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Endangered Species Act and Legal Issues Regarding Columbia Basin Salmon and Steelhead

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Summary

The construction and operation of the Federal Columbia River Power System (FCRPS) have reduced salmon and steelhead populations in the Columbia Basin. In 1991 the Snake River sockeye became the first Pacific salmon stock listed under the Endangered Species Act. Since then, operations of the FCRPS have had to be considered in the context of the ESA. This means that federal operators of the FCRPS, the Bureau of Reclamation, the Bonneville Power Administration, and the Army Corps of Engineers are required to consult with the National Marine Fisheries Service (NMFS) on how federal actions may impact species. At the end of the consultation, NMFS issues a biological opinion (BiOp) as to whether the action would jeopardize the continued existence of a species. As part of the consultation process, mitigation measures are recommended by NMFS to avoid harm to listed species. Protective measures for fish often come at a cost in terms of energy generation or irrigation supply, and this conflict between natural resources and energy production and irrigation is at the heart of Columbia Basin conflict.

Beginning in 1992, a series of BiOps were issued by NMFS. Courts have found almost all of them inconsistent with the ESA. The 2005 BiOp was remanded to NMFS, with the final, updated BiOp released in May 2008. That BiOp is now the subject of a lawsuit. The court reviewing the 2008 BiOp had stated in 2007 that if the final document did not meet ESA standards, the court might vacate the BiOp. This step would mean that any harm to a listed species by FCRPS operations would be an unauthorized "take" under the ESA.

The Bonneville Power Administration has offered nearly $1 billion to four Indian tribes to resolve the litigation. However, states, environmental groups, and fishing interests, who also have acted as plaintiffs, were not included in the settlement.

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Federal dams have had an effect on salmon and steelhead populations in the Columbia Basin since the 1938 construction of Bonneville Dam, the first Federal Columbia River Power System (FCRPS) dam. (See **Figure 1**.) The FCRPS now includes 29 federal hydropower dams in the Columbia Basin[1] that are operated by either the Corps of Engineers (Corps) or the Bureau of Reclamation (Reclamation).[2] The electric power from these projects is marketed by the Bonneville Power Administration (BPA). These three agencies are known as the action agencies. The action agencies stated that for the purposes of consultation under the Endangered Species Act (ESA),[3] they consider the FCRPS to consist of 14 federal dams in the Columbia Basin that they have designated as primary "mainstem" facilities.[4]

The Department of Commerce's National Marine Fisheries Service (NMFS) has regulatory authority for salmon and steelhead under the ESA. Additionally, the Department of the Interior's Fish and Wildlife Service (FWS) has regulatory authority under the ESA for resident fish in the Columbia Basin — resident fish are those that do not migrate to the sea as do salmon and steelhead.[5] The ESA requires that federal actions, such as the operation of the FCRPS, must be reviewed to determine whether they are likely to jeopardize the continued existence of threatened

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[1] Some sources state that the FCRPS includes 31 dams. Two federal dams, Lost Creek and Green Springs, are part of the FCRPS but they are located outside the Columbia Basin in southern Oregon on the Rogue River.

[2] See [http://www.bpa.gov/power/pgf/hydrPNW.shtml].

[3] P.L. 93-205; 16 U.S.C. §§ 1531 et seq.

[4] BPA, Corps, and Reclamation, *Biological Assessment for Effects of Federal Columbia River Power System and Mainstem Effects of Other Tributary Actions on Anadromous Salmonid Species Listed Under the Endangered Species Act*, August 2007, p. 1-1. Hereinafter referred to as *Biological Assessment*. See [http://www.salmonrecovery.gov/Biological_Opinions/FCRPS/BA-CA/FCRPS/BA_MAIN_TEXT_FINAL_08-20-07_Updated_08-27.pdf].

[5] It is important to note that resident fish, such as bull trout and Kootenai River white sturgeon, which are listed as threatened and endangered respectively under the ESA are affected by the FCRPS. These species are the subject of a December 2000 FWS biological opinion on FCRPS operations, available at [http://www.fws.gov/pacific/finalbiop/BiOp.pdf]. While resident fish are important, the greatest controversy in the Columbia Basin focuses on anadromous fish — those that migrate between fresh and salt water — namely salmon and steelhead. Thus, this report focuses on ESA actions and litigation related to these species.

and endangered species. This review, conducted by NMFS in the case of salmon and steelhead, results in a biological opinion (BiOp) with either a jeopardy or no-jeopardy finding. New ESA listings or new or changed federal actions may all be cause for ESA consultation and the drafting of a BiOp. To develop a BiOp, NMFS reviews a Biological Assessment submitted by the relevant action agencies describing the proposed action that is the subject of ESA consultation. If NMFS finds that specific actions will likely jeopardize listed species, it is required to propose reasonable and prudent alternatives (RPAs) to the proposed action in the Biological Assessment to avoid jeopardy. (See "BiOp Litigation Discussion," below.)

Figure 1. The Columbia River Basin

Source: [http://yosemite.epa.gov/r10/water.nsf/ac5dc0447a281f4e882569ed0073521f/5896e9e63772fad288256a31005570b8/$FILE/ATTP0GJG/MapColBsn9-99.jpg].

