. Of course, predicting changes in “limiting factors” is not the same as predicting numerically precise survival improvements for populations and species, a problem NOAA still has not rationally addressed. Yet at the end of the day, these unreliable and unverifiable predictions are all NOAA will actually have to show for the tributary habitat program in the RPA. NOAA cannot credibly conclude from this evidence that the actual and specific salmon and steelhead survival increases that are the fundamental premise of its no-jeopardy finding are reasonably certain to occur.

5. *The 2014 BiOp Arbitrarily Relies on Favorable Analyses and Data While Improperly Dismissing Unfavorable Information.*

90. Apart from the above failures in the jeopardy analysis in the 2014 BiOp and its predecessors, NOAA in the new BiOp—also like its predecessors—arbitrarily chooses to selectively disregard or discount unfavorable scientific information while crediting or overstating

the significance of favorable information. Examples of this “cherry-picking” from the available information include:

- The 2014 BiOp admits that the 2008 BiOp jeopardy analysis failed to account for the significant and harmful effects of double-crested cormorant predation on ESA-listed salmon and steelhead, *see* 2014 BiOp at 409; *see also NWF v. NMFS*, Declaration of Fred Olney at ¶¶ 76-80 (Dkt. 1501) (discussing failure of 2008 BiOp to address evidence of cormorant predation), Reply Declaration of Fred Olney at ¶¶ 22-28 (Dkt. 1597) (same). NOAA also asserts that this problem has moderated recently. 2014 BiOp at 198 (stating that cormorant predation peaked in 2006), but the published scientific studies NOAA cites fail to show that cormorant predation actually has declined.²⁴ The RPA fails to include any specific actions or requirements to reduce this source of harm, *see id.* at 410 (action agencies “will develop a cormorant management plan . . . and implement warranted actions”); *see also* 2010 BiOp at 2-91 (discussing plans to study ways to reduce cormorant predation while admitting that efforts to reduce predation to date “have not been successful,” have had “mixed results,” or “would [not] significantly decrease predation rates on Columbia Basin salmonids”), or require other actions to compensate for or offset this significant new source of mortality. In addition, the one study from Minnesota the 2014 BiOp cites for the ability to control cormorant predation, 2014 BiOp at 411, acknowledges the limited success of those efforts (which basically involved shooting hundreds of birds, an action likely to stir its own controversy). As importantly, the jeopardy analysis still has not been updated to account for the magnitude of the harm from the omitted cormorant predation, even though equally uncertain benefits of a similar magnitude are still included in the analysis.
- The no-jeopardy findings for ESA-listed steelhead in the 2008 BiOp rely on specific survival improvements to be achieved through a kelt reconditioning program that is part of the RPA. 2008 BiOp at 8-16 to 8-17; *see also NWF v. NMFS*, Declaration of Fred Olney at ¶¶ 86-92 (Dkt. 1501) (describing evidence regarding problems with kelt reconditioning that the 2008 BiOp does not address), Reply Declaration of Fred Olney at ¶¶ 29-36 (Dkt. 1597) (same). The 2010 BiOp did not address this issue at all even though a 2009 review by the Independent Science Review Panel (“ISRP”) of the most extensive,

²⁴ The 2010 BiOp stated that recent studies “probably reflect the stability of the double-crested cormorant population in the estuary.” 2010 BiOp at 2-91 (citing Roby *et al.* (2008) and Collis *et al.* (2009)). The Collis *et al.* (2009) study, however, states “[t]he growth of the East Sand Island colony appears to be exceptional among colonies of double-crested cormorants along the coast of the Pacific Northwest, most of which are stable or declining.” Collis *et al.* (2009) at 44 (emphasis added); *see also id.* at 57 and Figure 25 (stating and showing that the cormorant population is growing). Although there was a reduction in the colony size in 2008, the authors do not conclude that this means the population will remain stable or decline. *See* Collis *et al.* (2009) at 57. In addition, Roby *et al.* (2008) states “[b]ased on these results, it is possible that the cormorant breeding population will continue to expand for the foreseeable future” Roby *et al.* (2008) at 75.

long-term kelt reconditioning program found that to date this program had failed to produce evidence that kelt reconditioning works (*i.e.*, contributes to natural origin productivity of Upper Columbia steelhead populations) and that the results to date are discouraging. ISRP 2009-39 (*available at* <http://www.nwcouncil.org/library/isrp/isrp2009-39.pdf>). The 2014 BiOp likewise continues to assume productivity improvements of 6% for Snake River B-run steelhead in the absence of any evidence that these improvements actually can be achieved. *See* 2014 BiOp at 383-87.

- The 2014 BiOp also does not address the impacts of increased transportation of juveniles (pursuant to the amended 2014 RPA) on adult salmon and steelhead mortality as a result of impaired homing ability and increased straying. In the 2008 BiOp, NOAA presented conversion rate data for adult fish that had been collected and transported as juveniles and for fish migrating as juveniles in the river showing that transported fish strayed at much higher rates as adults. In the 2008 BiOp, NOAA found that transportation *reduced* the number of adults that reached their native spawning grounds by 6.1% for Snake River fall chinook, 6.9% for Snake River spring/summer chinook, and 6.8% for Snake River steelhead. 2008 BiOp at 14-21 (Table 14.1) (comparing average adult mortality between in-river and transported fish). In the 2010 BiOp, NOAA again recognized that transported Snake River spring/summer chinook salmon and steelhead stray at higher rates than fish that migrate in the river as juveniles. 2010 BiOp at 70. Significantly, NOAA also admitted that Court-ordered spill operations had helped to limit these stray rates. *Id.* at 78 (“[c]ompared to assumptions in the 2008 BiOp, recent spill operations at the Snake River collector projects have resulted in substantially *lowered* transportation rates.... [and] should substantially reduce the number of Snake River steelhead adults straying [into Mid-Columbia populations]... as a result of juvenile transportation operations, and thus reduce negative genetic impacts to these ...populations.”). In the 2014 BiOp, NOAA’s modification of the RPA to alter the spring and summer spill program will intentionally *increase* transportation of chinook, steelhead and sockeye as compared to the Court-ordered spill operations described in the 2010 BiOp. Yet in the 2014 BiOp, NOAA does not discuss the effects of increased transportation under the revised RPA on homing impairment, straying or adult survival even though this omission in the draft 2014 BiOp was called to NOAA’s attention by a number of scientists.
- The RPA in the 2014 BiOp—and the Corps and BOR’s 2014 RODs—also arbitrarily reduce spill levels from those required by the Court for the past nine years to partially alleviate the “irreparable harm ... to listed species as a result of the operation of the FCRPS.” *Nat’l Wildlife Fed’n*, 839 F. Supp. 2d at 1130-31; *but see* 2014 BiOp at 37, 39 (Fig. 1.3-1); Corps 2014 ROD at 4; BOR 2014 ROD at 2-3 (modifying and adopting spill and transport operations). First, while the BiOp adopts the action agencies’ proposal to eliminate a presumptive operation for the May 7-20 time period or during low flow years, 2014 BiOp at 375, it follows equally that there is no commitment to continue the existing spring spill levels during this period, despite evidence that spill during this time is beneficial.²⁵ The 2014 BiOp’s related alteration of overall planning dates and

²⁵ The action agencies have elsewhere been clear that they still believe, based on *their* analysis of the data, that spring spill should be terminated for a period of weeks in May. *See, e.g.*, “FCRPS

transportation operations will result in significant reductions in current spring spill levels and greater than 50% transport rates for wild spring chinook migrants. *Id.* Second, as it did in the 2008 and 2010 BiOps, NOAA once again allows early termination of summer spill in the Snake River without considering its detrimental ecological or evolutionary impacts and despite evidence that it is biologically important to protect each component of the wild/natural fish migration, including the tail of the migration in August, to maximize genetic diversity for Snake River fall chinook.²⁶ 2014 BiOp at 39 (Figure 1.3-1, & n.4). Finally, the 2014 BiOp and 2014 RODs ignore or improperly dismiss the best available scientific data demonstrating that spill levels can and should be dramatically increased to improve salmon and steelhead survival. *See* Comparative Survival Study, 2012 Annual Report at 44 (BPA Contract #19960200) (Nov. 30, 2012) (indicating that increased spill would improve fish travel time, mortality rates, and survival);²⁷ *see also* Hall, A. and Marmorek, D., Comparative Survival Study (CSS) 2013 Workshop Report (documenting that sufficient spill increases would result in significant survival improvements and consequently higher SARs.).²⁸ NOAA's terse dismissal of this multi-year, carefully reviewed evidence rests on two severely flawed reviews prepared by outside contractors, *see* 2014 BiOp at 380-82. NOAA, the Corps, and BOR fail to address the ISAB's review of this same evidence and its conclusion that "the increased spill hypothesis stands as a possible candidate for testing. Other changes to hydrosystem operations have so far been inadequate to meet SAR targets required to conserve endangered salmon populations, even with structural changes that have been made at the dams such as surface spill weirs." ISAB, "Review of the Proposed Spill Experiment" at 5 (Feb. 20, 2014).²⁹ Federal Defendants have again arbitrarily adopted a set of spill operations that is not based on the best available scientific data.

6. *The 2014 BiOp Is Arbitrary and Contrary to Law in Other Respects.*

91. As NWF has previously explained, *see NWF v. NMFS*, Fifth Supp. Compl. at ¶ 92 (describing flaws in jeopardy analysis) (Dkt. 1492), the benefits from hatchery programs on

System Improvements and September 2013 Operations—A Progress Report" (Sept. 20, 2013), available at <http://www.salmonrecovery.gov/Files/Hydro/FinalHydroSynthesisWithReview9-16-13.pdf>.

²⁶ The proposed cut-off also rests on an implicit assumption that spill is somehow harmful to the overall life-cycle of Snake River fall chinook. As the recent increased returns of this ESU demonstrate, that assumption is contradicted by the evidence. *See* Fish Passage Center comments on Draft FCRPS BiOp, available at <http://www.fpc.org/documents/memos/120-13.pdf>.

²⁷ The report is available at <http://www.fpc.org/documents/CSS/2012%20CSS%20Annual%20Report—Final.pdf>.

²⁸ The report is available at http://www.fpc.org/documents/CSS/CSS_2013_Workshop_Report_-_FINAL_w_presentations.pdf.

²⁹ The ISAB's report is available at <http://www.nwcouncil.org/media/6939290/ISAB2014-2.pdf>.

which NOAA continues to rely in its jeopardy analysis are to be produced by future federal actions that will require—but have not yet been the subject of—their own consultations under ESA section 7. While the 2014 BiOp repeats that the 2008 BiOp did not consider or assume any *quantitative* benefits associated with these future hatchery actions that were included in the RPA, the new BiOp now states that “NOAA did recognize *qualitative* benefits that were reasonably certain to occur from implementation of the hatchery RPA Actions.” 2014 BiOp at 389 (emphasis added). NOAA thus admits that it relies on the benefits of these future federal actions to reach its no-jeopardy finding for the RPA. It also acknowledges that, to date, it has only completed eleven of the literally dozens of hatchery consultations it said in the RPA in the 2008 BiOp it would complete by August of 2010. *Compare* 2014 BiOp at 404 (eleven consultations completed) *with* 2008 BiOp, RPA at 54 (all consultations to be completed by August 2010).

