

1 MARK L. STERMITZ, OSB No. 03144  
Glaser, Weil, Fink, Jacobs & Shapiro, LLP  
2 10250 Constellation Boulevard, 19th Floor  
Los Angeles, California 90067  
3 Telephone: (310) 556-7861  
Facsimile: (310) 556-2920  
4 JEREMIAH D. WEINER, Assistant Attorney General  
Office of the Montana Attorney General  
5 Attorneys for *Intervenor-Defendant* State of Montana

THE HONORABLE JAMES A. REDDEN

6 MICHAEL S. GROSSMAN, Senior Counsel  
State of Washington, Office of the Attorney General  
7 P.O. Box 40100  
Olympia, WA 98504-0100  
8 Telephone: (360) 586-3550  
9 Facsimile: (360) 586-3454  
Attorneys for *Intervenor-Defendant* Washington State

10 LAWRENCE G. WASDEN  
11 Attorney General  
State of Idaho

12 CLIVE J. STRONG (ISB No. 2207)  
Division Chief, Natural Resources Division

13 CLAY R. SMITH (ISB No. 6385)

14 STEVEN W. STRACK (ISB No. 3906)

E-Mail: [steve.strack@ag.idaho.gov](mailto:steve.strack@ag.idaho.gov)

15 Deputy Attorneys General, Natural Resources Division

P.O. Box 83720

16 Boise, ID 83720-0010

Telephone: (208) 334-4118

17 Facsimile: (208) 854-8072

Attorneys for *Intervenor-Defendant* State of Idaho

18 UNITED STATES DISTRICT COURT

19 DISTRICT OF OREGON

21 NATIONAL WILDLIFE FEDERATION,  
22 *et al.*,

Plaintiffs,

23 v.

24 NATIONAL MARINE FISHERIES  
25 SERVICE, *et al.*,

Defendants.

Case No. CV 01-00640-RE (Lead Case)

Case No.: CV 05-00023-RE

(Consolidated Cases)

**JOINT MEMORANDUM OF  
WASHINGTON, IDAHO AND MONTANA  
IN OPPOSITION TO PLAINTIFFS'  
SUMMARY JUDGMENT MOTION AND  
IN SUPPORT OF CROSS-MOTION FOR  
SUMMARY JUDGMENT**

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LAW OFFICES  
 GLASER, WEIL, FINK, JACOBS & SHAPIRO, LLP  
 10250 CONSTELLATION BOULEVARD  
 SUITE 1000  
 LOS ANGELES, CALIFORNIA 90067  
 (310) 853-3000

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LAW OFFICES  
 GLASER, WEIL, FINK, JACOBS & SHAPIRO, LLP  
 10280 CONSTELLATION BOULEVARD  
 NINETEENTH FLOOR  
 LOS ANGELES, CALIFORNIA 90067  
 (310) 583-3000

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1 **I. INTRODUCTION**

2 The 2008 biological opinion is legally valid and biologically sound. It has produced a  
3 comprehensive approach to developing and analyzing FCRPS operations, working through the  
4 unprecedented remand collaboration effort with the Columbia Basin's states and tribes. This  
5 collaborative approach has brought a fresh perspective on the means for undertaking an FCRPS  
6 biological opinion. Prior biological opinions looked at the status of the fish and the impact of the  
7 FCRPS on them from a system-wide perspective. In contrast, and most fundamentally, the 2008  
8 biological opinion reviews and evaluates the status and needs of fish from the perspective of each  
9 population. This information is then rolled up to the evolutionarily significant unit ("ESU") or  
10 distinct population segment ("DPS") level (collectively, "ESU"), thereby directly tying development  
11 of the proposed FCRPS actions to the specific needs of a particular ESU. The States believe this  
12 ESU-specific approach more accurately reflects the evaluation requirements imposed by the  
13 Endangered Species Act (ESA) because it recognizes that the needs of each ESU are different, and  
14 that the solutions to address those needs must also be different. The resulting suite of proposed  
15 actions, therefore, provides a stronger overall response to the needs of each ESU.

16 The approach taken by this biological opinion makes important distinctions regarding the  
17 relative health of the various ESUs, recognizing that within each ESU, some populations are  
18 relatively healthy, while others are in difficult straits. The advantage of the ESU approach is that it  
19 allows defendant National Marine Fisheries Service ("NMFS") and the action agencies to focus on  
20 those individual populations that the Interior Columbia Basin Technical Recovery Team ("ICTRT")  
21 has identified as particularly critical to the long-term recovery of that ESU based upon the specific  
22 limiting factors that have been identified for each ESU.