Columbia Basin salmon populations have declined due to a number of human actions other than those of the FCRPS, including fishing, water pollution, and water withdrawals for irrigation.[6] However, the construction and operation of the FCRPS has been a visible cause of salmon and steelhead mortality and population decline for decades. Currently 13 evolutionarily significant units (ESUs)[7] of salmon and steelhead [8] in the Columbia Basin are listed as threatened or endangered under the ESA.[9] Actions intended to aid the recovery of these stocks generally fall into one of four categories: habitat, harvest, hatchery, and hydrosystem.[10] Collectively, these four categories are referred to as the All-H strategy.

Habitat actions focus on access to, and improvement of, habitat suitable for rearing of juvenile salmon and spawning by returning adults. Habitat actions may provide access to previously blocked areas, or create new areas suitable for rearing or spawning. Harvest actions focus on limiting harvest or harm to listed species through such approaches as the use of selective fishing gear and timing harvest periods to focus fishing on hatchery stocks. Hatchery efforts are intended to increase the number of fish through artificial propagation. Some assert that hatchery production reduces predator and harvest pressures on wild fish, while others are concerned that hatchery fish compete with wild salmon and steelhead for food and habitat. Hatcheries also may alter the genetic diversity of specific stocks. Hatchery efforts are controversial and are currently under review.[11]

Finally, hydrosystem actions are aimed at improving the survival of juvenile and adult salmon and steelhead as they migrate past dams and through the reservoirs they create. Hydrosystem actions include structural and operational changes at the dams, such as the addition of juvenile bypass systems and surface-oriented passage routes; the collection and transportation of juveniles in barges past the dams; the installation

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[6] Robert T.Lackey, Denise H. Lach, and Sally L. Duncan, "Policy Options to Reverse the Decline of Wild Pacific Salmon," *Fisheries*, vol. 31, no. 7, (2006), pp. 344-351. Available at [http://www.epa.gov/naaujydh/pages/staff/lackey/pubs/SALMON-2100-PROJECT-SUMMARY-ARTICLE-REPRINT-2006.pdf].

[7] Federal Caucus, *Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, Volume 1*, (December 2000). Available at [http://www.salmonrecovery.gov/Biological_Opinions/FCRPS/all_h_strategy/docs/2000_Final_Strategy_Vol_1.pdf]. Hereinafter referred to as *2000 Salmon Recovery Strategy*.

[8] Salmon stocks are described in terms of evolutionarily significant units, or ESUs. NMFS defines an ESU as a population or group of populations that is considered distinct (and hence a distinct population segment) for purposes of conservation under the Endangered Species Act. To qualify as an ESU, a population must (1) be reproductively isolated from other populations within the same species, and (2) represent an important component in the evolutionary legacy of the species. See [http://www.nwr.noaa.gov/Salmon-Recovery-Planning/Salmon-Recovery-Glossary.cfm].

[9] See [http://www.nwr.noaa.gov/Salmon-Hydropower/Columbia-Snake-Basin/Index.cfm].

[10] *2000 Salmon Recovery Strategy*.

[11] Background information is available at [http://www.hatcheryreform.us] and [http://www.fws.gov/pacific/Fisheries/Hatcheryreview/index.html].

of structures to guide fish toward safer passage routes; and water releases either to speed travel through the river or provide safer passage past a dam.

Although some federal salmon and steelhead protection measures have been in place for nearly 70 years — Bonneville Dam was constructed in 1938 with a fish ladder to allow upstream passage of returning adult salmon[12] — the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act) codified a fish protection program to mitigate losses associated with the FCRPS.[13] The first ESA listing of a Pacific salmon stock as endangered was in 1991. This listing ushered in the era of action agency salmon recovery planning, BiOps, and litigation that continues to the present.

The configuration and operation of the FCRPS dams is a particularly galvanizing issue between proponents of hydropower development, irrigation, and river navigation and those supporting commercial, sport, and tribal fishing as well as environmental conservation. Some actions to benefit salmon, such as spilling water to help juveniles pass safely, come at a cost in terms of energy production. Such actions may affect power rates in the region,[14] creating an economic incentive for some consumers and hydropower supporters to oppose an increase in fish protection operations.

As an alternative to altering dam operations to make them more favorable to salmon, some parties advocate partially or entirely removing four dams on the Lower Snake River in Washington. They believe this is the only way to ensure survival of the Snake River salmon and steelhead ESUs. Dam removal could also result in economic benefits to various fishing and recreation interests. Proponents of dam removal argue that the four Lower Snake River dams do not produce a significant amount of power but do cause significant harm to listed species. They further indicate that removal of the Snake River dams would reduce federal expenditures and revitalize local economies.[15] Opponents of dam removal note that dam removal would only benefit 4 of the 13 listed salmon and steelhead ESUs in the Columbia Basin, and the federal agencies must focus efforts on all of the basin's ESUs. The action agencies and NMFS have stated that they do not have the authority to remove the Lower Snake River dams; that would require congressional action.[16]

In addition to FCRPS actions, Reclamation operates a number of smaller dams in the Upper Snake River Basin whose primary purpose is to release water for

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[12] See [http://www.nwcouncil.org/history/FishPassage.asp].

[13] P.L. 96-501, 16 U.S.C. §839.