92. Until NOAA actually completes these consultations, it must incorporate the ongoing impacts of existing hatchery operations, including any negative impacts, in its analysis (whether in the environmental baseline, cumulative effects, or in the action itself). And NOAA must evaluate those impacts in light of the most recent scientific studies and literature, including the materials described and summarized in both the 2010 and 2014 BiOps. *See* 2010 BiOp at 2-115 to 2-123; 2014 BiOp at 390-405 (describing hatchery studies, many of which conclude that many current hatchery practices negatively affect the productivity of wild populations). In short, NOAA may only properly incorporate and rely on benefits from hatchery programs with completed consultations—it may not rely on hoped-for future consultations for any purposes. NOAA’s assertion that it “will review these tradeoffs when it reviews existing or new hatchery supplementation programs pursuant to sections 7, 4(d), and 10 of the ESA,” 2014 BiOp at 390, is contrary to law.

93. The 2014 BiOp also fails to address or remedy the failure of the 2010 and 2008 BiOps to adequately assess whether dam operations under the RPA will destroy or adversely modify designated critical habitat. NOAA's failure to ensure that critical habitat provides for the survival and recovery of the species in the 2014 BiOp includes, but is not limited to, the fact that the triggers, promises to study contingencies, and monitoring provisions of the AMIP are not tied to critical habitat conditions at all, but are instead focused only on thresholds for dangerous population declines that indicate nothing whatsoever about the present or future condition of the habitat NOAA has deemed "essential to the conservation" of listed ESUs. 16 U.S.C. § 1532(5)(A)(ii). Moreover, while acknowledging the additional damage that climate change will cause to critical habitat, NOAA continues to incorrectly assume—as it does in its jeopardy determinations—that actions it already requires to mitigate for the impacts of the hydrosystem can also be credited to address the future harms from climate change. *See* ¶¶ 71-80 (describing flaws with this approach). NOAA's continuing failure in the 2014 BiOp to credibly or rationally address the legal deficiencies in its critical habitat analysis is arbitrary and capricious and violates the requirements of ESA § 7(a)(2), 16 U.S.C. § 1536(a)(2).

94. The 2014 BiOp also arbitrarily adopts NOAA's definition of the action area and cumulative effects from the 2008 BiOp. NOAA's identification of the action area for this consultation is limited to "[t]he subbasins that are the focus of the Action Agencies' proposed non-hydro mitigation projects, designed to offset adverse effects of their proposed hydro operations" and to "[a]ll additional spawning areas above Bonneville Dam that are accessible to listed adult salmon or steelhead that are affected by the FCRPS RPA." 2008 BiOp at 4-4. By focusing on watersheds where the action agencies have proposed beneficial actions, however, NOAA has excluded watersheds or subbasins that might contain either ongoing or future harmful projects by federal, state, or private actors. To the extent NOAA seeks to count the benefits of

the RPA measures in certain watersheds, the action area must also encompass those watersheds where harmful actions may occur. *See Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 254 F. Supp. 2d at 1212 (finding that because NOAA relies on “range-wide off-site mitigation from habitat, harvest, and hatchery actions” to avoid jeopardy, “[t]he court is left with the firm conviction that the range-wide area is therefore indirectly, if not directly, impacted by FCRPS operations” and part of the actions area).

95. NOAA also fails to include an accurate and complete description of the cumulative effects that must be considered together with the effects of the action in determining whether the proposed action would cause jeopardy. 50 C.F.R. § 402.14(g)(3); 50 C.F.R. § 402.02. The few actions with potential cumulative effects that NOAA mentioned in the 2008 BiOp are limited to actions geared toward “protection and/or restoration of existing degraded fish habitat.” 2008 BiOp at 8.3-17 (citing Chapter 17 of the CA, listing projects almost universally aimed at benefiting salmon). There is nowhere in the 2008 BiOp, or any of its supplements, even a list—let alone some analysis of the effects—of *specific* actions such as logging, grazing, irrigation withdrawals, water quality permits, or any other activity with the potential to harm salmon even in the watersheds where NOAA is relying on the beneficial actions of the RPA. This results in a cumulative effects analysis that is unaccountably and arbitrarily one-sided.

7. *The 2014 BiOp's Conclusion That the RPA is Not Likely to Adversely Affect Endangered Southern Resident Killer Whales is Arbitrary and Contrary to Law.*

96. NOAA listed the Southern Resident Killer Whale population (“killer whales”) as an endangered species in 2005. 70 Fed. Reg. 69903-69912 (Nov. 18, 2005). Although these critically endangered whales congregate in the inland waters of the Salish Sea during the summer months, during the fall, winter, and spring they regularly range along the Washington and

Oregon coasts (and sometimes as far south as Monterey Bay in California) in search of food, often appearing at the mouth of the Columbia River at certain times of the year. 2014 BiOp at 484.³⁰ Perhaps the primary threat leading to the killer whale listing is the decline in abundance and availability of salmon, particularly chinook, which is the whales' preferred food source. NOAA found in its Recovery Plan for Southern Resident Killer Whales that “[p]erhaps the single greatest change in food availability for resident killer whales since the late 1800s has been the decline of salmon from the Columbia River basin.” Recovery Plan for Southern Resident Killer Whales (“Recovery Plan”) (Jan. 2008) at II-82.

97. In the 2008 BiOp, NOAA concurred with the action agencies' conclusion that continued operation of the FCRPS was “not likely to adversely affect” this population of killer whales. 2008 BiOp, Chp. 9. NOAA based its concurrence on an analysis that simply “compared the percent increase in adult Chinook from the hatchery actions to the total mortality rate for juvenile Chinook passing through the hydrosystem” and concluded that “the hatchery production contained in the Prospective Actions more than mitigates for losses to the killer whale prey base, regardless of the source of loss,” (*i.e.*, the action agencies will produce slightly more salmon in hatcheries than they will kill by operating the hydrosystem). 2008 BiOp at 9-16 to 9-17. NOAA reaffirmed that conclusion in 2010. *See* 2010 BiOp at 4-11.

98. In the 2014 BiOp, NOAA again concludes that “its past evaluation of effects on Southern Resident Killer Whales remains valid,” and again concurs with the action agencies' previous assessment that operation of the FCRPS under the RPA is not likely to adversely affect this species, making formal consultation for this species unnecessary. 2014 BiOp at 487. The action agencies' findings, and NOAA's concurrence in these findings, ignores the best available

³⁰ Recent NOAA research, available but not cited in the 2014 BiOp, demonstrates further the whales' reliance on chinook salmon returning to the Columbia River in the spring. *See, e.g.*, http://www.nwfsc.noaa.gov/research/divisions/cb/ecosystem/marinemammal/satellite_tagging/blog.cfm (results of NOAA's 2013 satellite tagging and tracking during winter and spring).

science and violates the requirements of the ESA and its implementing regulations for at least the following reasons:

- NOAA’s “net effects” analysis of salmon numbers for killer whales does not account for the effects of the environmental baseline, the status of the species, or cumulative effects. NOAA’s approach fails to consider, for example, what number and quality of fish would be needed from the Columbia River basin to ensure killer whale survival and recovery. Elsewhere in the 2008 BiOp, and in the 2014 BiOp, of course, NOAA has determined that the status of these fish must improve to ensure their survival and recovery. But in its discussion of the effects on killer whales, NOAA considers only the ability of hatchery fish to replace or offset the numbers of fish killed by the hydrosystem—a figure that is based on *current*, inadequate salmon numbers. Of course, it is precisely these status quo numbers which led the agency in the Killer Whale Recovery Plan to conclude that the decline of Columbia River basin salmon was perhaps “the greatest change in food availability ... since the 1800s.” A proper analysis of the RPA’s effects on killer whales would begin with the effects of the degraded baseline on the species and then add the effects of the action and any cumulative effects to the baseline. By ignoring the baseline—the effects of already-depleted salmon runs—NOAA has cemented current hydrosystem mortality into the killer whale prey base without asking whether continuing this situation, together with the effects of the RPA, will appreciably reduce the killer whales’ likelihood of survival and recovery. Operation of the FCRPS in a manner that will, at best, assure long-term continuation of already-inadequate chinook numbers is likely to adversely affect, if not jeopardize, the whales.
- NOAA admits that “recent data ... demonstrate a link between Chinook abundance and whale survival and fecundity,” 2014 BiOp at 486, and that it is “best to estimate population energetic needs and prey consumption rates based on ... the high end of the range in daily energy expenditure estimates,” *id.* at 485. NOAA has determined in other biological opinions that the whales need far more than current levels of salmon available for prey, and determined that long-term reliance on hatcheries would not avoid jeopardy to killer whales.³¹ Despite these past findings that more wild salmon are likely needed to avoid jeopardy, and the new evidence concerning the whales’ metabolic needs and reliance on chinook salmon, NOAA fails to perform any analysis in the 2014 BiOp of whether there are currently sufficient numbers of chinook salmon available to avoid an appreciable reduction in the whales’ likelihood of survival and recovery. Instead, NOAA arbitrarily concludes that “a new analysis of the prey available to the whales

³¹ CVP BiOp at 165-166, 573, 715. *See also* “Effects of the Pacific Coast Salmon Plan on the Southern Resident Killer Whale (*Orcinus orca*) Distinct Population Segment” (May 5, 2009) (“Harvest BiOp” at 38, available from https://pcts.nmfs.noaa.gov/pcts-web/dispatcher/trackable/NWR-2009-2298?overrideUserGroup=PUBLIC&referer=%2fpcts-web%2fpublicAdvancedQuery.pcts%3fsearchAction%3dSESSION_SEARCH (finding that in April-October, when the whales are most frequently foraging in coastal waters, the number of chinook “available to Southern Resident killer whales is insufficient for the whales to meet their metabolic needs.”)).

compared to their prey needs is not warranted,” 2014 BiOp at 486, because a 2012 report questioned NOAA’s ability to *precisely* estimate the number of salmon that must be present in coastal waters as prey in order for the whales to survive or recovery, *id.* at 485. NOAA’s failure to consider or analyze this factor misinterprets the cited report, and fails to apply the best available data that NOAA *does* have about the whales’ prey requirements and prey availability.

- In several other biological opinions, NOAA has applied a far more precautionary approach to its analysis by emphasizing that this killer whale population is so fragile NOAA will “scrutinize even small effects on the fitness of individuals that increase the risk of mortality or decrease the chances of successful reproduction.”³² NOAA does not articulate or apply a similarly conservative and precautionary standard in the 2014 BiOp, nor does it explain why it departs from that standard.

