

A Ten Minute History of 15 Years of Columbia River ESA Litigation

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ABSTRACT:

The following is excerpted from Judge Redden's May 26, 2005 Opinion and Order overturning the 2004 FCRPS BiOp.

Summary of 1993, 1995, and 2000 Biological Opinions

1. 1993 Biological Opinion.

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

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

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

The State of Idaho challenged the 1993 biological opinion. In 1994, Judge Marsh of this court held the 1993 biological opinion to be invalid. *Idaho Dept. of Fish and Game v. NMFS*, 850 F.Supp. 886, 893 (D. Or. 1994), *vacated as moot*, 56 F.3d 1071 (9th Cir. 1995). Judge Marsh found specifically that the choice of the 1986-1990 baseline was arbitrary and capricious "because the agency failed to consider relevant facts such as the drought condition and low run numbers of the species during the base period," and

because in its combined effects analysis “NOAA arbitrarily and capriciously discounted low range assumptions without well-reasoned analysis and without considering the full range of risk assumptions.” *Id.* at 898. While Judge Marsh did not reject the two-step jeopardy framework, he found that NOAA had consistently erred in applying the framework in favor of the status quo when “the situation literally cries out for a major overhaul.” *Id.* at 900. Thus, Judge Marsh noted that “NOAA focused on the system capabilities . . . rather than stabilization of the species.” *Id.* at 893. Judge Marsh also found “NMFS should have fully considered the enhanced risks associated with small populations prior to discounting low range assumptions.” *Id.* at 899.

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

2. 1995 Biological Opinion.

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

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

Under this jeopardy framework, NOAA concluded that the action agencies’ proposal to operate the DAMS during 1994-1998 would be likely to jeopardize the continued existence of the listed salmon and adversely modify their critical habitat. *Id.* at 83-91. NOAA then offered a reasonable and prudent alternative to the proposed action involving “an adaptive approach to increasing survival and the probability of recovery of

the listed salmon that involved immediate survival improvements, structural modifications and evaluations, and intermediate flow-improvements, spill initiatives, continued transportation, lowered Snake River pools, preparation for drawdowns of Snake River reservoirs, and comprehensive evaluations and ongoing studies. *Id.* at 91- 127. NOAA concluded that with adoption of its reasonable and prudent alternatives, the dam operations were not likely to jeopardize the listed species. *Id.* at 128-136.

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

3. 2000 Biological Opinion.

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

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

Jeopardy analysis in the 2000BiOp: (a) defines the recent population trend as the median annual population growth rate, and mostly calculated from data on adult returns from 1980 through 1999 (*Id.* at A-2); (b) estimated the proportional change in that rate necessary to achieve the survival and recovery criteria (*Id.* at A-5); (c) adjusted the population growth rate based on its assessment of the impact of the proposed action and

potentially different survival rates in other life stages (*Id.* at A-7); (d) constructed ratios to indicate the degree to which the proposed action would be expected to achieve the survival and recovery criteria (*Id.* at A-8); and (e) qualitatively evaluated the degree to which other factors – those that did not lend themselves to the quantitative analysis summarized above, including hatchery management and habitat improvements – would “reduce the additional necessary survival change” required to meet the criteria noted above. *Id.*

The 2000BiOp found that eight listed species would be jeopardized by the proposed operation of the DAMS. *Id.* at Chapters 6 and 8. NOAA therefore proposed reasonable and prudent alternatives to the proposed action, and analyzed whether, in conjunction with the environmental baseline and cumulative effects, these would increase survival rates enough to enable the listed species to achieve the survival and recovery criteria. *Id.*, Chapter 9. Finding these insufficient, NOAA also appraised the impact of off-site mitigations, including hatchery and habitat initiatives outlined in the Basinwide Salmon Recovery Strategy. *Id.* NOAA found these sufficient to improve survival rates so as to enable the listed species to avoid jeopardy. *Id.*

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

The following text is taken from CRITFC’s comments on the 2004 draft FCRPS BiOp and describes the jeopardy analysis framework used by NMFS in that document.