[14] The retail rates for electricity in the Pacific Northwest are among the lowest in the nation. See [http://www.eia.doe.gov/fuelelectric.html].

[15] Save Our Wild Salmon, et al., *Revenue Stream*, (November 2006), pp 1-2. Available at [http://www.wildsalmon.org/library_files/revenuestream8.pdf].

[16] Bonneville Power Administration and Corps, *Fact Sheet: Why Lower Snake River Dam removal is not in the Draft 2007 FCRPS BiOp*, (October 2007). Available at [http://www.bpa.gov/corporate/BPANews/Perspective/2007/Snake_River_Dams/BiOp_Fact_Sheet_dam_removal.pdf].

irrigation and flood control (five of these generate power and are a part of the FCRPS).[17] None of the 13 listed Columbia Basin salmon and steelhead stocks are found in the Upper Snake River Basin, because upstream fish passage is completely blocked by Idaho Power Company's Hell's Canyon Project. However, Reclamation's operations in the Upper Snake River Basin do contribute to flow augmentation for listed salmon and steelhead downstream. Dam operations and the water they provide are the essence of the Upper Snake River disputes.

BiOp Litigation

BiOp decisions and actions have been contentious since the first salmon ESU was listed in 1991. After a species is listed as threatened or endangered, FCRPS operations that may affect it require consultation under § 7 of the ESA to determine if the listed species would be put in jeopardy by those operations. (A history of major ESA actions and litigation is presented in **Table 1**.) Less than a year after NMFS issued its 1993 BiOp for the FCRPS, a federal district court invalidated it, finding it arbitrary and capricious. The court decision of May 1994 was the first in an ongoing series of court challenges; most NMFS BiOps for the Columbia and Snake Rivers were nullified by the courts.

The heart of a biological opinion is the finding of jeopardy or no-jeopardy; that is, whether an agency action will jeopardize the continued existence of a species. In 1994 the district court found NMFS had used misleading data when determining the baseline numbers of fish.[18] The number of fish harmed by the agency action could then appear to be smaller, when compared to the low baseline numbers. NMFS had calculated the future success of the species based on fish counts from 1984 to1990. The years between 1986 and 1990 were drought years, leading to atypically low numbers of fish that, according to the court, skewed the data on which NMFS relied. By comparison, the 1992 BiOp had used the years 1975 to 1990.

Litigation based on the subsequent 1994 to 1998 BiOp, issued in March 1994, claimed that the NMFS no-jeopardy conclusion was flawed. The environmental plaintiffs argued that NMFS incorrectly relied on the program to transport juvenile salmon downstream around the dams on the Columbia River, releasing them below the Bonneville Dam, as the basis for the species not being in jeopardy. However, instead of determining whether NMFS was justified in its actions, the court ruled that the issuance of a 1995 BiOp rendered the action moot.[19]

The 1995 BiOp stands out for several reasons. First, it included a jeopardy opinion. Second, the plaintiffs were customers of the hydroelectric dams, not environmentalists. And third, the BiOp was upheld by the court. The plaintiffs claimed that the RPAs found necessary by NMFS as part of the ESA consultation process were based on inappropriate data and failed to balance salmon protection

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[17] See [http://www.salmonrecovery.gov/Biological_Opinions/Upper_Snake/].

[18] *Idaho Dept. of Fish and Game v. NMFS*, 850 F.Supp. 2d 886 (D. Or. 1994).

[19] *American Rivers v. NMFS*, 126 F.3d 1118 (9th Cir. 1997).

with the production of hydroelectric power.[20] The court noted that there was scientific uncertainty regarding the salmon decline, but refused to hold that NMFS had acted arbitrarily or capriciously.

The next BiOp, the 2000 BiOp, included a no-jeopardy opinion. To reach this conclusion, NMFS had first found that eight salmon ESUs were likely to be jeopardized by the hydroelectric plants along the Columbia River, and proposed RPAs that would mitigate the harm. Thus, NMFS was able to issue a no-jeopardy conclusion. Environmental plaintiffs took issue with the mitigation measures, claiming that the BiOp was based on future federal actions that had not undergone § 7 consultations, and also on future nonfederal off-site actions that were not reasonably certain to occur.[21] The 2000 BiOp was invalidated by the court, but allowed to remain in place while NMFS prepared a new one.

Similarly, the 2004 BiOp was remanded to NMFS, but also allowed to remain in place while the agency prepared a new one. The litigation over the 2004 BiOp began in 2005 and did not conclude until 2008. In May 2005 a district court granted a preliminary injunction requiring certain dams to allow water to flow past spill gates rather than through turbines during the summer.[22] The decision also found that NMFS used the wrong method for making the no-jeopardy determination. The Ninth Circuit affirmed the lower court decision, but remanded the action to have the district court see if the injunction could be more narrowly tailored.[23] On remand, the district court again held that NMFS had incorrectly performed its BiOp and directed the agency to produce a new one within a year, keeping the 2004 BiOp in place until the new one was developed.[24] The last word regarding the 2004 BiOp appeared to have been in April 2007, when the Ninth Circuit affirmed the district court's decision that the NMFS BiOp violated the ESA.[25] The court criticized the agency for not considering the aggregate effects on the species when making its jeopardy determination:

> instead of assessing whether the listed fishes would be jeopardized by the aggregate of the proposed agency action, the environmental baseline, cumulative effects, and current status of the species, NMFS segregated its analysis, first evaluating whether the proposed agency action — consisting of only the proposed discretionary operation of the FCRPS — would have an appreciable net effect on a species. It considered additional context only if it found such an effect.[26]

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[20] *Aluminum Co. of America v. Bonneville Power Admin.,* 175 F.3d 1156 (9th Cir. 1999), *cert. denied*, 528 U.S. 1138 (2000).