99. NOAA cannot reach a rational decision to concur in a not likely to adversely affect determination without even considering its own prior analyses. The agency’s decision to reaffirm its concurrence with the action agencies’ erroneous 2008 “not likely to adversely affect” finding (and the action agencies’ failure to revisit or reconsider that finding) is not based on the best available science and is arbitrary and capricious.

ACTS AND OMISSIONS OF THE CORPS AND BOR VIOLATING THE ESA AND NEPA

100. BOR and the Corps adopted the RPA from the 2014 BiOp through supplemental RODs. These RODs in turn adopt and incorporate the agencies’ earlier RODs adopting the RPA from the 2008 and 2010 BiOps. For all of the reasons discussed above, the Corps’ and BOR’s continued reliance on their previous RODs and the 2008 and 2010 BiOps, as well as their current reliance on their 2014 RODs and the 2014 BiOp, all of which they know or should know are invalid, fails to meet their independent and continuing legal duty to comply with the procedural and substantive requirements of the ESA, including but not limited to the requirement of section 7(a)(2) to avoid jeopardy and adverse modification of critical habitat, 16 U.S.C. § 1536(a)(2), and violates the prohibition on “take” under section 9, 16 U.S.C. § 1538.

101. In addition, in adopting the RPA from the 2014 BiOp, including the provisions of

³² See, e.g., Harvest BiOp at 56; CVP BiOp at 573.

the RPA from the 2008 and 2010 BiOps, the Corps and BOR were required to, but did not, prepare an analysis of the environmental impacts of their decisions to adopt the RPA under NEPA. Instead, the Corps' 2014 ROD merely lists the 1992 Columbia River Salmon Flow Improvement Measures Options Analysis Environmental Impact Statement, its 1993 supplement, and the 1997 System Operation Review EIS as the three NEPA documents "relevant to this decision" and notes several other "NEPA documents that have been relied upon" in the ROD. *See* Corps 2014 ROD at 9 (also listing 2002 Lower Snake River Juvenile Salmon Migration Feasibility Report/EIS, VARQ EIS, Albeni Falls and Inland Avian Predation Environmental Assessment).

102. BOR's 2014 ROD does not even mention NEPA, but the agency's attached 2010 ROD includes a footnote with a list of NEPA documents that is substantially similar to the Corps, all completed between 1992 and 2004. 2014 BOR ROD, Attachment A (2010 ROD) at 9 & n.8 (listing 1992 Columbia River Salmon Flow Improvement Measures Options Analysis Environmental Impact Statement, its 1993 supplement, and 1997 System Operation Review EIS as the three documents that address "the environmental effects of the FCRPS" and several other site-specific analyses).

103. Neither agency explains how the actions and measures adopted in the 2014 RODs relate to, or are even addressed by, the cited NEPA documents or summarizes the subject matter or analyses contained in these documents. *See* 40 C.F.R. § 1502.20. In addition, the condition of the environment and the agencies' options and operations of the FCRPS have changed significantly since these documents were signed. For example, there has been significant new information regarding the impacts of climate change on the Columbia River basin and spill levels on salmon and steelhead survival to mention only two. New species of salmon and steelhead have been listed as threatened or endangered, over 10,000 megawatts of new power generation

has been added to the grid in the past decade, and the value of navigation on the Snake River has declined significantly. None of this significant new information and much more, or the substantial changes in the environmental context and circumstances of FCRPS operations, were considered in any of the EISs or other NEPA documents referenced in the Corps' and BOR's RODs. *See* 40 C.F.R. § 1502.9(c).

CLAIMS FOR RELIEF

FIRST CLAIM FOR RELIEF NOAA VIOLATIONS OF THE ESA AND APA

104. NOAA has failed to follow, and has violated, the requirements of ESA section 7 and its implementing regulations, and has arbitrarily, capriciously, without any rational basis, and in disregard of the best available scientific information concluded in the 2014, 2010 and 2008 BiOps that the actions of the Corps, BPA, and BOR, as set forth in the amended RPA, are not likely to jeopardize any listed species or destroy or adversely modify their critical habitat. The defects in these biological opinions include, but are not limited to, those described and referred to above. NOAA's actions and omissions are arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with section 7 of the ESA, 16 U.S.C. § 1536(a)(2), and its implementing regulations and are reviewable under the APA, 5 U.S.C. §§ 701-706.

SECOND CLAIM FOR RELIEF

THE CORPS' AND BOR'S VIOLATIONS OF SECTION 7 OF THE ESA AND APA

105. The Corps and BOR have an independent and continuing legal duty to comply with the substantive requirements of ESA section 7(a)(2) to avoid jeopardy and adverse modification of critical habitat without regard to whether they have received a biological opinion for their actions. Indeed, the Corps and BOR may not meet their duty to comply with § 7 by relying on an invalid opinion. *Stop H-3 Ass'n v. Dole*, 740 F.2d at 1460; *Res. Ltd. v. Robertson*, 35 F.3d at 1304. For at least each of the reasons described above, the Corps' and BOR's reliance

on the 2014, 2010 and 2008 BiOps in their 2014, 2010 and 2008 RODs is arbitrary, capricious, an abuse of discretion, and in violation of ESA section 7(a)(2).

106. The Corps' and BOR's actions and omissions also are arbitrary, capricious, and in violation of the ESA and its implementing regulations for at least the following additional reasons:

- The Corps and BOR have not obtained a valid, complete § 7(a)(2) consultation for operation of their projects and have not evaluated, proposed or implemented further protective measures for ESA-listed salmon and steelhead in order to avoid jeopardy and destruction and adverse modification of critical habitat;
- The ESA requires the Corps and BOR to operate their projects in a manner that avoids harm to listed species pending compliance with the procedural requirements of § 7(a)(2). The Corps and the Bureau have not developed any valid analysis or rationale of their own to establish that their actions comply with the requirements of ESA § 7(a)(2). 16 U.S.C. § 1536(a)(2); *see also Greenpeace v. Nat'l Marine Fisheries Serv.*, 106 F. Supp. 2d 1066 (W.D. Wash. 2000) (enjoining implementation of fishing management plans in specific areas pending completion of BiOp). In addition to these violations of ESA § 7(a)(2), BOR and the Corps are violating the supplemental protections afforded by ESA § 7(d), 16 U.S.C. § 1536(d), by taking actions that may foreclose implementation of measures required to avoid jeopardy.

107. Because the Corps and BOR have not obtained a valid, complete consultation, or taken any other appropriate steps to ensure that their operations will not harm ESA-listed species, the Corps and BOR are operating their projects in violation of § 7(a)(2) of the ESA, 16 U.S.C. § 1536(a)(2), and its implementing regulations, and § 7(d) of the ESA, 16 U.S.C. § 1536(d).

108. The Corps' and BOR's project operations and 2008, 2010 and 2014 RODs are arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the ESA and are reviewable under the ESA, 16 U.S.C. § 1540(g)(1), and the APA, 5 U.S.C. §§ 701-706.

THIRD CLAIM FOR RELIEF

THE CORPS' AND BOR'S VIOLATIONS OF SECTION 9 OF THE ESA

109. By their actions and inactions as described above, and as recognized by NOAA in the 2014, 2010, and 2008 BiOps, the Corps and BOR are currently taking, and unless enjoined will continue to take, ESA-listed salmon and steelhead through their ongoing operations of the FCRPS. The incidental take statements NOAA issued as part of the invalid 2008 and 2010 BiOps, and again as part of the invalid 2014 BiOp, do not exempt the Corps and BOR from liability for this take.

110. By their actions and inactions alleged above, the Corps and BOR are violating section 9 of the ESA, 16 U.S.C. §§ 1538(a)(1)(B) & (G), 1538(g), and the salmon 4(d) rule, 50 C.F.R. § 223.203(a).

FOURTH CLAIM FOR RELIEF

THE CORPS' AND BOR'S VIOLATIONS OF THE NATIONAL ENVIRONMENTAL POLICY ACT

111. NEPA requires federal agencies to prepare an EIS in connection with all “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C).

112. A federal agency’s decision to adopt an RPA that is set forth in a biological opinion under section 7 of the ESA is a “major federal action[] significantly affecting the quality of the human environment” for which the agency must prepare an EIS. *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d at 655. The Corps and BOR did not prepare an EIS, Environmental Assessment, or other NEPA analyses for their adoption of the 2014 BiOp’s RPA in their 2014 RODs.

113. NEPA and its implementing regulations impose a continuing duty on agencies to prepare a supplemental environmental impact statement whenever “(i) The agency makes

substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. §§ 1502.9(c)(1)(i), (ii). An agency may not rely on stale or outdated data or analyses to satisfy its duty to examine the impacts of, or alternatives to, an action. *Lands Council v. Powell*, 395 F.3d 1019, 1031 (9th Cir. 2004). None of the significant new information or substantial changes in FCRPS operations were considered in any of the EISs or other NEPA documents referenced in the Corps’ and BOR’s 2014 RODs.

114. While an agency may tier a site-specific NEPA analysis to a broader programmatic NEPA analysis, the Corps and BOR do not explain how the actions and measures adopted in the 2014 RODs relate to or are included in the NEPA documents cited in the 2014 RODs. 40 C.F.R. § 1502.20.

115. By their actions and inactions alleged above, the Corps and BOR are currently violating, and unless enjoined will continue to violate, the National Environmental Policy Act and its implementing regulations. The Corps’ and BOR’s actions and inactions are arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the requirements of NEPA and its implementing regulations and are reviewable under the APA, 5 U.S.C. §§ 701-706.