23 Each ESU affected by the federal hydro system begins with a historical assessment and each  
24 has its own story. In some cases, legacy hatchery effects are the key issue for particular populations.  
25 In others, estuary and tributary habitat substantially limit the viability of populations within an ESU.  
26 Clearly, the importance of federal hydro operations, both as a limiting factor and as a remedy,  
27 cannot be minimized as hydropower operations generally impact each ESU. However, the  
28 analytical approach used by this biological opinion is grounded in a comprehensive frame of

1 reference that uses a full life-cycle approach to reflect the fuller suite of variables that affect these  
2 fish. Based on this information, the biological opinion - and the mitigation projects contained in the  
3 associated Fish Accord MOAs - then utilizes a combination of actions from hydro, and hydro-  
4 funded habitat, hatchery and anti-predation actions to address the specific needs of each ESU.  
5 Ultimately, as the Endangered Species Act expressly countenances, the collective application of  
6 these actions to each ESU enabled NMFS to make a well documented and scientifically appropriate  
7 no-jeopardy finding for this biological opinion.

8 In addition, and in direct response to the directives of this Court and the case law that has  
9 emerged in recent years, the 2008 biological opinion is nested within a broader recovery context.  
10 Since the initial listings in the early 1990s, the action agencies have not been idle. They have  
11 undertaken many activities to correct the operation of the FCRPS regarding adverse impacts on  
12 listed species. An impressive summary of the federal actions taken over the last 15 years has been  
13 provided to this court. *See Overhaul of the System 2007*, App. A. Adding to the evolving picture of  
14 FCRPS-related fish actions over the last ten years, the Columbia Basin States (working with NMFS,  
15 the Columbia Basin tribes and the Northwest Power and Conservation Council) have produced  
16 sophisticated watershed-based sub-basin plans and in many cases fully approved salmon recovery  
17 plans. These locally developed and supported recovery plans, requiring millions of dollars of  
18 funding, are now in various stages of implementation and provide the context within which the  
19 biological opinion will be implemented. The 2008 biological opinion actively promotes these  
20 salmon recovery objectives and will fund many of the projects that implement those objectives to  
21 enhance recovery prospects.

22 Finally, the collaboration has done much over the last three years to shape not only the new  
23 biological opinion but also how we work together as a region. Prior biological opinions were  
24 developed without the direct and active input from the tribal and state sovereigns within the region.  
25 That has changed with this biological opinion. The collaborative remand was an important step in  
26 bringing together the regional interests with the resources, expertise and commitment to ensure that  
27 this biological opinion will be implemented as intended. The collaboration has also provided a  
28

1 common table and an openness to accommodate differences of perspective. This will continue  
2 under this biological opinion with the Regional Implementation Oversight Group.

3         Needless to say, the collaboration did not, and given the complexity of issues likely could  
4 not, produce complete consensus. That lack of consensus is in many ways indicative of the full  
5 vetting of issues that took place in the collaborative remand, where honest and qualified experts  
6 continue to disagree on certain points. In the end however, the unqualified directive of the federal  
7 Administrative Procedures Act, and the Endangered Species Act, is that NMFS must be the final  
8 arbiter of those disputed issues.

9         There has been no shortage of references to Judge Marsh's 1994 opinion that admonished  
10 the federal defendants for simply protecting the *status quo* when he believed a major overhaul was  
11 necessary. But by building on the significant federal actions taken since the first listings, by  
12 focusing our efforts on an ESU-by-ESU approach that looks at the specific needs of fish, and by  
13 working collaboratively within the context of region-wide salmon recovery plans and efforts, the  
14 major overhaul called for by Judge Marsh is well underway with this biological opinion. The 2008  
15 biological opinion responds to an enormously complex and controversial challenge. The States are  
16 confident that NMFS has approached the 2008 biological opinion with a firm commitment to apply  
17 the Endangered Species Act and its implementing regulations in a faithful manner and with the best  
18 available data and science. The States believe it is now time to unite behind this biological opinion  
19 and work collectively and collaboratively to ensure that it succeeds. With that goal in mind they  
20 have joined in this memorandum.