[21] *National Wildlife Federation v. NMFS*, 254 F. Supp. 2d 1196 (D. Or. 2003).

[22] *National Wildlife Federation v. NMFS*, 2005 WL 1278878 (D. Or. May 26, 2005).

[23] *National Wildlife Federation v. NMFS*, 422 F.3d. 782 (9th Cir. 2005).

[24] *National Wildlife Federation v. NMFS*, 2005 WL 2488247 (D. Or. October 7, 2005).

[25] *NWF v. NMFS*, 481 F.3d 1224 (9th Cir. 2007).

[26] *NWF v. NMFS*, 481 F.3d 1224, 1232 (9th Cir. 2007).

The NMFS approach for the 2004 FCRPS BiOp — to find jeopardy only if the agency action's effect on fish was appreciably worse compared to a recent baseline — would allow the fish's environment to become incrementally worse with each agency action without finding jeopardy, according to the court, thwarting the purpose of the ESA.[27] Where the species' environmental baseline already jeopardizes a species, the Ninth Circuit held that an agency may not take action that deepens the jeopardy by causing additional harm.[28] The court also found fault with NMFS's failure to consider the recovery needs of the species within this BiOp, unlike earlier BiOps. In April 2008 the Ninth Circuit amended its decision. It did not change its holding, but clarified that a recent U.S. Supreme Court ruling did not alter its conclusion.[29]

The 2005 Upper Snake River BiOp was criticized for using a comparative analysis, rather than an aggregate analysis, just as was done in the 2004 FCRPS BiOp.[30] Like the 2004 BiOp, the 2005 Snake River BiOp was also remanded by the courts, but allowed to remain in place while NMFS prepared a new one. As a result, the BiOps that are currently in place for both the Upper Snake River and the FCRPS were ruled invalid under the ESA. While the BiOps were being finalized, the district court ordered that the Columbia River be operated pursuant to the 2008 Fish Operations Plan.[31] This plan specifies how the action agencies will manage the FCRPS during the peak salmon migration times for juvenile and adult fish. New FCRPS and Upper Snake River BiOps were finalized in May 2008.[32]

The 2008 FCRPS BiOp was challenged by environmental groups, anglers, an energy conservation organization, and the State of Oregon as being arbitrary and capricious. The plaintiffs argued that NMFS created a new method of making its jeopardy analysis that is "scientifically and legally flawed." NMFS said the BiOp "improve[s] the prospects for [the salmon's] recovery" and was based on "the best available science."[33]

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[27] *NWF v. NMFS*, 481 F.3d 1224, 1235 (9th Cir. 2007).

[28] *NWF v. NMFS*, 481 F.3d 1224, 1236 (9th Cir. 2007).

[29] *NWF v. NMFS*, 524 F.3d 917 (9th Cir. 2008) (holding that *Nat'l Ass'n of Homebuilders v. Defenders of Wildlife*, 127 S. Ct. 2581 (2007) did not affect the FCRPS BiOp as Congress imposed broad mandates, not specific actions, on the action agencies).

[30] *American Rivers v. NOAA-Fisheries*, 2006 WL 1455629 (D. Or. May 23, 2006).

[31] *National Wildlife Federation v. NMFS*, No. 01-640-RE (D. Or. February 25, 2008). The 2008 plan is available at [http://www.salmonrecovery.gov/Biological_Opinions/docs/FOP_2008_final.pdf].

[32] See [https://pcts.nmfs.noaa.gov/pls/pcts-pub/pcts_upload.summary_list_biop?p_id=27149], and [https://pcts.nmfs.noaa.gov/pls/pcts-pub/pcts_upload.summary_list_biop?p_id=103108].

[33] NOAA Press Release (May 5, 2008); see [http://www.nwr.noaa.gov/Newsroom/Current/upload/05-05-2008.pdf].

Non-BiOp ESA Litigation

Other litigation affected the way the ESA has been applied to Columbia River anadromous fish. When the Tenth Circuit Court of Appeals (Denver, CO) ruled that the FWS's method of determining critical habitat (CH) under the ESA was flawed, NMFS agreed to settle a suit that challenged its CH determination for the Columbia River.[34] This is because NMFS said it had used similar methodology to FWS in determining how economic factors were used in its determination of CH.

Other lawsuits challenged which salmon and steelhead would be listed under the ESA. A lawsuit claiming that four ESUs of West Coast Chinook should not be listed as threatened or endangered species was able to delay the listing of those species while NMFS prepared its hatchery listing policy (HLP).[35] Once the HLP was prepared, a lawsuit by different plaintiffs led to the decision that the HLP violated the ESA.[36] That court also found that NMFS's downlisting of the Upper Columbia River steelhead from endangered to threatened by using the HLP violated the ESA by not considering the best available scientific data.