PRAYER FOR RELIEF

WHEREFORE, NWF respectfully requests that the Court:

1. Adjudge and declare that NOAA has violated ESA section 7 and its implementing regulations by making no-jeopardy/no-adverse modification findings and concurring in a not likely to adversely affect determination in the 2014, 2010 and 2008 BiOps and issuing incidental take statements and other permits that are arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law;

2. Vacate and set aside the 2014, 2010 and 2008 BiOps and the accompanying incidental take statement and permits, enjoin NOAA to notify the Action Agencies of these actions, and enjoin NOAA and the Action Agencies to reinstate consultation in order to prepare a biological opinion for the FCRPS, its operations, and any related actions that complies with the requirements of the ESA;

3. Adjudge and declare that BOR and the Corps have violated ESA section 7(a)(2) and its implementing regulations by continuing to operate their projects in the Columbia and Snake River Basin without a valid biological opinion, by failing to ensure that these projects avoid jeopardy, and by making irretrievable and irreversible commitments of resources before the conclusion of a valid consultation, in violation of the requirements of ESA section 7, 16 U.S.C. § 1536, and that their actions are arbitrary, capricious, an abuse of discretion, and not in accordance with law;

4. Adjudge and declare that the Corps and BOR have violated ESA section 9 and the ESA implementing regulations by taking endangered salmon and steelhead without a valid incidental take statement;

5. Adjudge and declare that BOR and the Corps have violated ESA section 7(a)(2) and its implementing regulations by continuing to operate the FCRPS without initiating and completing consultation with NOAA on the effects of FCRPS operations, including the amended RPA, on endangered Southern Resident Killer Whales and without ensuring that those operations will not jeopardize the survival and recovery of this species;

6. Order the Corps and BOR to consult with NOAA pursuant to section 7(a)(2) of the ESA on the effects of FCRPS operations on Southern Resident Killer Whales and ensure, based on that consultation, that any actions will not jeopardize the survival and recovery of these threatened and endangered species;

7. Adjudge and declare that the Corps and BOR have violated NEPA by failing to prepare an environmental impact statement that addresses the environmental impacts of, and reasonable alternatives to, the decisions in their 2014 RODs to adopt the amended RPA from the 2014 BiOp;

8. Grant NWF such preliminary and permanent injunctive relief as it may from time-to-time request and as may be necessary to protect the environment and ESA-listed species until the Court decides the merits of this case or the agency complies with the law;

9. Award NWF its reasonable fees, costs, expenses, and disbursements, including attorneys' fees, associated with this litigation; and

10. Grant NWF such further and additional relief as the Court may deem just and proper.

Respectfully submitted this 9th day of July, 2014.

s/ Todd D. True
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CERTIFICATE OF SERVICE

I am a citizen of the United States and a resident of the State of Washington. I am over 18 years of age and not a party to this action. My business address is 705 Second Avenue, Suite 203, Seattle, Washington 98104.

On July 9, 2014, I served a true and correct copy of the following documents on the parties listed below:

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I, Catherine Hamborg, declare under penalty of perjury that the foregoing is true and correct. Executed this 9th day of July, 2014, at Seattle, Washington.


Catherine Hamborg

EXHIBIT A



EARTHJUSTICE

ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES
NORTHWEST ROCKY MOUNTAIN WASHINGTON, DC INTERNATIONAL

April 14, 2014

Via Federal Express

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RE: Sixty-Day Notice of Intent to Sue for Violations of the Endangered Species Act
Regarding Impacts of the Federal Columbia River Power System on Threatened
and Endangered Salmon and Steelhead

Dear Sirs and Madam:

This letter provides notice of intent to sue the U.S. Army Corps of Engineers and the Bureau of Reclamation (“Action Agencies”) for violations of § 7 and § 9 of the Endangered Species Act (“ESA”), 16 U.S.C. §§ 1536, 1538.¹ These violations arise from the Action Agencies’ failure to comply with the substantive and procedural requirements imposed by ESA § 7, 16 U.S.C. § 1536, as well as the prohibition on “take” of listed species in ESA § 9,

¹ This letter is sent by the undersigned on behalf of the following organizations: American Rivers, Federation of Fly Fishers, Idaho Rivers United, Idaho Wildlife Federation, Institute for Fisheries Resources, NW Energy Coalition, Northwest Sport Fishing Industry Association, Pacific Coast Federation of Fishermen’s Associations, Salmon for All, Sierra Club, and Washington Wildlife Federation. A list of these organizations’ business addresses is appended hereto. Many of these organizations also sent a separate letter to Bonneville Power Administration on March 24, 2014 describing similar violations of the ESA.

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16 U.S.C. § 1538, in their coordinated operation and maintenance, along with the Bonneville Power Administration, of federal dams, reservoirs, and related facilities and actions in the Columbia River basin. This notice is provided pursuant to § 11(g) of the ESA, 16 U.S.C. § 1540(g), and supplements earlier notices regarding the violations of law described in prior letters dated June 27, 2008, August 28, 2008, and June 17, 2010.

I. BACKGROUND

A. Listed Columbia River Basin Salmon and Steelhead Populations

The dramatic decline of Columbia and Snake River salmon and steelhead populations is reflected in the listings of thirteen Evolutionarily Significant Units (“ESUs”) or Distinct Population Segments (“DPS”) of these species in the Columbia basin under the ESA. Many other ESUs/DPSs are already extinct. As a consequence, NOAA Fisheries within the Department of Commerce (“NOAA”) has listed the following salmon and steelhead ESUs/DPSs in the Columbia River basin as threatened or endangered and designated their migratory, spawning, and rearing habitat in the basin as critical habitat: Snake River sockeye, Snake River spring/summer chinook, Snake River fall chinook, Snake River steelhead, Upper Columbia River steelhead, Lower Columbia River steelhead, Upper Columbia River spring-run chinook, Lower Columbia River chinook, Middle Columbia River steelhead, Upper Willamette River steelhead, Upper Willamette River chinook, Columbia River chum, and Lower Columbia River coho. *See* 70 Fed. Reg. 37,160 (June 28, 2005) (listing salmon ESUs); 71 Fed. Reg. 834 (Jan. 5, 2006) (listing steelhead DPSs).

The work of the Interior Columbia Technical Recovery Team (“ICTRT”) for seven of these species confirms that each of these populations requires significant improvement to be considered “viable.” *See, e.g.,* Required Survival Rate Changes to Meet Technical Recovery Team Abundance and Productivity Viability Criteria for Interior Columbia Basin Salmon and Steelhead Populations at 22 (Nov. 30, 2007). Moreover, the available scientific evidence indicates that many populations of these species have actually declined or remained at dangerously low levels in recent years.

B. Federal Agencies’ Operations, Maintenance, and Power Marketing

The Bureau of Reclamation (“BOR”) and the U.S. Army Corps of Engineers (“Corps”) jointly manage and operate the dams, reservoirs, irrigation projects, and other facilities including those referred to as the Federal Columbia River Power System (“FCRPS”).² The Bonneville Power Administration (“BPA”) coordinates operations and maintenance of these and other

² “FCRPS” is used in this letter as shorthand for all of the dams, reservoirs, and related facilities managed by the BOR, Corps, and BPA throughout the Columbia River basin, and does not refer only to the smaller subset of these facilities considered in NOAA’s 2008 FCRPS Biological Opinion and the 2010 and 2014 Supplemental Biological Opinions.

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facilities with the Corps and BOR and distributes and markets power generated by these facilities.

Specifically, within the Columbia River basin (the “Basin”), BOR oversees 30 irrigation projects. Of these, nineteen are located along the Columbia River or its non-Snake River tributaries and eleven are located within the Snake River basin. Actions by BOR at all of these projects, including water deliveries, administration of uncontracted water, power production, and other project management decisions, have significant influence on the hydrology and water quality of the Columbia and Snake Rivers.

The Corps has responsibility for operating 12 hydroelectric projects in the Basin. The Corps’ hydroelectric dam operations directly affect the survival of salmon and steelhead attempting to migrate up and down the Snake and Columbia Rivers past the FCRPS dams. The Corps also oversees the juvenile salmon transportation program that is currently authorized under section 10 of the ESA.

BPA coordinates operation and maintenance of these facilities with BOR and the Corps and also markets the electric power created by these projects. In addition, BPA has statutory duties to fund mitigation projects and studies in the basin in an attempt to offset the significant impacts of dam operations on salmon and other natural resources.

II. LEGAL FRAMEWORK

A. The Endangered Species Act

Under ESA § 7(a)(2), “[e]ach federal agency *shall ... insure* that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species.” 16 U.S.C. § 1536(a)(2) (emphasis added). The obligation to “insure” against a likelihood of jeopardy or adverse modification requires the agencies to give the benefit of the doubt to endangered species and to place the burden of risk and uncertainty on the proposed action. *See Sierra Club v. Marsh*, 816 F.2d 1376, 1386 (9th Cir. 1987). The substantive duty imposed by § 7(a)(2) is constant, relieved only by an exemption from the Endangered Species Committee. 16 U.S.C. § 1536(h); *Conner v. Burford*, 848 F.2d 1441, 1452 n.26 (9th Cir. 1988).

The ESA’s substantive protections are implemented in part through the consultation process, which Congress designed explicitly “to ensure compliance with the [ESA’s] substantive provisions.” *Thomas v. Peterson*, 753 F.2d 754, 764 (9th Cir. 1985). As the Ninth Circuit stated, “[i]f a project is allowed to proceed without substantial compliance with those procedural requirements, there can be no assurance that a violation of the ESA’s substantive provisions will not result.” *Id.* (citing *TVA v. Hill*, 437 U.S. 153 (1978)). To fulfill these procedural duties, federal agencies must consult with the appropriate federal fish and wildlife agency (NOAA in the

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Page 4

case of anadromous fish) and, if appropriate, obtain a biological opinion evaluating the effects of any federal agency action on listed species and their critical habitat. *Id.* If NOAA concludes that a proposed action is likely to jeopardize a listed salmon species or result in adverse modification of its critical habitat, NOAA must propose reasonable and prudent alternatives, if available, that will mitigate the proposed action so as to avoid jeopardy and/or adverse modification of critical habitat. 16 U.S.C. § 1536(b)(3); *Idaho Dep't of Fish & Game v. Nat'l Marine Fisheries Serv.*, 56 F.3d 1071 (9th Cir. 1995).

Compliance with the procedural requirements of the ESA—making the determination of the effects of the action through the consultation process—is integral to compliance with the substantive requirements of the Act. Under this statutory framework, federal actions that “may affect” a listed species or critical habitat may not proceed unless and until the federal agency ensures, through completion of the consultation process, that the action is not likely to cause jeopardy or adverse modification of critical habitat. 16 U.S.C. § 1536(a); 50 C.F.R. §§ 402.14, 402.13; *Pac. Coast Fed'n of Fishermen's Ass'ns v. U.S. Bureau of Reclamation*, 138 F. Supp. 2d 1228 (N.D. Cal. 2001) (enjoining delivery of Klamath project water to irrigators until a valid consultation was complete); *Greenpeace v. Nat'l Marine Fisheries Serv.*, 106 F. Supp. 2d 1066 (W.D. Wash. 2000) (enjoining ocean-bottom fishing until § 7(a)(2) consultation was complete); *Conner v. Burford*, 848 F.2d at 1441, 1453-55 (enjoining oil and gas lease sales and related surface-disturbing activity until comprehensive biological opinion assessing the effects of all phases of the oil and gas activities was complete); *Lane Cnty. Audubon Soc'y v. Jamison*, 958 F.2d 290, 295 (9th Cir. 1992) (“the individual sales cannot go forward until the consultation process is complete on the underlying plans which BLM uses to drive their development”).