## 21 **II. PRELIMINARY STATEMENT**

22         This litigation is of a piece with the challenges to the 2000 and 2004 biological opinions  
23 concerned with the operation of the FCRPS hydroelectric projects. Like the prior challenges, it  
24 turns principally, if not entirely, on the legal adequacy of the jeopardy and adverse modification  
25 standards and attendant methodology applied to an extraordinarily complex set of action agency-  
26 conducted or funded activities. Those activities, for purposes of the 2008 FCRPS biological  
27 opinion, encompass three of the four "Hs": hydro, habitat and hatcheries. The fourth "H"—  
28 harvest—is also considered in the jeopardy analysis as part of the environmental baseline but was

1 subject to a separate biological opinion whose validity is not before this Court. Plaintiff National  
2 Wildlife Federation *et al.* ("NWF") argues that the 2008 opinion "unapologetically adopts another  
3 novel approach to a jeopardy analysis" unsanctioned by statute, regulation, agency policy or prior  
4 practice. Doc. 1498 ("NWF Br.") at 1. Intervenor-plaintiff State of Oregon concurs. *E.g.*, Doc.  
5 1508 ("Oregon Br.") at 2 ("[t]he recovery standard used in the 2008 biological opinion not only  
6 lacks a necessary relationship to actual recovery, it also is scientifically meaningless").

7 The intervenor-defendant States disagree with NWF and their sister State. NMFS has  
8 employed a jeopardy analysis that fits squarely with the four corners of the language in section  
9 7(a)(2) of the Endangered Species Act ("ESA"), 16 U.S.C. § 1536(a)(2), the definitions of the  
10 relevant terms as embodied in agency regulations codified at 50 C.F.R. § 402.02, and prior decisions  
11 of the Ninth Circuit in its most recent decision concerning the 2004 biological opinion and this  
12 Court in related litigation. *See Nat'l Wildlife Fed'n v. NMFS*, 524 F.3d 917, 930 (9th Cir. 2008);  
13 *Am. Rivers, Inc. v. NOAA Fisheries*, No. CV-04-0061-RE, 2006 WL 1455629, at \*10 (D. Or. May  
14 23, 2006). Indeed, to the extent NMFS employs the "trending toward recovery" consideration as  
15 part of its formal quantitative jeopardy analysis—the focus of NWF and Oregon's challenge—the  
16 agency exceeded the duty imposed under the ESA section 7(a)(2) which, as construed in applicable  
17 regulations, forecloses "*reduc[ing] appreciably* the likelihood of survival of both survival and  
18 recovery of a listed species in the wild." 50 C.F.R. § 402.02 (defining the term "[j]eopardize the  
19 continued existence of") (emphasis supplied). The principal issue before the Court is, therefore,  
20 quite narrow and focuses squarely on whether the jeopardy standard adopted in the biological  
21 opinion satisfies ESA requirements.

22 To be sure, NWF and Oregon question NMFS' application of the jeopardy standard on  
23 various grounds. Their attacks, however, ask this Court to ignore settled principles of deference to  
24 agency expertise, particularly where matters of scientific or technical expertise are involved and  
25 where an agency must make decisions in the face of less-than-complete data or conflicting views on  
26 how those data should be analyzed. NMFS has been directed by Congress to make judgment calls  
27 in a singularly daunting area of environmental protection, and the judiciary lacks both the statutory  
28 mandate and the institutional competence to do other than ensure that the agency gave a reasoned

1 explanation for its determination. The 2008 biological opinion plainly passes muster under that  
2 highly deferential measure.<sup>1</sup>

### 3 **III. STATEMENT**

#### 4 **A. Litigation Background**

5 The 2008 biological opinion is the seventh biological opinion issued by NMFS over a 16-  
6 year period concerning the effect of FCRPS operations on listed salmon and steelhead. With the  
7 exception of the 1994 opinion, all have been challenged judicially.<sup>2</sup> Each prior opinion has differed  
8 from its predecessor in material ways. *E.g.*, *American Rivers*, slip op. at 12 (NMFS "substantially  
9 modified its jeopardy standard" in response to earlier decision and following consultation with other  
10 entities and consideration of intervening report); *NWF*, 524 F.3d at 926 ("[o]n remand [from  
11 invalidation of the 2000 biological opinion, NMFS made several structural changes to its jeopardy  
12 analysis]"). Most recently, this Court found significant flaws, *inter alia*, in the jeopardy and adverse  
13 modification analysis of the 2004 biological opinion and remanded with instructions that certain  
14 issues be addressed and that the remand process include collaboration between the involved federal