DRAFT Biological Opinion Reinitiation of Consultation on Operation of the Federal Columbia River Power System Including the Juvenile Fish Transportation Program, and 19 Bureau of Reclamation Projects in the Columbia Basin September 8, 2004

Step 1: Evaluate Current Status with Respect to Range-wide Biological Requirements and Essential Features of Critical Habitat

For this Opinion, NOAA Fisheries reviewed the current status of the populations affected by the proposed action in the context of viable salmonid population (VSP) criteria and then reviewed the status of each major population group before reaching a conclusion for an ESU. NOAA Fisheries based this analysis on information published in its June 14, 2004 Status Review (69 FR 33102), which states the reason for listing each ESU and any other relevant information about its status...

2004 draft BiOp pages 1-6 & 1-7

NOAA did not quantify species' population trends in this BiOp, such as the likelihoods of achieving threshold population sizes or population growth rates that were set forth in the 1995 and 2000 BiOps, respectively. The 2004 draft BiOp generally indicates whether recent (5-year) population trends are above or below replacement. For example, the 2004 draft BiOp notes that:

All populations in the UCR spring chinook ESU exhibited strong returns of adults during the past four years suggests [sic] that the next few brood cycles will also be strong. These increases are encouraging, following the last decade of steep declines to record, critically low escapements. However, despite the strong returns in 2001, both recent 5-year and long-term productivity trends remain below replacement.

2004 draft BiOp pages 4-6 & 4-7

For Snake River Spring/summer Chinook the picture according to NOAA is slightly better:

Due to the severe declines in the populations since the 1960s, the long-term productivity trends remain below replacement for all natural production areas, despite the recent increases. However, the short-term productivity trends for the majority of the natural production areas in the ESU are at or above replacement, which are positive signs for this ESU.

2004 draft BiOp pages 4-4

For Snake River steelhead the picture according to NOAA is somewhat worse:

Numbers of spawners surveyed in sections of the Grande Ronde, Imnaha, and Tucannon rivers were generally improved in 2001. However, recent 5-year abundance and productivity trends are mixed. Five of the nine available data series exhibit positive long- and short-term trends in abundance. Most of the remaining long-term population growth rate estimates were below replacement, and most of the short-term population growth rates were either marginally above replacement or well below replacement, depending upon the assumed effectiveness of hatchery fish in contributing to natural productivity.

2004 draft BiOp pages 4-10

Unlike the 2000 biological opinion NOAA does not quantitatively assess the likelihood of extinction for these stocks. Neither here nor in following steps does NOAA assess the degree of survival improvement that is needed to assure meeting biological survival and recovery indicators. The reader is left to wonder, among other things, how the "strong" Chinook returns can be below replacement or how far below replacement the recent "well below replacement" rates are for Snake River steelhead. This is one of the most serious "gaps" in NOAA's jeopardy framework.

Step 2: Evaluate Relevance of the Environmental Baseline in the Action Area to Biological Requirements and the Current Status of the Species and Any Designated Critical Habitat

In this step, NOAA Fisheries analyzes the effects of past, present, and certain future human factors within the action area to which the effects of the proposed action would be added. The environmental baseline, together with cumulative effects (Step 4), provides the starting point for evaluating whether the action would cause, directly or indirectly, a reduction in the productivity, abundance, or distribution of the listed species or diminish any essential physical or biological feature of critical habitat.

1.2.2.1 Define the Action Area

The action area defines the geographic scope of the environmental baseline and cumulative effects that are relevant to a particular consultation. It includes all areas affected directly or indirectly by the Federal action, not merely the immediate area involved in the action (50 CFR § 402.02).