Even after the procedural requirements of a consultation are complete, however, the ultimate duty to ensure that an activity does not jeopardize a listed species lies with the action agency. An action agency's reliance on an inadequate, incomplete, or flawed biological opinion to satisfy its duty to avoid jeopardy is arbitrary and capricious. *See, e.g., Stop H-3 Ass'n v. Dole*, 740 F.2d 1442, 1460 (9th Cir. 1984). Thus, the substantive duty not to jeopardize listed species (or adversely modify critical habitat) remains in effect regardless of the status of the consultation. While this substantive duty is most readily fulfilled by implementing a federal action that properly has been determined not to cause jeopardy, or by implementing a valid RPA that results from a properly completed consultation, an action agency is “technically free” to choose another alternative course of action if it can independently ensure that the alternative will avoid jeopardy. *See Bennett v. Spear*, 520 U.S. 154, 170 (1997).

In addition, ESA's Section 7(a)(1) requires federal agencies to “utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species listed” under the Act. 16 U.S.C. § 1536(a)(1) (emphasis added). Like the duty to avoid jeopardy, this conservation duty is discharged, in part, in consultation with NOAA. *Id.* A program of “conservation” is one that brings the species to the point of recovery and delisting. *Id.* § 1532(3).

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Separately, ESA § 7(d) prohibits federal agencies, after the initiation of consultation under ESA § 7(a)(2), from making any irreversible or irretrievable commitment of resources if doing so would foreclose the implementation of reasonable and prudent alternatives. 16 U.S.C. § 1536(d); *Natural Res. Def. Council v. Houston*, 146 F.3d 1118, 1128 (9th Cir. 1998) (section 7(d) violated where BOR executed water service contracts prior to completion of formal consultation); *Marsh*, 816 F.2d at 1389 (construction of highway outside species habitat barred by § 7(d) pending completion of consultation). This prohibition is not an exception to the requirements of § 7(a)(2); it remains in effect until the procedural requirements of § 7(a)(2) are satisfied, 50 C.F.R. § 402.09; and it ensures that § 7(a)(2)'s substantive mandate is met. *See, e.g., Pac. Rivers Council v. Thomas*, 30 F.3d 1050 (9th Cir. 1994); *Greenpeace v. Nat'l Marine Fisheries Serv.*, 80 F. Supp. 2d 1137 (W.D. Wash. 2000).

Section 7(d) thus does not and cannot permit activities to continue that otherwise are in violation of the procedural or substantive requirements of § 7(a)(2); it does not grant permission to proceed with admittedly harmful activities while consultation is still ongoing. *See* 51 Fed. Reg. at 19,940 (“section 7(d) is strictly prohibitory in nature”). Additionally, harm to the protected resource itself is considered a violation of Section 7(d). *Pac. Rivers Council*, 30 F.3d at 1057 (“timber sales constitute ‘per se’ irreversible and irretrievable commitments of resources under § 7(d), and thus cannot go forward during the consultation process”); *Lane Cnty. Audubon Soc’y v. Jamison*, 958 F.2d at 295.

Finally, section 9 of the ESA prohibits all activities that cause a “take” of an endangered species. 16 U.S.C. § 1538(a)(1)(B), (C); 50 C.F.R. § 17.11(h). Congress intended the term “take” to be defined in the “broadest possible manner to include every conceivable way” in which a person could harm or kill fish or wildlife. *See* S. Rep. No. 307, 93rd Cong., 1st Sess. 1, reprinted in 1973 U.S. Code Cong. & Admin. News 2989, 2995. “Take” is defined by the ESA to encompass killing, injuring, harming, or harassing a listed species. 16 U.S.C. § 1532(19). NOAA has further defined “harm” as “an act which actually kills or injures wildlife. Such acts may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.” 50 C.F.R. § 222.102. The U.S. Supreme Court has upheld the validity of this definition. *See Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687 (1995) (upholding similar definition used by Fish and Wildlife Service).

Section 9's take prohibition applies on its face to two of the 13 listed ESUs/DPSs affected by the Action Agencies' activities because they are listed as “endangered.” Additionally, NOAA has enacted rules pursuant to ESA § 4(d) that extend the take prohibition to the ten salmon and steelhead ESUs/DPSs in the Snake and Columbia basins that are listed as “threatened.” 16 U.S.C. § 1533(d); 70 Fed. Reg. 37,160 (June 28, 2005) (updating 4(d) rules for salmon ESUs); 71 Fed. Reg. 834 (Jan. 5, 2006) (incorporating updated 4(d) rules for steelhead DPSs). While the 4(d) rules contain some exemptions to the take prohibition for threatened species, none are applicable here.

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Federal actions that have completed a legally valid § 7(a)(2) consultation and have a biological opinion generally obtain an “incidental take statement” (“ITS”). 50 C.F.R. § 402.14(i). The ITS authorizes the agency, if in compliance with the terms and conditions of the ITS, to “take” listed species without facing § 9 liability. *Id.* § (i)(5). However, if a biological opinion is legally flawed, the ITS cannot shield the action agency from liability.

B. The 2000 and 2004 Biological Opinions

NOAA issued a biological opinion for the operation of 14 federal projects that NOAA, the Corps, BOR, and BPA labeled the “Federal Columbia River Power System” on December 21, 2000 (“2000 FCRPS BiOp”). In the 2000 FCRPS BiOp, NOAA concluded that the proposed operation of these projects would jeopardize 8 of the 12 listed salmon and steelhead ESUs in the Columbia River basin. The agency included a Reasonable and Prudent Alternative (“RPA”) that, according to NOAA, would avoid jeopardy.

A coalition of fishing businesses and conservation and fishing advocacy organizations (including the organizations sending this letter) filed a lawsuit in May of 2001, alleging that the 2000 BiOp was arbitrary and capricious and contrary to law because, among other things, it relied on speculative, off-site mitigation actions from both federal and non-federal parties. On May 7, 2003, the U.S. District Court for the District of Oregon agreed with plaintiffs that the 2000 FCRPS BiOp was legally flawed and relied on improper factors in reaching a no-jeopardy finding for the RPA. *See Nat’l Wildlife Fed’n, et al. v. Nat’l Marine Fisheries Serv.*, 254 F. Supp. 2d 1196 (D. Or. 2003). The Court remanded the opinion to NOAA to prepare a new opinion that complied with the law.

On November 30, 2004, NOAA issued its revised biological opinion (the “2004 FCRPS BiOp”). In sharp contrast to its previous opinions, NOAA concluded in the 2004 BiOp that the proposed FCRPS operations included in the “Updated Proposed Action” (“UPA”) from BPA, the Corps, and BOR would not jeopardize the continued existence of twelve listed ESUs of salmonids in the Columbia River basin. Both the District Court and the Ninth Circuit rejected the 2004 FCRPS BiOp and once again remanded it to NOAA. *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 2005 WL 1278878 (D. Or. May 26, 2005); *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, CV-01-640-RE, Opinion and Order of Remand (Oct. 7, 2005); *aff’d*, *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 524 F.3d 917 (9th Cir. 2008) (amended opinion).

C. The 2008 Biological Opinion

After a nearly three-year remand, NOAA issued a new biological opinion on May 5, 2008 (the “2008 FCRPS BiOp”).³ The 2008 FCRPS BiOp concluded that the “Prospective Actions”—

³ NOAA also issued a “Supplemental Comprehensive Analysis” along with the 2008 FCRPS BiOp that contained additional explanation. The Supplemental Comprehensive Analysis

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proposed by the Corps, BOR, and BPA and which were treated as a reasonable and prudent alternative (“RPA”)—would not jeopardize any ESA-listed salmon or steelhead ESUs/DPSs or adversely modify or destroy any of their designated critical habitat. The actions addressed in the 2008 FCRPS BiOp were not materially different from those in the 2004 UPA or the earlier, failed RPA from the 2000 FCRPS BiOp. In fact, in some vital respects the actions considered in the 2008 FCRPS BiOp provided less protection for ESA-listed salmon and steelhead. To reach a no-jeopardy/no-adverse-modification finding for actions that do little to address the fundamental obstacles to the survival and recovery of ESA-listed salmon and steelhead in the Columbia River basin, NOAA once again created from whole cloth a new kind of jeopardy analysis for this consultation that had not previously been employed in any biological opinion under ESA section 7. In doing so, NOAA departed markedly from the requirements of the ESA and its implementing regulations, failed to use the best available scientific information, and reached numerous conclusions that are otherwise arbitrary and capricious and not supported by the record.

The 2008 BiOp is arbitrary, capricious, and contrary to law for reasons that include, but are not limited to, those described below:

- The “trending towards recovery” standard for the recovery prong of the jeopardy analysis fails to address elements of a jeopardy analysis that the regulations identify as necessary and that are scientifically essential to determining whether an action appreciably reduces a species’ likelihood of recovery. *See* 50 C.F.R. §§ 402.02; 402.14. Moreover, the “trending towards recovery” standard is sharply at odds with, for example, the components of the recovery prong of the jeopardy analysis in the 2000 FCRPS BiOp—yet there is no explanation for why these components are no longer legally or scientifically relevant. The 2000 FCRPS BiOp first set the probability necessary to avoid an “appreciable” reduction in the likelihood of recovery, then identified the time in which recovery must be achieved, and finally described what population level constitutes recovery. The “trending towards recovery” standard lacks each of these elements.
- The short-term extinction risk standard NOAA uses to assess whether the 2008 PA/RPA will cause an appreciable reduction in a species’ likelihood of survival is contrary to law, disregards the best available scientific information, and is arbitrary. The quantitative survival standard in the Jeopardy Metric Memo and the 2008 FCRPS BiOp focuses on the risk of extinction for salmon and steelhead populations over a 24-year period, although NOAA now also asserts that it has not identified, and does not rely on, a quantitative standard to assess risks to species survival but only presents the results of the short-term extinction risk analysis from the SCA “for convenience.” 2008 FCRPS BiOp at 7-7 to 7-8. If NOAA does not rely on this quantitative standard for assessing risk to

purports to expand upon (but also adopts) the Action Agencies’ “Comprehensive Analysis” released in August 2007. Except where noted specifically, we refer to these documents collectively as the “2008 FCRPS BiOp.”

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species survival, it has not described rationally what it does rely on or what the relevance of its quantitative analysis is to its conclusion for each ESU that the 2008 PA/RPA avoids jeopardy to species survival.