---

15 <sup>1</sup> The States do not address in this memorandum the claim asserted by NWF under the  
16 section 401 of the Clean Water Act ("CWA"), 33 U.S.C. § 1341. It is their understanding that the  
17 federal defendants and other intervenor-defendants will oppose NWF's summary judgment motion  
18 and cross-move for summary judgment as to that claim. Given this understanding and their desire to  
19 file a joint brief on the ESA-related claims deemed to be the core of this litigation, the States have  
20 limited their summary judgment motion to those ESA claims. The States do reserve the right to  
21 respond in a reply brief, either jointly or separately, to arguments raised by other parties concerning  
22 the CWA claim.

23 <sup>2</sup> *Pac. N.W. Generating Co-op. v. Brown*, 822 F. Supp. 1479 (D. Or. 1993) (declining to  
24 reach, *inter alia*, merits of claim that ITS in 1992 opinion was improperly conditioned on providing  
25 flow augmentation), *aff'd*, 38 F.3d 1058 (9th Cir. 1994); *Idaho Fish & Game Dep't v. NMFS*, 850 F.  
26 Supp. 886 (D. Or. 1994) (IDFG) (invalidating 1993 biological opinion for applying incorrect  
27 jeopardy standard and inadequately explaining analytical assumptions), *vacated on mootness*  
28 *grounds*, 56 F.3d 1071 (9th Cir. 1995) (relying on issuance of 1995 biological opinion as moot  
challenge to 1993 biological opinion); *Am. Rivers v. NMFS*, No. 96-384-MA (D. Or. Apr. 3, 1997)  
(upholding 1995 biological opinion), *aff'd*, No. 97-36159 (9th Cir. Mar. 8, 1999); *Nat'l Wildlife*  
*Fed'n v. NMFS*, 254 F. Supp. 2d 1196 (D. Or. 2003) (Doc. 396) (invalidating 2000 biological  
opinion because of improperly defined "action area" and inclusion in RPA of (a) federal actions  
over which consultation had not taken place and (b) non-federal action not reasonably certain to  
occur); *Nat'l Wildlife Fed'n v. NMFS*, No. CV-01-640-RE, 2005 WL 1278878 (D. Or. May 26,  
2005) (Doc. 986) invalidating 2004 biological opinion on the basis of an improper jeopardy standard  
for survival-determination purposes, a faulty adverse modification finding, and a failure to consider  
recovery independently in the jeopardy analysis), *aff'd*, 524 F.3d 917 (9th Cir. 2008).

1 agencies and other Columbia River Basin sovereigns. *Nat'l Wildlife Fed'n v. NMFS*, No. CV-01-  
2 640-RE, 2005 WL 2488447 (D. Or. Oct. 7, 2005) (Doc. 1087).<sup>3</sup>

3 As six remand reports to this Court indicate,<sup>4</sup> the Federal defendants instituted a  
4 comprehensive and lengthy process that centered on collaboration with the four principal Basin  
5 States and seven Indian tribes.<sup>5</sup> Parties to this litigation other than sovereigns did not participate  
6 directly in the collaboration but were offered the opportunity to observe technical workgroup  
7 meetings and to participate in "Tier II" conferences for purposes of commenting on matters under  
8 collaboration. *See* Doc. 1249, Attach. 1; Doc. 1252, Main Doc. at 6. The collaborating parties  
9 established 14 technical working groups that were overseen by the Policy Work Group. *Id.* at 4-5.<sup>6</sup>

10  
11 <sup>3</sup> More specifically, the Court ordered NMFS to do the following on remand with respect to  
its substantive analysis:

- 12 1) Correct its improper segregation of the elements of the proposed action NOAA deems to  
be nondiscretionary;
- 13 (2) Correct its improper comparison, rather than aggregation, of the effects of the proposed  
action on the listed salmon and steelhead;
- 14 (3) Correct its flawed determinations as to whether the proposed action destroys or  
adversely modifies critical habitat;
- 15 (4) Correct its failure to consider the effects of the proposed action on both recovery and  
survival of the listed species in determining whether the proposed action is likely to  
16 jeopardize the continued existence of listed salmon and steelhead; and
- 17 (5) Correct its past reliance on mitigation measures that are not reasonably certain to occur  
and/or have not undergone Section 7 consultation.