Conclusion

The most recent NMFS FCRPS BiOp was finalized on May 5, 2008, and a legal challenge was filed in June 2008.[37] NMFS and the action agencies contend that the 2008 BiOp is scientifically based and reflects substantial changes over past BiOps. The federal agencies contend that many changes have been made in system configuration, river operations, and research efforts to guide and assess fish survival improvements. Referring to a quote from Judge Malcolm Marsh in 1994 that FCRPS operation for salmon and steelhead protection "literally cries out for a major overhaul,"[38] the action agencies say they have made significant changes and will continue this trend through 2017 with the new BiOp.[39]

The action agencies suggested an RPA to NMFS, which they say was developed in collaboration with state and tribal entities with a stake in the outcome of the BiOp. The agencies cite a regulation[40] requiring NMFS to draw on the expertise of the federal agency when developing an RPA.[41]

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[34] *National Association of Home Builders, Inc. v. Evans*, 2002 WL 1205743 (D.D.C. April 30, 2002).

[35] *Common Sense Salmon Recovery v. Evans*, 329 F. Supp. 2d 96 (D.D.C. 2004).

[36] *Trout Unlimited v. Lohn*, 2007 WL 1795036 (W.D. Wash. June 13, 2007).

[37] *National Wildlife Federation v. NMFS*, No. 01-640-RE (D. Or. June 17, 2008).

[38] *Idaho Dept. of Fish and Game v. NMFS*, 850 F. Supp. 886, 900 (D. Ore. 1994).

[39] *Biological Assessment*, p. 1-8.

[40] 50 C.F.R. §402.14(g)(5).

[41] *Biological Assessment*, pp. 1-6, 1-7.

Critics of the new BiOp indicate that it does little to enhance dwindling salmon populations and offers no significant changes. A lawsuit claims the BiOp ignores the data gathered by the Interior Columbia Basin Technical Recovery Team, a multi-displinary science team assembled by NMFS. An environmental group released the following statement about the 2008 BiOp:[42]

> Based on what we're seeing today, the agencies didn't get the message — or chose to ignore it. Once you get past the bells and whistles, it's clear this plan is about little more than protecting the status quo, regardless of the harm the dams do to salmon and the communities that depend upon them.

When BiOps are compared to each other chronologically, the level of protective measures (such as spill for juvenile passage) increases over time, and this holds true for the 2008 BiOp.[43] It is unclear how much of this increase is due to the series of court orders requiring additional protective measures versus increased understanding of the best management practices for salmon and steelhead recovery.

BPA has negotiated two memoranda of agreement (MOA) with four regional tribes to garner their support for the new BiOp in exchange for the BPA's funding habitat and hatchery projects to benefit salmon, steelhead, and other fish over the next ten years.[44] The *New York Times* reports that $900 million was offered, with $50 million to be paid by the Army Corps of Engineers.[45] There is no indication that the states, environmental groups, or fishing interests who have acted as plaintiffs were part of the settlement.

Judge Redden stated in a December 2007 letter to BiOp litigants that if the final BiOp is legally flawed he is unlikely to remand the document again, but rather would vacate it.[46] This could leave operators of the FCRPS in violation of ESA for unauthorized "take" of listed species. Further, the court also indicated that an unsatisfactory BiOp may result in a permanent injunctive order directing the federal defendants to provide more spill and flow augmentation measures, and obtain additional water from the Upper Snake and Columbia Rivers, including possible drawdown of reservoirs to aid fish passage.

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[42] Available at [http://www.wildsalmon.org/pressroom/press-detail.cfm?docid=766].

[43] Telephone conversation on February 13, 2008, with Mr. Scott Bettin, Fish and Wildlife Administrator, BPA.

[44] See [http://www.salmonrecovery.gov/Biological_Opinions/FCRPS/2008_biop/ColumbiaBasinFishAccords.cfm].

[45] W. Yardley, "Deal Gives Money to Tribes to Drop Role in Fish Lawsuits," *New York Times*, April 8, 2008.

[46] Letter from Judge James Redden to parties to the litigation dated December 7, 2007. Available at [http://www.salmonrecovery.gov/biological_Opinions/FCRPS/biop_remand_2004/docs.cfm].

Table 1. Chronology of Major ESA Actions and Litigation on Columbia Basin Pacific Salmon and Steelhead Trout

(litigation is identified by **boldface** type)