- The narrative no-jeopardy findings for each ESU/DPS in the 2008 FCRPS BiOp appear to be based on both quantitative and qualitative assessments that fail to actually articulate how the various factors discussed can be combined in a rational or logical way to support a no-jeopardy conclusion. In addition, many of the factors discussed are neither fully nor accurately described, nor does the agency explain why its discussion omits other factors that also would be relevant to a jeopardy analysis.
- The jeopardy analysis fails to rationally address the effects of global warming in combination with the 2008 PA/RPA on the likelihood of ESA-listed salmon and steelhead survival and recovery.
- The no-jeopardy finding for Snake River sockeye salmon is arbitrary, inconsistent with other analyses, and disregards the best available scientific information. Even though this conclusion strains credulity on its face, it also ignores a number of relevant factors including, but not limited to: (1) the primary action in the 2008 PA/RPA for this species is an increase in the production of hatchery smolts from the captive breeding program, even though the species already is sustained only through hatchery production and the scientific evidence demonstrates that such production has long-term deleterious effects on species recovery; (2) a number of the hydrosystem operations NOAA asserts will help other species are likely to harm Snake River sockeye; and (3) NOAA has not identified any actions specific to this species that would reduce the negative effects of the hatchery program and improve conditions in the species' migratory corridor enough to avoid appreciable reductions in the likelihood of both survival and recovery.
- The 2008 FCRPS BiOp jeopardy analysis defers consideration of the harmful effects of hatcheries on species recovery to a future biological opinion while at the same time including the allegedly beneficial effects of hatchery programs on mitigating the short-term risk of extinction. NOAA fails to provide either a legal or a rational basis for this bifurcation, or how it may rely on the effects of future consultations to offset harm that may be occurring now.
- The 2008 FCRPS BiOp jeopardy analysis relies to a substantial degree, and for many populations, on the alleged benefits of habitat restoration actions to offset the harm from ongoing hydrosystem measures in order to reach a no-jeopardy finding. This reliance is, among other things, contrary to the best available scientific information about the potential role of habitat actions to offset hydrosystem impacts, fails to account for the risks and uncertainties surrounding these habitat measures and their effects, depends on a new and novel "habitat model" that lacks scientific validity, and fails to acknowledge or

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account for the contrary effects of continued habitat degradation in some or all of the watersheds targeted for beneficial actions.

- The 2008 FCRPS BiOp contains numerous optimistic and/or scientifically unsupported assumptions that fail to acknowledge or address appropriately, among other issues, (1) the increased risk of allowing populations to persist at low abundance and productivity for an indefinite period; (2) the increased risk of relying on subjective considerations for combining population and major population group risks to arrive at an overall jeopardy evaluation for an ESU/DPS; (3) the very substantial risk that the quantitative analyses for the base-to-current adjustment, survival gap calculations, and current-to-prospective adjustments are so infected by uncertainty that they provide very little reliable information; (4) the very substantial risk that benefits for hydrosystem, habitat, and hatchery actions, both in the base-to-current and in the current-to-prospective adjustments, actually overestimate benefits because the analyses treat actions in each of these areas as fully independent when they are not; (5) the very substantial risk to both survival and recovery posed by the fact that the various models on which NOAA relies are inadequate or inappropriate to the purposes for which they are employed; (6) the very substantial risk that the research, monitoring, and evaluation in the PA/RPA either does not address the relevant biological issues or will not timely detect adverse effects or both; (7) the very substantial risk to both survival and recovery posed by freshwater and ocean effects of climate change and; (8) the very substantial risks to both survival and recovery posed by the failure to address all of the factors relevant to the adverse effects of hatchery and habitat actions, both those that are a part of the 2008 PA/RPA and those that are not.
- The 2008 FCRPS BiOp's assessment of whether the proposed action is likely to destroy or adversely modify critical habitat violates ESA § 7(a)(2) because it assesses destruction or adverse modification of critical habitat by comparing the "current pre-Prospective Action condition of designated critical habitat relative to the functionality of its PCEs (primary constituent elements)," 2008 FCRPS BiOp at 7-52, to the likely future state of critical habitat after implementation of the PA/RPA. By doing so, NOAA arbitrarily compares proposed hydrosystem operations to a baseline that already includes ongoing operations that NOAA acknowledges have adverse impacts on the designated critical habitat of ESA-listed salmon and steelhead.
- NOAA's critical habitat analysis erroneously examines the effects of the PA/RPA on the habitat's value to the listed ESUs/DPSs' "long term trend toward recovery" rather than on the species' actual "likelihood of . . . recovery." 50 C.F.R. § 402.02 (definition of "destroy or adversely modify"). This does not comply with Section 7's directive to assess whether the actions' impacts on critical habitat will reduce appreciably the likelihood that listed ESUs/DPSs will actually recover, i.e., the likelihood that listed ESUs/DPSs will increase their populations to the point that they may be removed from protection under the ESA. See 16 U.S.C. § 1532(5)(A)(i); *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059 (9th Cir. 2004); *Nat'l Wildlife Fed'n v. Nat'l*

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Marine Fisheries Serv., 524 F.3d at 936. The analysis also fails to consider impacts on the PCE of water quality stemming from oil discharges and spills from federal dams on the Columbia and Snake Rivers.

- The agencies' finding that PA/RPA is Not Likely to Adversely Affect ("NLAA") endangered Southern Resident Killer Whales and NOAA's concurrence in that finding are arbitrary and contrary to law. The analysis underlying these conclusions ignores the current degraded state of salmon populations in the Columbia/Snake and does not consider whether these populations must increase to ensure that the FCRPS does not jeopardize the whales.
- The 2008 FCRPS BiOp defines the action area for this consultation too narrowly by focusing on watersheds where the Corps, BOR, and BPA have proposed beneficial actions. NOAA has excluded watersheds or subbasins that might contain either ongoing or future harmful projects by federal, state, or private actors. Moreover, NOAA failed to consider the harmful effects of ongoing or reasonably certain non-federal actions even in watersheds or subbasins where potential beneficial actions may occur. To the extent NOAA seeks to count the benefits of the RPA measures in certain watersheds, the action area and its analysis must also encompass those watersheds where harmful actions may occur.
- The jeopardy analysis in the 2008 FCRPS BiOp also fails to include an accurate and complete description of the cumulative effects that must be considered together with the effects of the action in determining whether the proposed action would cause jeopardy. 50 C.F.R. § 402.14(g). The actions NOAA, the Corps, BOR, and BPA included as cumulative effects come almost exclusively from the States and Tribes and are limited to actions with positive benefits for salmon. Neither the Comprehensive Analysis, nor the 2008 FCRPS BiOp account for the negative effects of the myriad of other State, tribal, and private actions throughout the Columbia basin.

Through formal record of decisions on August 1, 2008 and September 3, 2008, the Corps and BOR (respectively) agreed to implement the RPA in the 2008 FCRPS BiOp, and on that basis also concluded that their actions would avoid jeopardy.⁴

D. The 2010 Supplemental BiOp

After notifying the Action Agencies of these violations of law in the 2008 BiOp and agency records of decision described above in June and August of 2008, the fishing and conservation organizations, including those sending this letter, filed a Supplemental Complaint for Declaratory and Injunctive Relief challenging the 2008 FCRPS BiOp and the 2008 records of decision for the Corps and BOR in the district court. After oral argument on cross-motions for

⁴ This letter refers to these Records of Decision as the "2008 RODs."

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summary judgment, federal defendants requested an in-chambers status conference. At that meeting on April 2, 2009, “Federal Defendants, the State of Oregon, the Nez Perce Tribe, and the National Wildlife Federation committed to jointly exploring all ‘possible legal avenues’ for resolving this matter.” Memorandum from Court to Counsel (May 18, 2009). On May 18, 2009, to assist the parties in these efforts, the Court issued guidance in the form of a memorandum to counsel providing its preliminary view that the 2008 BiOp was arbitrary and capricious and suggesting a series of steps that could address the Court’s concerns. Thereafter, administration officials for the Corps, BOR, BPA, and NOAA held only brief and one-sided “listening sessions” with the undersigned organizations and other parties. Despite federal defendants’ failure to engage even in preliminary substantive and mutual discussions, these parties took repeated steps to inform federal defendants and the administration leadership about the issues they believed needed to be discussed in order to address the flaws in the 2008 BiOp and 2008 RODs and the topics raised in the Court’s guidance letter.

These suggestions were ignored and on September 15, 2009, the Administration announced a unilaterally-developed Adaptive Management Implementation Plan (“AMIP”) that the Action Agencies and NOAA touted as a response to the concerns outlined in the Court’s May 18, 2009 guidance memorandum. In addition to the substantive legal violations detailed herein, the undersigned parties and their allies demonstrated that the AMIP was not properly before the Court but instead was an attempt at an improper post-hoc rationalization for the 2008 FCRPS BiOp. The Court agreed and eventually left NOAA and the Action Agencies little choice but to take a 90-day voluntary remand of the 2008 BiOp “to consider, among other actions, integrating the Adaptive Management Implementation Plan and its administrative record into the 2008 BiOp.” See *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, CV-01-640-RE, Order (Docket #1750) (Feb. 19, 2010); see also Letter to Counsel (Feb. 10, 2010) (Docket #1749) at 1-2 (explaining basis for proposed voluntary remand order, finding, among other things, that “Federal Defendants have, in effect, acknowledged that the AMIP is procedurally flawed and no one seriously contends that it is properly before the court.”). In addition, the Court directed the agencies to consider the best available science and to consider implementing the parties’ suggestions for actions necessary to comply with the law.

On May 20, 2010, NOAA issued a Supplemental Biological Opinion (“2010 Supplemental BiOp”) after reinitiating consultation with the Action Agencies on May 3, 2010. The 2010 Supplemental BiOp does not alter any of the conclusions or analyses from the 2008 BiOp and is therefore arbitrary and capricious for all of the reasons outlined above. In addition, the 2010 Supplemental BiOp does not address the Court’s previous guidance, nor does it propose any new actions that will affect salmon and steelhead survival through the FCRPS. It does not, for example, propose a single new action that would assist salmon and steelhead in the face of a warming climate, nor does it consider, evaluate, or act on the best available science about the effects of climate change on its predictions of the status of the species or the agencies’ speculation about the benefits of the habitat and other measures proposed in the 2008 BiOp and 2010 Supplemental BiOp. The 2010 Supplement similarly fails to consider, explain, or take action based on the best available science on topics ranging from the potential long-term

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negative effects of hatchery practices to the limitations of tributary and estuary habitat improvements. It fails to acknowledge or evaluate in any way the fact that the level of tributary and estuary habitat mitigation measures predicted in the 2008 FCRPS BiOp have not occurred. In short, the 2010 Supplement fails to draw a rational connection between any of the new scientific evidence and its conclusions that the 2008 FCRPS BiOp and the AMIP will avoid jeopardy and adverse modification of critical habitat. Instead, the 2010 Supplement merely catalogs this science, includes only six additional measures to study potential future actions and to compile additional data, and adds the AMIP to the 2008 BiOp as action “RPA 1A.”

Moreover, in reinitiating consultation on May 3, 2010, the agencies failed to comply with the procedural and substantive requirements of § 7(a)(2). The 2010 Supplement and the 2010 RODs fail even to acknowledge the recent scientific evidence regarding the effects of dams and hatchery operations on the prey needed to ensure survival and recovery of Southern Resident Killer Whales. Much of this scientific evidence was developed by NOAA itself and contradicts the Action Agencies’ previous NLAA conclusion (and NOAA’s concurrence with that conclusion). Similarly, neither the Action Agencies nor NOAA considered the effects of the FCRPS on Pacific Smelt (eulachon). *See* 75 Fed. Reg. 13012, 13019 (Mar. 19, 2010) (finding that impoundment of the Columbia River has altered river flows and winter temperatures necessary for Pacific smelt spawning and migration).