2004 draft BiOp pages 1-8

NOAA defines the action area in this draft BiOp to include the mainstem Columbia and Snake rivers, high priority subbasins (Methow, Wenatchee, Entiat, Upper Salmon, Little Salmon, Lemhi, and John Day), areas affected by 19 BuRec water projects, and the estuary and near shore environment. Figure 5.1 on page 5-3 of the draft depicts these areas.

Once again, the identification of the action area in NOAA's BiOp is problematic. For instance, the action area defined in the draft BiOp does not appear to include any significant portion of the Yakima River Basin, yet this basin is pervasively influenced by the Bureau of Reclamation's water resources projects located therein, including five major water storage projects that largely dictate the flow of the Yakima and Naches rivers during certain months of the year.¹ Similarly, the operations of the Upper Snake projects should be considered in this BiOp because of their effects on Snake River water supplies.

¹ The Yakima Project provides irrigation water for land that extends for 175 miles on both sides of the Yakima River in south-central Washington. The irrigable lands presently being served total approximately 464,000 acres. Storage dams and reservoirs on the project are Bumping Lake, Clear Creek, Tieton, Cle Elum, Kachess, and Keechelus. Other project features are 5 diversion dams, canals, laterals, pumping plants, drains, 2 powerplants, and transmission lines. More information can be found at: <http://www.usbr.gov/dataweb/html/yakima.html#general>

The action area inappropriately does not include subbasins where the Bonneville Power Administration is currently funding salmon restoration projects in fulfillment of its statutory duties under the Northwest Power Act. Attachment _____, the Columbia Basin Fish and Wildlife Program Rolling Provincial Review Implementation, prepared by the Columbia Basin Fish and Wildlife Authority, June 2004 (hereinafter “CBFWA Program Review”), describes BPA funded projects in numerous other basins such as the Walla Walla, Clearwater, Grande Ronde, Imanaha, Tucannon. These projects are directly and indirectly carried out by the action agencies in exercising responsibilities that are part and parcel of their operations of the FCRPS. These projects also directly affect salmonid species listed under the ESA. Also the draft does not incorporate the impacts of land disturbing activities that are the subject of programmatic consultations, due evidently to time limitations. The action area must be defined to include a much broader geographic range incorporating the full extent of areas affected by the action agencies’ salmon mitigation projects and the full extent of Reclamation’s project effects associated with the 19 projects under consultation in this BiOp.

1.2.2.2 Determine Biological Requirements and Essential Habitat Features within the Action Area

1.2.2.3 Evaluate the Environmental Baseline Relative to the Biological Requirements and Species Status

Unlike prior BiOps, NOAA’s treatment of the environmental baseline in this BiOp has warped the jeopardy framework so severely that more than 90% of the salmon mortality associated with the operation and configuration of the FCRPS is excluded from treatment under section 7(a)(2) of the ESA. Moreover, the NOAA framework also effectively jettisons any notion of achieving salmon recovery from the agency’s analytical framework. NOAA sets the stage for this wholesale turnabout in regulatory approach with the following narrative:

Where the proposed action is a continuation of a past action, as is the case for the operation of the FCRPS, the analysis for this step is complicated, because the environmental baseline will necessarily include the effects of past actions taken to construct and operate the ongoing project. NOAA Fisheries must therefore distinguish the effects of the proposed future operation of the project from its past construction and operation. As described in more detail in Section 5.0, NOAA Fisheries made this distinction by following the fundamental principle of an ESA ' 7(a)(2) consultation. Section 402.03 provides: “Section 7 and the requirements of this part apply to all actions in which there is discretionary involvement or control.” Accordingly, the ESA requires a Federal agency to consult on actions that it proposes to authorize, fund, or carry out that are within its discretionary authority. See also 50 CFR ' 402.02 “action” and ESA ' 7(a)(2). Thus, conversely, the effects of the existing project that are beyond the current discretion of the action agency are properly part of the effects of the environmental baseline. Those

effects are part of the “no action” environment to which will be added the effects of the proposed action. 2004 draft BiOp pages 1-8 & 1-9

This new approach narrows the view of the effects of the operation of the FCRPS to the difference between a proposed operation of the FCRPS and a hypothetical reference case that purports to embrace the full “discretion” of the action agencies to operate the FCRPS for the benefit of salmon. As noted elsewhere in CRITFC’s comments, the physical difference between the reference case and proposed operation is slight to non-existent. The measurement of survival differences between these two cases, using SIMPAS, compounds the omission of FCRPS induced mortalities from this BiOp, mortalities which were previously accounted for in the jeopardy frameworks of each FCRPS BiOp since 1993.