18 2005 WL 2488447, at \*5. As to inter-sovereign collaboration, it directed NMFS and the action  
agencies to

19 collaborate with the sovereign entities, including the States of Idaho, Montana, Oregon, and  
20 Washington, and the Tribes who are parties or *amici* in this action (the Nez Perce,  
Umatilla, Yakima, Warm Springs, and Kootenai Tribes) to achieve the goals of:

- 21 (a) Developing items to be included in the proposed action; and
- 22 (b) Clarifying policy issues and reaching agreement or narrowing the areas of disagreement  
on scientific and technical information.

23 *Id.*; *see also* AR A.1 ("BiOp") at 1-6.

<sup>4</sup> Docs. 1222, 1252, 1265, 1283, 1309, 1346.

24 <sup>5</sup> The involved tribes were *amici curiae* Confederated Tribes of the Warm Springs  
Reservation, Confederated Tribes of the Umatilla Reservation, Confederated Tribes and Bands of  
25 the Yakama Nation, and Nez Perce Tribe, both individually and through the Columbia River Inter-  
Tribal Fish Commission, and *amicus curiae* Confederated Tribes of the Colville Reservation,  
26 intervenor-defendant Kootenai Tribe, and *amicus curiae* Spokane Tribe. *See* Doc. 1252 at 4 n.3;  
BiOp at 1-7.

27 <sup>6</sup> The various working groups consisted of the following: All-H Integration Workgroup;  
28 Contingencies Workgroup; Critical Habitat Work Group; Framework Workgroup; Habitat  
Workgroup; Hatchery and Harvest Workgroup; Hydro Actions Workgroup; Hydro Analysis

1 Almost 300 collaboration-related meetings occurred in connection with formulation of the agency  
2 action and other matters central to the 2008 biological opinion's analysis. BiOp at 1-8. The  
3 collaboration extended over an 18-month period. *See* Doc. 1222 (Federal defendants' first remand  
4 status report filed January 3, 2006); Doc. 1346 (Federal defendants' sixth remand status report filed  
5 May 21, 2007). The final status report attached various documents that were the collaboration's  
6 work product and set out in all essential respects the proposed action reviewed under section 7(a)(2)  
7 by NMFS. *Id.*, Attachs. 2-9.

8 This Court left in place as part of the remand the ITS issued as part of the otherwise vacated  
9 2004 biological opinion. The action agencies—the Corps and the Bureau of Reclamation  
10 ("BOR")—operated the FCRPS and the other facilities subject to the that biological opinion  
11 consistently with its terms or the recommendations of the agencies except for what the Court  
12 deemed as a "radical departure" from existing practice as to late spring spill. Doc. 1229 at 7. The  
13 Court found the study upon which the Corps premised the recommendation, in light of NWF's  
14 criticism, as failing to negate "the continuing uncertainty regarding the relative benefits of  
15 transportation and spill in facilitating safer migration of smolts" so as to provide an adequate basis  
16 for abandoning the "'spread the risk' philosophy . . . originally formulated as a response to that  
17 uncertainty." *Id.* at 1-8. This spill regime continued during the 2007 operating season, "except for  
18 changes to reflect the anticipated structural improvements at two facilities," under an agreement  
19 (Doc. 1303, Attach. at 1) approved by the Court in April 2007 (Doc. 1340) and adopted as an order  
20 in the following month (Doc. 1347 at 6). The Court in February 2008 entered as an order an  
21 agreement between NWF and the federal defendants to adhere to the 2008 Fish Operations Plan  
22 until 11:59 p.m. on August 31, 2008, at which time the terms and conditions of the 2008 biological  
23 opinion became controlling. Doc. 1423. Pursuant to the Court's directive, finally, the federal  
24 defendants filed periodic spill implementation reports and, pursuant to the May 2007 order, continue  
25 to notify the Court of any "variation from required fish-protection measures . . . as soon as  
26

27 Workgroup; Hydro Forecasting Workgroup; Hydro Regulation Modeling Workgroup; Oversight  
28 and Governance Workgroup; Passage Model Workgroup; Recovery Workgroup; and Research,  
Monitoring and Evaluation Workgroup. *See* Doc. 1239, Attach. 1.