Date	Action or Court Decision	Citation or Link
November 20, 1991	NMFS published determination that Snake River sockeye salmon were endangered.	56 *Fed. Reg*. 58619
January 3, 1992	FWS published notice that Snake River sockeye salmon had been listed as endangered.	57 *Fed. Reg*. 212
April 10, 1992	NMFS issued its first BiOp for operation of the FCRPS.	
April 22, 1992	NMFS published determinations that Snake River spring/summer-run chinook salmon and Snake River fall-run chinook salmon were threatened.	57 *Fed. Reg*. 14653
June 3, 1992	NMFS published a correction of its determination that Snake River spring/summer-run chinook salmon and Snake River fall-run chinook salmon were threatened. In its correction, NMFS clarified that the ESU includes populations in the Clearwater River.	57 *Fed. Reg*. 23458
May 26, 1993	NMFS issued its second BiOp for operation of the FCRPS.	
December 2, 1993	The Corps, Reclamation, and BPA forwarded a biological assessment to NMFS with a request for consultation on the 1994-1998 operation of the FCRPS.	
December 28, 1993	NMFS published critical habitat (CH) designations for Snake River sockeye salmon, Snake River spring/summer-run chinook salmon, and Snake River fall-run chinook salmon.	58 *Fed. Reg*. 68543
March 16, 1994	NMFS issued "Section 7 Consultation, BiOp, Reinitiation of Consultation on 1994-1998 Operation of the Federal Columbia River Power System and Juvenile Transportation Program in 1995 and future years."	
March 28, 1994	**The 1993 BiOp was held arbitrary and capricious. The court found the BiOp used a baseline of 1984-1990 for data, even though 1986-90 were drought years, rather than the 1975-90 baseline typically used. The court found the BiOp did not include structural improvements to dams when it included dams in the baseline.**	**Idaho Dept. of Fish and Game v. NMFS, 850 F. Supp. 2d 886 (D. Or. 1994), *vacated as moot by* 56 F.3d 1071 (9th Cir. 1995)**
August 18, 1994	NMFS published an emergency interim rule wherein NMFS determined that Snake River spring/summer-run chinook salmon and Snake River fall-run chinook salmon warranted reclassification from threatened to endangered.	59 *Fed. Reg*. 42529

Date	Action or Court Decision	Citation or Link
September 28, 1994	**Challenged three 1992 BiOps — FCRPS, and two harvest BiOps. The challenge to the FCRPS BiOp was declared moot due to 1993 consultation.**	**Pacific Northwest Generating Cooperative v. Brown, 38 F.3d 1058 (9th Cir. 1944), amending and superseding 25 F.3d 1443.**
March 2, 1995	NMFS issued a revised BiOp for the FCRPS.	
April 2, 1997	**Suit based on 1994-98 BiOp was declared moot because the 1995 BiOp had already replaced it.**	**American Rivers v. NMFS, 109 F.3d 1484 (9th Cir. 1997); *amended* 126 F.3d 1118 (9th Cir. Sept. 26, 1997)**
August 18, 1997	NMFS published determinations that Upper Columbia River steelhead trout were endangered and the Snake River Basin steelhead trout were threatened. NMFS extended the deadline for a final listing determination for Lower Columbia River steelhead trout.	62 *Fed. Reg*. 43937 and 43974
January 12, 1998	NMFS, citing improvements in the status of the ESUs, withdrew its proposed rule to reclassify Snake River spring/summer-run chinook salmon and Snake River fall-run chinook salmon from threatened to endangered.	63 *Fed. Reg*. 1807
January 21, 1998	Action agencies (Corps, BPA, and Reclamation) transmitted their *Biological Assessment for 1998 and Future Operation of the Federal Columbia River Power System, Upper Columbia and Lower Snake River Steelhead* to NMFS.	
March 19, 1998	NMFS published a determination that Lower Columbia River steelhead trout were threatened.	63 *Fed. Reg*. 13347
May 14, 1998	NMFS issued its Supplemental BiOp to the March 2, 1995 BiOp.	
February 5, 1999	NMFS proposed CH for endangered Upper Columbia River steelhead trout as well as threatened Snake River Basin, Lower Columbia River, Upper Willamette River, and Middle Columbia River steelhead trout.	64 *Fed Reg*. 5740
March 24, 1999	NMFS published determinations that Lower Columbia River and Upper Willamette River chinook salmon were threatened, and that the Upper Columbia River spring-run chinook salmon were endangered.	64 *Fed. Reg*. 14308

Date	Action or Court Decision	Citation or Link
March 25, 1999	NMFS published a determination that Columbia River chum salmon were threatened. NMFS published determinations that Middle Columbia River and Upper Willamette River steelhead trout were threatened.	64 *Fed. Reg*. 14508 and 14517
May 10, 1999	**Industrial users of BPA energy challenged changes imposed by the NMFS BiOp for Snake River sockeye and spring/summer and fall chinook. The court found BPA was not arbitrary in adopting the RPAs in NMFS jeopardy opinion.**	**Aluminum Co. of America v. Bonneville Power Admin., 175 F.3d 1156 (9th Cir. 1999), *cert. denied*, 528 U.S. 1138 (2000)**
August 2, 1999	FWS published a notice that Lower Columbia River and Upper Willamette spring-run chinook salmon, the Columbia River chum salmon, and the Middle Columbia River and Upper Willamette River steelhead trout had been listed as threatened, and that Upper Columbia River spring-run chinook salmon had been listed as endangered.	64 *Fed. Reg*. 41835
February 16, 2000	NMFS published CH designations for Lower Columbia River, Upper Willamette River, and Upper Columbia River spring-run chinook salmon; Columbia River chum salmon; and Upper Columbia River, Snake River Basin, Lower Columbia River, Upper Willamette River, and Middle Columbia River steelhead trout.	65 *Fed. Reg*. 7764
April 2000	Action agencies submitted their biological assessment on the effects of the Willamette River Basin Flood Control Project on ESA-listed species.	
July 10, 2000	NMFS published §4(d) rule to regulate activities affecting threatened species for Snake River Basin, Lower Columbia River, Middle Columbia River, and Upper Willamette River steelhead trout (applicable Sept. 8, 2000); and for Snake River spring/summer-run, Snake River fall-run, Lower Columbia River and Upper Willamette River chinook salmon, and Columbia River chum salmon (applicable Jan. 8, 2001).	65 *Fed. Reg*. 42422
July 14, 2000	NMFS issued a BiOp on the impacts from collection, rearing, and release of salmonids associated with artificial propagation programs on the Upper Willamette River spring-run chinook salmon and winter-run steelhead trout.	
December 21, 2000	NMFS issued a BiOp on operation of the FCRPS for salmon and steelhead.	Available at [https://pcts.nmfs.noaa.gov/pls/pcts-pub/sxn7.pcts_upload.summary_list_biop?p_id=12342].