The 1995 and 2000 FCRPS BiOps recognized that the action agencies exercised control over both the operation and configuration of the FCRPS dams. Even the 2004 draft BiOp recognizes that the action agencies will make configuration changes at the dams. Unlike the 2004 draft BiOp, however, these BiOps did not forgive FCRPS mortalities associated with past configuration decisions.

Step 3: Describe the Effects of the Proposed Action

As mentioned, the “net effects” approach taken by NOAA, which is essentially a comparison of two SIMPAS model runs and a qualitative assessment of the potential to fill any net survival “gap” identified stands in marked contrast to the analyses previously undertaken by NOAA.

Effects of the action, to be evaluated in Step 3, are defined as “the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with the action, that will be added to the environmental baseline” (50 CFR § 402.02). 2004 draft BiOp page 1-10

While NOAA purports to assess the full effect of the FCRPS on species survival and recovery, what NOAA does instead is to focus on “net effects”. E.g. table 6.7 and 6.9. The relatively small “net effect” starkly contrasts with the approach taken in section 6 of the 2000 BiOp, where NMFS concluded that for all ESUs, stocks will need additional survival improvements up to several orders of magnitude to achieve a stable population growth rate. E.g. Table 6.3-12. This “net effects” analysis, which occupies most of chapter 6 of the 2004 BiOp, has virtually nothing to say about the likelihood of species survival and recovery. Rather the focus has shifted from survival and recovery, which NOAA admits is profoundly impacted by the operation and configuration of the FCRPS, to net effects which have little or anything to say about survival or recovery, except to say that the proposed operation, including changes to system configuration, “would likely

result in no **net** reduction in the numbers, reproduction, or distribution of this ESU.” The “net” effects analysis performed in chapter 6 of the BiOp does not reveal whether the reproductive capacities of the target stock are such that it is in decline. Nor does the “net” effect analysis reveal whether the stock will achieve the indicators of survival and recovery identified by the BRWG or NMFS’ 1995 BiOp or PATH or NMFS’ 2000 BiOp.

Step 4: Describe Cumulative Effects

The cumulative effects analysis in Step 4 requires NOAA Fisheries to evaluate the future effect of those state or private activities (not including Federal activities) that are reasonably certain to occur in the action area.

2004 draft BiOp pages 1-10 & 1-11

NOAA appropriately recognizes that the overall cumulative effects on the listed species are likely to be negative.

Step 5: Conclusion (section 8)

The evidence of a shift in NOAA’s thinking about survival and recovery as regards the mortalities imposed by the FCRPS is clearly expressed in the conclusions section of the draft BiOp. The following excerpt concerning Upper Columbia River spring Chinook is illustrative:

The main consideration in determining if the reduced numbers, productivity, and distribution of this ESU constitute an appreciable reduction in the likelihood of survival and recovery is the degree to which the proposed action poses an additional risk to the ESU.

2004 draft BiOp page 8-12

Even though NOAA recognizes that UCR spring Chinook are at “high risk,” and that the mortality of the FCRPS in the baseline is the primary cause of this risk, the “main focus” is not this risk. It is instead the “additional risk” imposed by the hypothetical difference between a reference operation and the proposed operation. Because this “net effect” only rises to a “medium” indicator level, NOAA isn’t too concerned about the “net effect”. Gone from the analysis is any suggestion that the FCRPS must account for the overwhelming levels of mortality now included in the baseline.