1 practicable" and report, where such measures have been violated, "the mitigation measures that may  
2 be appropriate to account for such violation." Doc. 1347 at 7. Except in quite limited  
3 circumstances, therefore, the FCRPS and other facilities subject to the 2004 biological opinion have  
4 been operated in accordance with the proposed action that it reviewed.

5 **B. 2008 Biological Opinion: The Jeopardy and Adverse Modification Standards**

6 The core of the 2008 biological opinion lies in the standards against which it makes the  
7 determinations required under section 7(a)(2)—whether the reasonable and prudent alternative  
8 ("RPA") identified in the opinion is "likely to jeopardize the continued existence of any [listed]  
9 species or result in the destruction or adverse modification of [critical] habitat of such species."<sup>7</sup>  
10 Indeed, three of the five areas identified by this Court in its remand order as issues to be addressed  
11 concerned essentially legal errors found in the 2004 biological opinion with respect to the jeopardy  
12 standard's formulation and application. *See supra* n.2. A fourth area focused on correcting errors in  
13 the adverse modification analysis. The biological opinion and two foundational NMFS memoranda  
14 address these matters in detail.

15 **1. The Jeopardy Standard**

16 The general five-step analysis employed in reaching the jeopardy determination is  
17 summarized in section 1.7 of the biological opinion. BiOp at 1-10 – 1-14. It follows generally the  
18 analysis pattern prescribed in 50 C.F.R. § 402.14(g)(1)-(5). Of central importance for immediate  
19 purposes is the fourth step which requires a determination concerning "whether the species can be  
20 expected to survive with an adequate potential for recovery (e.g., trending toward recovery) under  
21 the effects of the proposed or continuing action, the effects of the environmental baseline, and any

22 <sup>7</sup> The 2008 biological opinion uses the reasonable and prudent ("RPA") format for its  
23 determination because the opinion's "goal . . . is to correct the legal deficiencies of its 2000 FCRPS  
24 Biological Opinion and RPA." BiOp at 1-6. NMFS therefore viewed "the focus of the Biological  
25 Opinion, as it was for the remand collaboration with regional sovereigns," to be development of "a  
26 program of action for the FCRPS that avoids jeopardy and adverse modification of critical habitat  
27 and otherwise satisfies the regulatory definition for a 'reasonable and prudent alternative' (50 C.F.R.  
28 § 402.02)." *Id.* at 1-7. The biological opinion and the attendant supplemental comprehensive  
analysis also uses the term "prospective action" but does so typically when discussing FCRPS-  
related activities under consultation, those subject to consultation by BOR with respect to its Upper  
Snake Basin operations, and the management agreement in *United States v. Oregon*, Civil No. 68-  
513-KI (D. Or.). *E.g., id.* at 3-4; AR A.2 ("SCA") at 2-3. The term "RPA" will be applied to the  
agency activities under review here.

1 cumulative effects." BiOp at 1-12 (emphasis and italics removed). This general formulation of the  
2 jeopardy standard, as NMFS explains, anticipates an analysis that "looks at the aggregate of all . . .  
3 effects going forward" with a focus "on the resulting survival and recovery potential." *Id.* The  
4 geneses of the "trending toward recovery" standard were July and September 2006 memoranda sent  
5 by NMFS Regional Administrator D. Robert Lohn to the collaboration process's Policy Work  
6 Group. AR B0343, B0344.

7                                   a.       **The 2006 Jeopardy-Analysis Memoranda**

8           The first memorandum set out NMFS' understanding of the jeopardy standard articulated in  
9 the Court's May 2005 partial summary judgment decision and stated that the required jeopardy  
10 analysis demands review of the "aggregated effects" which "necessarily include not only the  
11 proposed action (or RPA)[] but also other Federal actions that have completed consultation and,  
12 thus, are in the environmental baseline and non-Federal activities in the other Hs that will contribute  
13 to the aggregated effects." AR B0343 at 2. As to the jeopardy standard itself, the memorandum  
14 reasoned that this Court "has made clear that if an ESU is currently trending towards extinction, then  
15 NOAA must determine whether the [aggregated] effects of the proposed action (or RPA) . . . will  
16 reverse that trend and thereby contribute to recovery." *Id.* (citing *Am. Rivers*, 2006 WL 1455629, at  
17 \*10) (emphasis supplied). It further stated that "no one [quantitative] metric will be used to assess  
18 an ESU's potential for recovery" given "the uncertainty attendant to any metric regarding the  
19 prospects for recovery and the difficulty in extrapolating from the population level on which those  
20 metrics are based." *Id.* Instead, NMFS intended to "consider a number of metrics, including those  
21 generated in the recovery planning process, along with other qualitative biological information and  
22 apply its best professional judgment to an ESU's prospects for recovery." *Id.* The memorandum  
23 added that, as to the survival prong of the jeopardy analysis, "NOAA will consider the short-term  
24 extinction risk using available metrics and other qualitative biological information." *Id.* at 3.