Date	Action or Court Decision	Citation or Link
April 30, 2002	**Court accepted the consent order that vacated the CH designations for salmon and steelhead, pursuant to 10th Circuit decision finding FWS did not use economic factors correctly. [New Mexico Cattlegrowers' Association v. U.S. Fish and Wildlife Service, 248 F.3d 1277 (10th Cir. 2001).]NMFS had used a similar method for the Columbia River.**	**National Association of Home Builders, Inc. v. Evans, 2002 WL 1205743 (D.D.C. April 30, 2002)**
May 7, 2003	**The court invalidated the 2000 BiOp and remanded it to NMFS. The December 21, 2000 BiOp's no jeopardy determination was held arbitrary and capricious because NMFS limited the scope to mainstems of Columbia and Snake, and relied on non federal mitigation.**	**National Wildlife Federation v. NMFS, 254 F. Supp. 2d 1196 (D. Or. 2003)**
September 29, 2003	In response to the April 30, 2002 court order cited above, NMFS removed CH previously designated for Lower Columbia River, Upper Willamette River, and Upper Columbia River spring-run chinook salmon; Columbia River chum salmon; and Upper Columbia River, Snake River Basin, Lower Columbia River, Upper Willamette River, and Middle Columbia River steelhead trout.	68 *Fed. Reg*. 55900
June 14, 2004	NMFS proposed relisting Upper Willamette River, Lower Columbia River, Middle Columbia River, Snake River Basin, and Upper Columbia steelhead trout; Upper Willamette River, Lower Columbia River, Snake River fall-run, and Snake River spring/summer-run chinook salmon; and Columbia River chum salmon as threatened as well as Snake River sockeye salmon and Upper Columbia River spring-run chinook salmon as endangered (to reflect how the inclusion of certain hatchery stocks might influence listing determinations). In addition, Lower Columbia River coho salmon were proposed to be listed as threatened.	69 *Fed. Reg*. 33102
August 10, 2004	**Plaintiffs challenged the March 1999 listing of four Chinook salmon. The court stayed the listing of Upper Chinook spring-run salmon, Puget Sound, Lower Columbia River, and Upper Willamette spring-run salmon, pending final hatchery policy (due June 14, 2005).**	**Common Sense Salmon Recovery v. Evans, 329 F. Supp. 2d 96 (D.D.C. 2004)**
November 2004	Reclamation submitted a biological assessment to FWS and NMFS for operations and maintenance actions at 12 federal projects in the Upper Snake River basin.	Available at [http://www.usbr.gov/pn/programs/UpperSnake/2004ba/index.html].
November 30, 2004	NMFS reissued a revised BiOp on operation of the FCRPS for salmon and steelhead.	Available at [https://pcts.nmfs.noaa.gov/pls/pcts-pub/sxn7.pcts_upload.summary_list_biop?p_id=14756].

Date	Action or Court Decision	Citation or Link
March 2005	FWS issued a BiOp on operations and maintenance of the Reclamation Upper Snake River Basin Projects above Brownlee Reservoir.	Available at [http://www.fws.gov/idaho/publications/BOs/Final.pdf].
March 31, 2005	NMFS issued a BiOp on operations and maintenance of the Bureau of Reclamation Upper Snake River Basin Projects above Brownlee Reservoir.	Available at [https://pcts.nmfs.noaa.gov/pls/pcts-pub/sxn7.pcts_upload.summary_list_biop?p_id=22363].
May 26, 2005	**The court issued a preliminary injunction blocking implementation of the 2004 BiOp, and ordering summer water through spillgates rather than through turbines at certain dams.**	**National Wildlife Federation v. NMFS, 2005 WL 1278878 (D. Or. May 26, 2005).**
June 28, 2005	NMFS relisted Upper Columbia River spring-run chinook salmon and Snake River sockeye salmon as endangered as well as Lower Columbia River/Southwest Washington coho salmon, Snake River fall-run chinook salmon, Snake River spring/summer-run chinook salmon, Lower Columbia River chinook salmon, Upper Willamette River chinook salmon, and Columbia River chum salmon as threatened.	70 *Fed Reg*. 37160
September 1, 2005	**The appellate court affirmed the district court opinion of May 26, 2005, that the 2004 BiOp for FCRPS was flawed. The Ninth Circuit found no abuse of discretion in district court injunction, and remanded the issue of whether the district court's preliminary injunction was narrowly tailored. [District court decision = 2005 WL 1278878 (D. Or. May 26, 2005).]**	**National Wildlife Federation v. NMFS, 422 F.3d. 782 (9th Cir. 2005)**
October 7, 2005	**The court remanded the 2004 BiOp to NMFS, directing NMFS and action agencies to comply with ESA, and to complete new BiOp within one year. The decision kept the 2004 BiOp in place while new one was being drafted.**	**National Wildlife Federation v. NMFS, 2005 WL 2488247 (D. Or. Oct. 7, 2005)**
January 5, 2006	NMFS relisted Snake River basin steelhead trout, Lower Columbia River steelhead trout, Upper Willamette River steelhead trout, and Middle Columbia River steelhead trout as threatened.	71 *Fed. Reg*. 834
May 23, 2006	**The court rejected the 2005 Upper Snake BiOp for using a comparative approach to determine jeopardy, saying the NMFS should have aggregated the effects. The court found NMFS failed to consider combined effects from proposed action and existing baseline. The court clarified that NMFS did not abuse its discretion in separating Upper Snake from rest of Columbia, but that a more cohesive strategy would occur if BiOp considered them both.**	**American Rivers v. NOAA-Fisheries, 2006 WL 1455629 (D. Or. May 23, 2006)**