As the plaintiffs and other parties have described, the 2008 FCRPS BiOp, as modified by the AMIP and the 2010 Supplemental BiOp, fundamentally failed to address the flaws in the 2008 FCRPS BiOp and 2008 ROD, including (but not limited to) the illegal jeopardy standard and analysis and the elements tentatively described by the Court as arbitrary and capricious.

Developing and “integrating” the AMIP into the 2010 Supplemental BiOp did not alter or address the legal failings in the 2008 FCRPS BiOp. Nothing in the AMIP modified the jeopardy analysis in the 2008 FCRPS BiOp or changed its illegal “trending towards recovery” standard, the only actual jeopardy standard and analysis for the conclusion that the 2008 RPA and the 2010 Supplemental RPA avoid jeopardy to ESA-listed salmon and steelhead. The conclusory—and oft-repeated—statement in the September 15 AMIP that “the RPA as implemented through the [AMIP] satisfies the jeopardy standard that has been articulated by the Ninth Circuit,” *see, e.g.*, NOAA Letter of September 14, 2009 at 2 (Exhibit 2 to September 15th Response), is not a supplemental or revised jeopardy standard or analysis, nor does it refer to one. This semantic sleight-of-hand merely rephrases arguments made in the past, apparently in an attempt to distance the agencies from the “trending towards recovery” standard. This effort does nothing to change the plain fact that the jeopardy standard and analysis in the 2008 FCRPS BiOp, relied on in the 2008 RODs and 2010 RODs, remains unaltered and fail to comply with the Endangered Species Act, its implementing regulations, or the case law.

Moreover, the AMIP and its supporting materials, as well as the 2010 Supplemental BiOp, fundamentally failed to address the specific shortcomings of the 2008 FCRPS BiOp that the Court has tentatively identified as arbitrary and capricious. May 18 Letter at 2. Nor did

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these documents seriously attempt to implement the “additional and specific mitigation actions, independent scientific review, and the development of a contingency plan,” the Court suggested. *Id.* at 3. The Court detailed six particular flaws in the 2008 FCRPS BiOp but the AMIP and 2010 Supplemental BiOp do not actually address any of them. *See, e.g., Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, CV-640-RE, NWF Plaintiffs’ Response to Federal Defendants’ Sept. 15, 2009 Filing (filed Oct. 7, 2009) (Docket #1723) at 8-29. The same is true for the six areas of mitigation the Court suggested the parties consider in order to resolve this case. In short, the 2010 Supplement did nothing to correct the myriad legal violations and scientific inaccuracies in the 2008 FCRPS BiOp and the AMIP that had already been detailed, and the agencies’ actions are still arbitrary, capricious, and contrary to law.

The Action Agencies adopted the 2010 Supplemental BiOp through supplemental RODs signed on June 11, 2010. These “2010 RODs” include BPA’s “Record of Decision Following the May 20, 2010 NOAA Fisheries Supplemental Biological Opinion to the May 2008 FCRPS Biological Opinion,” the Corps’ “Amended Record of Consultation and Statement of Decision on NOAA Fisheries’ May 20, 2010 Supplemental Consultation on Remand for Operation of the Federal Columbia River Power System, 11 Bureau of Reclamation Projects in the Columbia Basin and ESA Section 10(a)(1)(A) Permit for Juvenile Fish Transportation Program,” and BOR’s 2010 Supplemental Decision Document Following the May 2010 NOAA Fisheries Supplemental Consultation on Operation of the Federal Columbia River Power System, 11 Bureau of Reclamation Projects in the Columbia Basin, and ESA Section 10(a)(1)(A) Permit for Juvenile Fish Transportation Program” (collectively the “2010 RODs”).

Plaintiffs, including the organizations sending this letter, filed a supplemental complaint challenging the 2010 Supplemental BiOp and the 2010 RODs. On August 2, 2011, the Court held that the 2008/2010 BiOps were arbitrary and capricious for their “entire ten-year term” and made clear that the agencies’ fundamental approach to avoiding jeopardy required re-examination. *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 839 F. Supp. 2d 1117, 1128 (D. Or. 2011). The structural problems in the 2008/2010 BiOps are rooted in a jeopardy standard that violates the ESA, the agencies’ inability to identify and implement mitigation measures, and their inability to reliably predict and verify any salmon survival improvements that may accrue even if these measures are identified and implemented. Specifically, the Court found that “NOAA Fisheries’ analysis fails to show that expected habitat improvements—let alone the expected survival increases—are likely to materialize,” *id.* at 1127, and that “[t]hus far, Federal Defendants have not implemented the habitat actions necessary to avoid jeopardy [and] there is no indication that they will be able to identify and implement the actions necessary to catch up,” *id.* at 1128. The Court also specifically noted that “the lack of scientific support for NOAA Fisheries’ specific survival predictions is troubling,” *id.* at 1129, and further noted that the government’s own scientists, “the independent experts who reviewed [the plan], and the Independent Scientific Advisory Board (“ISAB”) have expressed skepticism about whether those benefits will be realized,” *id.* at 1130. Overall, the Court found that “[c]oupled with the significant uncertainty surrounding the reliability of NOAA Fisheries’ habitat methodologies, the evidence that habitat actions are falling behind schedule, and that benefits are not accruing as

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promised, NOAA Fisheries” approach to these issues is “neither cautious nor rational.” *Id.* at 1128. The Court once again remanded the 2008/2010 BiOp as supplemented to NOAA and the Action Agencies and required that in any new BiOp, NOAA shall (1) “reevaluate[] the efficacy of the RPAs in avoiding jeopardy,” (2) “identif[y] reasonably specific mitigation plans for the life of the biological opinion, and” (3) “consider[] whether more aggressive action, such as dam removal and/or additional flow augmentation and reservoir modifications are necessary to avoid jeopardy.” *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 839 F. Supp. 2d at 1130. The Court also granted in part the injunction requested by plaintiffs and others and ordered continuation of previous levels of court-ordered spill to alleviate some of the short-term irreparable harm to ESA-listed stocks. *Id.* at 1130.

E. The 2014 Supplemental BiOp

After more than two years on remand, NOAA issued the 2014 Supplemental BiOp—which again supplements the prior 2008 and 2010 BiOps—on January 17, 2014. Despite the efforts of many in the region to convince the agencies to follow a new path, the 2014 Supplemental BiOp largely repeats/incorporates the problems that plagued the 2008/2010 BiOps it purports to supplement. This includes a continued reliance on the illegal jeopardy standard in the 2008 BiOp, and continued reliance on estuary and tributary habitat actions that are not reasonably certain to occur and/or that have uncertain benefits. Consequently, all of these flaws as described above are continued in the 2014 Supplemental BiOp and included within the scope of this notice letter with respect to the new BiOp.

In addition to these and all the flaws detailed above, the 2014 Supplemental BiOp compounds NOAA’s previous errors in at least the following ways:

- Ignoring (or arbitrarily dismissing) recent information and analyses about the performance of the listed populations, including but not limited to analyses by those outside NOAA and the Action Agencies as well as NOAA/Action Agency data demonstrating that productivity for many of the basin’s listed stocks remains either flat or continues to decline;
- Ignoring that many of the hoped-for actions in tributary and estuary habitats have either not been implemented, are far behind schedule, or are neither demonstrating nor providing the predicted survival improvements;
- Arbitrarily discounting new scientific information demonstrating the benefits of changing hydrosystem operations, including increasing spill;
- Arbitrarily permitting the Action Agencies to curtail or cut back on court-ordered spring and summer spill (by reducing or otherwise changing spill levels and/or spill seasons) necessary even to alleviate to a limited degree irreparable harm caused by the FCRPS;

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- Failing to consider increased flow levels, reservoir drawdown, dam removal, or other actions that would increase water travel time and downstream salmon survival;
- Failing to adequately consider and account for new information demonstrating that the impacts of climate change will continue to degrade habitats, to factor that information into its predictions of benefits for habitat and other actions, or to require a single new action to account for the increased degradation caused by climate change;
- Failing to account for the significant increased mortality from cormorant and other predation – as well the failure to reduce tern predation – or to propose any reasonably certain means to address this predation, let alone any compensatory actions to make up for the significant mortality that was not factored into the 2008 BiOp’s jeopardy analysis;
- Failing to account for (or propose alternative remedial actions for) the reduced survival benefits predicted from the kelt reconditioning program; and
- Failing to adequately consider the FCRPS’s impact on the prey base necessary for the survival and recovery of critically endangered Southern Resident Killer Whales.

The Corps and BOR adopted the 2014 Supplemental BiOp through a Supplemental RODs signed on February 28, 2014 and February 26, 2014. *See* “Supplemental Record of Consultation and Statement of Decision: NOAA Fisheries’ 2014 Supplemental Biological Opinion Endangered Species Act Section 7(a)(2) Supplemental Biological Opinion Consultation on Remand for the Operation of the Federal Columbia River Power System” (Feb. 28, 2014); “2014 Supplemental Decision Document Following the January 2014 NOAA Fisheries Supplemental Consultation on Operation of the Federal Columbia River Power System, 11 Bureau of Reclamation Projects in the Columbia Basin, and ESA Section 10(a)(1)(a) Permit for Juvenile Fish Transportation Program” (Feb. 26, 2014) (“2014 RODs”).

III. THE ACTION AGENCIES’ VIOLATIONS OF THE ESA

A. The Action Agencies Have Failed to Ensure That Their Actions Are Not Likely to Jeopardize the Continued Existence of Listed Species or Destroy or Adversely Modify Their Critical Habitat.

Jeopardy is defined by regulation to mean an action that “reduce[s] appreciably the likelihood of both the survival and recovery of a listed species in the wild.” 50 C.F.R. § 402.02. For reasons including those described above, the 2008 FCRPS BiOp—and the 2010 and 2014 Supplemental BiOps that reaffirm it—incorrectly apply ESA § 7(a)(2) and its implementing regulations to determine that the proposed action would avoid jeopardy. The Action Agencies, however, have an independent duty to ensure that their actions avoid jeopardy. The current revised RPA, when added to the environmental baseline and cumulative effects, has both short-term and long-term adverse impacts on listed species that jeopardize their continued existence.