25           The September memorandum outlined the anticipated jeopardy analytical process generally.  
26 AR B0344.<sup>8</sup> With respect to the recovery prong, it explained that NMFS would first prepare a

27                                   <sup>8</sup> Regional Administrator Lohn emphasized in the memorandum's introduction that the  
28 ensuing discussion was "intended to be illustrative, indicating the kinds of metrics and qualitative  
information that we currently believe to be useful and applicable" but that, in the absence of a

1 baseline, or "current status," analysis directed to identifying whether the involved salmon ESU<sup>9</sup>  
2 "appears to be trending towards recovery based on recent and longer-term estimates of abundance  
3 and productivity." *Id.* at 2. The baseline analysis was to be conducted against "the expected effects  
4 from actions already implemented but that have not yet been evidenced in adult returns." *Id.* NMFS  
5 then would "determine whether the proposed action or RPA, when added to the baseline, will result  
6 in an ESU that is trending toward recovery." *Id.* That analysis additionally would consider any  
7 "future non-federal actions that are reasonably certain to occur." *Id.* The memorandum established  
8 "[t]he expected effectiveness of the mitigation measures in reducing obstacles to recovery" as the  
9 "primary measure [NMFS] will use to determine whether the goals of maintaining or starting an  
10 ESU trending to recovery are achieved." *Id.* at 3. Any beneficial effects would only be included  
11 from the time that they are found "'reasonably expected' to accrue" from the particular mitigation  
12 action and, therefore, "may not be observable for years" such as with some habitat or hatchery  
13 improvements. *Id.*

14 NMFS made clear, as well, that the recovery analysis would be predicated on "its best  
15 scientific and professional judgment" considering "both quantitative and qualitative information"  
16 (*id.*) relating to the four viable salmonid population ("VSP") parameters—abundance, productivity,  
17 spatial population structure and genetic diversity—and that, with respect to the qualitative  
18 analysis—the agency would examine "the extent to which the listing factors in section 4(a)(1) of the  
19 ESA have been, are being, or will be reduced" by the RPA (*id.* at 4).<sup>10</sup> The quantitative metrics

20 proposed action or RPA, preparation of "either the baseline analysis or recovery analysis" and other  
21 possibly relevant information, the agency was "not now in a position to declare with specificity  
22 exactly which metrics and qualitative information will be applied." AR B0344 at 1.

23 <sup>9</sup> The memorandum included within its references to ESUs steelhead distinct population  
24 segments ("DPSs"). B0344 at 2 n.1. Similarly, the term "ESU" will be used in this brief to include  
25 both salmon ESUs and steelhead DPSs.

26 <sup>10</sup> Section 4(a)(1), 16 U.S.C. § 1533(a)(1), provides:  
27 The Secretary shall by regulation promulgated in accordance with subsection (b) of this  
28 section determine whether any species is an endangered species or a threatened species  
because of any of the following factors:  
(A) the present or threatened destruction, modification, or curtailment of its habitat or  
range;  
(B) overutilization for commercial, recreational, scientific, or educational purposes;  
(C) disease or predation;  
(D) the inadequacy of existing regulatory mechanisms; or

1 would include natural returns-per-spawner; lambda, or changes in ESU populations; changes in  
2 natural spawner ESU populations; and life-stage-survival information. *Id.* NMFS emphasized that  
3 none of the metrics "assesses by itself the status of a given ESU to the degree necessary to render a  
4 jeopardy determination." *Id.* at 3.

5 As to the survival prong of the jeopardy analysis, the September memorandum stated that  
6 NMFS also would "consider metrics and other qualitative biological information in addition to"  
7 those considered for recovery prong purposes." B0344 at 5. The qualitative component of the  
8 analysis would be directed towards making judgments concerning:

- 9 • The degree to which safety-net and/or supplementation hatchery programs meet  
10 program objectives;
- 11 • The degree to which actions targeted at limiting factors and threats are anticipated  
12 to generate biological benefits in the short term have been implemented; and
- 13 • The effectiveness of monitoring, performance standards, adaptive management, and  
14 governance in addressing short-term threats to the ESU[.]