Date	Action or Court Decision	Citation or Link
September 26, 2006	**The court remanded the 2005 Upper Snake BiOp but left it in place while NMFS prepared new one.**	**American Rivers, Inc. v. NOAA-Fisheries, 2006 WL 2792675 (D. Or. Sept. 26, 2006)**
April 9, 2007	**The Ninth Circuit affirmed the district court decision of Oct. 7, 2005, rejecting the 2004 FCRPS BiOp for for failing to consider nondiscretionary projects' impacts, failing to incorporate degraded baseline, and inadequately evaluating impacts of dams. The court criticized the use of comparative approach rather than aggregate. [District court decision = 2005 WL2488247 (D. Or. Oct. 7, 2005).]**	**NWF v. NMFS, 481 F.3d 1224 (9th Cir. 2007)**
May 31, 2007	Action agencies provided a supplemental biological assessment to NMFS and FWS evaluating the effects on ESA-listed fish in operating the Willamette River Basin dams for flood damage reduction and power generation.	Available at [https://www.nwp.usace.army.mil/pm/e/reports/environmental/ba/Final_Will_Supp'l_BA.pdf].
June 13, 2007	**The court found that NMFS's downlisting of Columbia River steelhead due to hatchery listing policy (HLP) violated the ESA. It set aside the HLP for violating the ESA.**	**Trout Unlimited v. Lohn, 2007 WL 1795036 (W.D. Wash. June 13, 2007)**
August 21, 2007	Action agencies issued a biological assessment for effects of the FCRPS. Reclamation issued a biological assessment on operations and maintenance of Upper Snake River Basin Projects above Brownlee Reservoir. A Comprehensive Analysis of the FCRPS and Mainstem Effects of Upper Snake and Other Tributary Actions was provided.	Available at [http://www.salmonrecovery.gov/Biological_Opinions/FCRPS/BA-CA/FCRPS/BA_MAIN_TEXT_FINAL_08-20-07_Updated_08-27.pdf] Available at [http://www.usbr.gov/pn/programs/UpperSnake/index.html]. Available at [http://www.salmonrecovery.gov/Biological_Opinions/FCRPS/BA-CA/CA/CA-Final.pdf].
October 31, 2007	NMFS released a draft revised BiOp on operation of the FCRPS and Upper Snake projects for salmon and steelhead.	Superseded by the final BiOp on operation of the FCRPS, Upper Snake projects, and harvest of salmon and steelhead, issued May, 5, 2008
February 25, 2008	**The court ordered that the FCRPS would be operated pursuant to the 2008 Fish Operations Plan until the 2008 BiOp was finished in August, 2008.**	**National Wildlife Federation v. NMFS, No. 01-640-RE (D. Ore. Feb. 25, 2008).**

Date	Action or Court Decision	Citation or Link
April 24, 2008	**The court amended its April 2007 decision to clarify that the Supreme Court decision in *Nat'l Ass'n of Homebuilders v. Defenders of Wildlife*, 127 S. Ct. 2581 (2007) did not alter its ruling.**	**National Wildlife Federation v. NMFS, 524 F.3d 917 (9th Cir. 2008).**
May 5, 2008	NMFS released the final BiOp on operation of the FCRPS, Upper Snake projects, and harvest of salmon and steelhead.	Available at [http://www.nwr.noaa.gov/Salmon-Hydropower/Columbia-Snake-Basin/final-BOs.cfm].
June 17, 2008	**Suit filed challenging the May 2008 FCRPS BiOp.**	**National Wildlife Federation v. NMFS, No. 01-640-RE (D. Ore. Jun. 17, 2008).**
July 11, 2008	NMFS released the final BiOp on operation of the Willamette Basin Project.	Available at [http://www.nwr.noaa.gov/Salmon-Hydropower/Willamette-Basin/Willamette-BO.cfm]