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Even before the 2008, 2010, and 2014 RODs were issued, the Action Agencies were already operating the FCRPS and taking other actions implicated by the RPA reviewed in the 2008 FCRPS BiOp and the 2010 and 2014 Supplemental BiOps. The agencies—through their continued actions, including adopting and acting pursuant to these RODs and BiOps—are knowingly violating section 7(a)(2), notwithstanding the 2008 BiOp and the 2010 and 2014 Supplemental BiOps. This is especially true here because the Action Agencies were intimately involved in the development and drafting of the analyses and data employed by NOAA in the 2008 FCRPS BiOp and the 2010 and 2014 Supplemental BiOps, and can reasonably be expected to know that the Opinions are arbitrary and capricious. *See, e.g., Res. Ltd. v Robertson*, 35 F.3d 1300, 1304-1305 (9th Cir. 1993); *Stop H-3 Ass'n. v. Dole*, 740 F.2d 1460.

The Action Agencies also have failed to ensure that their actions are not likely to destroy or adversely modify the designated critical habitat of listed species. *See* 50 C.F.R. § 402.02 (adverse modification defined as “direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of a listed species.”). The ESA defines critical habitat as those areas with the “physical or biological features essential to the conservation of the species....” 16 U.S.C. § 1532(5)(A)(i). The final rules designating critical habitat for listed salmon and steelhead describe many features of critical habitat essential for their recovery, including, among other things, adequate water quality and quantity, water temperature, water velocity, and safe passage conditions in migratory corridors. *See, e.g.,* 70 Fed. Reg. 52488, 52521-22 (Sept. 2, 2006). The proposed agency action, which was also adopted in the 2008, 2010, and 2014 RODs, adversely impacts these features of designated critical habitat and destroys and adversely modifies the ability of the critical habitat to contribute to the recovery of the species. *See Gifford Pinchot Task Force*, 378 F.3d 1059; *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 524 F.3d at 933-936. By implementing the proposed action under these circumstances, the Action Agencies are violating section 7(a)(2).

B. The Action Agencies Are Taking Actions That “May Affect” Listed Species and Their Designated Critical Habitat Without a Valid Biological Opinion.

The substantive goal of consultation under ESA § 7(a)(2) is to ensure that federal actions do not jeopardize the continued existence of listed species or adversely modify its critical habitat. Federal agencies may not take action that could harm a listed species until they have completed the ESA § 7(a)(2) consultation process and have received a valid biological opinion. The 2008 FCRPS BiOp, and the 2010 and 2014 Supplemental BiOps, are not valid and the Action Agencies may not rely on these documents to conclude that their actions will avoid jeopardy or to satisfy their procedural duties under the ESA. Under these circumstances, the ESA requires that the Action Agencies avoid any action that causes harm to listed species or designated critical habitat pending compliance with the procedural requirements of § 7(a)(2). *See Pac. Coast Fed'n of Fishermen's Ass'ns, et al. v. Bureau of Reclamation*, 138 F. Supp. 2d 1228 (N.D. Cal. 2001) (requiring that BOR suspend water deliveries in the Klamath basin, unless flows were fully adequate for fish, pending completion of biological opinion); *Greenpeace v. Nat'l Marine*

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Fisheries Serv., 80 F. Supp. 2d 1137 (W.D. Wash. 2000) (enjoining implementation of fishing management plans in specific areas pending completion of BiOp).

Moreover, the Action Agencies have not initiated formal consultation for the Southern Resident Killer Whale DPS, although the ongoing operation of the FCRPS is reducing the likelihood of survival and recovery of this DPS. As described above, the Action Agencies' NLAA determination for these whales (and NOAA's concurrence in that determination) is not based on the best scientific and commercial data available and fails to draw a rational connection between the evidence before the agencies and the conclusion.

C. The Action Agencies Have Failed to Comply With § 7(a)(1).

As discussed above, ESA § 7(a)(1) is an additional, mandatory obligation that agencies develop programs for the recovery of listed species, in consultation with NOAA. *See Sierra Club v. Glickman*, 156 F.3d 606 (5th Cir. 1998). As the 2008 FCRPS BiOp and the 2010 and 2014 Supplemental BiOps acknowledge, the biological requirements of salmon and steelhead in the mainstem of the Columbia and Snake Rivers are not being met, and consequently, the species continue to slide towards extinction. In neither the 2008 FCRPS BiOp nor the 2010 or 2014 Supplemental BiOps, or any other document—including the 2008, 2010, and 2014 RODs—have the Action Agencies identified, or consulted with NOAA regarding those steps they will take to recover these species to the point where they can be removed from ESA protection. Indeed, the Action Agencies continue to arbitrarily reject measures such as increased spill, reservoir drawdown, and dam removal, that would both increase fish survival and increase the likelihood of recovery.

D. The Action Agencies Are Making Irretrievable and Irreversible Commitments of Resources, in Violation of ESA § 7(d).

As noted earlier, § 7(d) prevents federal agencies from making irretrievable and irreversible commitments of resources “which [have] the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures.” 50 C.F.R. § 402.09 (emphasis added). As this regulation makes clear, “[t]his prohibition . . . continues until the requirements of section 7(a)(2) are satisfied.” *Id.* The additional restrictions imposed by § 7(d) are in effect because the Action Agencies have initiated the consultation process, but have not completed the process lawfully with the issuance of a valid biological opinion. The prohibition against the irreversible and irretrievable commitment of resources in § 7(d) applies to the ongoing operation of the FCRPS pending completion of a valid consultation, and adoption and implementation of a biological opinion that avoids jeopardy.

The Action Agencies are violating this prohibition by taking actions that could potentially foreclose implementation of measures required to avoid jeopardy, including but not limited to producing power with water otherwise necessary to save fish, delivering water for irrigation, foregoing river flow levels necessary to avoid salmon and steelhead mortality, transporting

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salmon and steelhead in trucks and barges, and entering into agreements that could require such actions in the future. These and other actions that make irreversible or irretrievable commitments of resources are contrary to law. *See Pac. Rivers Council v. Thomas*, 936 F. Supp. 738, 745 (D. Idaho 1996) (preservation of “status quo” as required by *Conner* means enjoining the action under consultation); *Pac. Coast Fed’n of Fishermen’s Ass’ns, et al. v. Bureau of Reclamation*, 138 F. Supp. 2d at 1249 & n.19; *Pac. Rivers Council*, 30 F.3d at 1057.

E. The Action Agencies Are “Taking” Listed Species Without an Incidental Take Statement, in Violation of ESA § 9.

In their operation of the FCRPS (including all of its projects and facilities), BOR and the Corps are “taking” or causing the take of endangered and threatened salmon and steelhead. As described in the 2008 FCRPS BiOp, “take” occurs in a number of ways, including mortality and injury to adults and juveniles caused by: passing through turbines, spillways, and bypass and collection systems; delayed migration and increased predation associated with reservoir operations and altered hydrograph; loss of spawning and rearing habitat; and impaired water quality. *See generally* 2008 FCRPS BiOp at § 14.2. Neither the 2010 nor 2014 Supplemental BiOps alter the ITS in the 2008 BiOp except for authorizing additional mortality to adult Snake River sockeye for an experimental adult upstream transportation program and revising the estimates of take from research and monitoring activities. *See generally* 2010 Supplemental BiOp at § 5.2; 2014 Supplemental BiOp at 551. The magnitude of this prohibited take is quite large. For example, total mortality of Snake River fall chinook caused by the FCRPS is estimated as high as 87%. 2008 FCRPS BiOp at 14-27. In the absence of a valid ITS or exemption under the Act, this take is prohibited.

Pursuant to the ESA and governing regulations, the 2008 FCRPS BiOp authorizes incidental take of a limited number of individuals of all relevant ESUs. *See id.* § 14.1 to 14.2. This provision does not protect the Action Agencies from liability under Section 9 because the 2008 FCRPS BiOp and the 2010 and 2014 Supplemental BiOps are arbitrary, capricious, and contrary to law. The incidental take statement (“ITS”) contained in these BiOps is consequently also invalid. Since the Action Agencies may not lawfully take listed species in the absence of a valid take statement, they are in violation of § 9.

IV. CONCLUSION

If the Action Agencies do not cure the violations of law described above immediately, upon expiration of the 60 days the parties to this notice intend to file suit against the Corps and BOR pursuant to the citizen suit provision of the ESA, 16 U.S.C. § 1540(g), and other applicable laws. If you would like to discuss the significant ESA violations described herein and seek a mutually acceptable solution to them, please contact any of the undersigned.

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Sincerely,



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Earthjustice
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Counsel for American Rivers, Federation of Fly Fishers, Idaho Rivers United, Idaho Wildlife Federation, Institute for Fisheries Resources, NW Energy Coalition, Northwest Sport Fishing Industry Association, Pacific Coast Federation of Fishermen's Associations, Salmon for All, Sierra Club, and Washington Wildlife Federation

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Salmon for All
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Sierra Club
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Washington Wildlife Federation
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Bellevue, WA 98118-1656



ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES
NORTHWEST ROCKY MOUNTAIN WASHINGTON, D.C. INTERNATIONAL

April 28, 2014

Via Federal Express

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RE: National Wildlife Federation's Joinder to Sixty-Day Notice of Intent to Sue for Violations of the Endangered Species Act Regarding Impacts of the Federal Columbia River Power System on Threatened and Endangered Salmon and Steelhead

Dear Sirs:

This letter provides notice that National Wildlife Federation adopts and joins the notice of intent to sue the Bureau of Reclamation ("BOR") and the U.S. Army Corps of Engineers ("Corps") (together the "action agencies") for violations of § 7 and § 9 of the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1536, 1538 dated April 14, 2014 and received by your agencies on April 15, 2014.¹

The April 14 letter details the action agencies' violations of the substantive and procedural requirements imposed by ESA § 7, 16 U.S.C. § 1536, as well as the prohibition on

¹ National Wildlife Federation's business address is: 2100 Westlake Avenue North, Seattle, Washington 98109.

“take” of listed species in ESA § 9, 16 U.S.C. § 1538, in the operation of federal dams, reservoirs, and related facilities and actions in the Columbia River basin stemming from Records of Decision signed in 2008 and 2010 and Supplemental RODs signed on February 28, 2014 and February 26, 2014. *See* “Supplemental Record of Consultation and Statement of Decision: NOAA Fisheries’ 2014 Supplemental Biological Opinion Endangered Species Act Section 7(a)(2) Supplemental Biological Opinion Consultation on Remand for the Operation of the Federal Columbia River Power System” (Feb. 28, 2014); “2014 Supplemental Decision Document Following the January 2014 NOAA Fisheries Supplemental Consultation on Operation of the Federal Columbia River Power System, 11 Bureau of Reclamation Projects in the Columbia Basin, and ESA Section 10(a)(1)(a) Permit for Juvenile Fish Transportation Program” (Feb. 26, 2014) (“2014 RODs”). National Wildlife Federation hereby incorporates that letter by reference and adopts the specific allegations made therein pursuant to § 11(g) of the ESA, 16 U.S.C. § 1540(g).²

Sincerely,



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² This letter is provided as notification only of National Wildlife Federation’s intent to join in any action initiated pursuant to the original April 14, 2014 letter and does not amend, supersede, or otherwise alter the original letter.