15 *Id.* NMFS, in turn, would determine on the basis of its quantitative and qualitative assessment  
16 "whether the short-term extinction risk is sufficiently low" so as not to reduce the likelihood of  
17 satisfying the recovery standard. *Id.* The survival-prong analysis, in other words, was to serve the  
18 purpose of assessing the probability of a species being extirpated by "[t]he effects of the existing  
19 conditions on the ESUs" prior to the RPA's effects accruing. *Id.* at 3.<sup>11</sup>

20 Several core analytical principles emanate from the memoranda. *First*, NMFS' recovery-  
21 prong jeopardy analysis would examine whether the RPA would either promote or not diminish the  
22 likelihood of individual ESUs trending towards achieving the recovery factors identified in section  
23 4(a)(2). This examination would be conducted through application of multiple quantitative metrics,

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(E) other natural or manmade factors affecting its continued existence.

25 <sup>11</sup> The memorandum discussed in a separate section NMFS' intent to use work-product of the  
26 sovereigns' collaboration, together with information developed by the agency's Biological Review  
27 Team, Technical Recovery Team and recovery planners or supplied by plaintiffs, in conducting its  
28 jeopardy analysis. B0344 at 5-6. NMFS stressed, however, that "the ultimate jeopardy  
determination will be made consistent with the analytical approach outlined in the Jeopardy  
Memorandum using metrics and qualitative information as discussed in this memo." *Id.* at 6.

1 where possible, directed to the first two VSP parameters and a qualitative assessment of other  
2 information relevant to the second two VSP parameters. *Second*, NMFS' survival-prong jeopardy  
3 analysis would examine the likelihood of baseline conditions and cumulative effects foreclosing,  
4 through near-term species extinction, the potential for recovery prior to the RPA's full  
5 implementation. This examination, like the recovery-prong analysis, would be undertaken through  
6 consideration of various quantitative metrics and qualitative factors tailored to assessing short-term  
7 risk of extinction. *Third*, the section 7(a)(2) finding would reflect a determination predicated on the  
8 NMFS' professional judgment concerning the most appropriate interpretation of the quantitative and  
9 qualitative technical analysis and the agency's application of that interpretation against the jeopardy  
10 standard established as the law of the case.

11 Lastly, subsequent to the memoranda's preparation, the Ninth Circuit issued its decision in the appeal  
12 from this Court's partial summary judgment invalidating the 2004 biological opinion, *National Wildlife*  
13 *Federation v. NMFS*, 422 F.3d 782 (9th Cir. 2007), *amended*, 524 F.3d 917 (2008). As discussed *infra* at  
14 Section I, these opinions endorsed a jeopardy standard less stringent than the "trending towards recovery"  
15 objective identified by Regional Administrator Lohn. That objective nonetheless remains relevant because  
16 the "trending toward recovery" metrics formed the basis for the quantitative analysis applied to six of the 13  
17 ESUs.

18 **b. Application of the Jeopardy Standard in the Biological Opinion**

19 The 2008 biological opinion addresses the analytical methods used to make the jeopardy  
20 determination in chapter 7. BiOP at 7-1 – 7-52; *see* SCA at 7-1 – 7-52 (same). Detailed  
21 quantitative analysis, as described in Regional Administrator Lohn's memoranda, was conducted  
22 only for the Upper and Middle Columbia River and the Snake River ESUs (collectively, "Interior  
23 Columbia River ESUs"), other than the Snake River Sockeye ESU for which insufficient data were  
24 available. BiOp at 7-2.<sup>12</sup> The methodology is detailed and technically complex, but its basic

25  
26 <sup>12</sup> The remaining ESUs are the Lower Columbia River Chinook, Lower Columbia River  
27 steelhead, Lower Columbia River Coho, Lower Columbia River Chum, Upper Willamette River  
28 Chinook and Upper Willamette River steelhead. Although the analysis as to certain of these ESUs  
presents data related to the abundance and productivity VSP parameters, NMFS did not apply the  
various recovery and survival metrics to them. *See* BiOp at 8.9-1 – 8.14-23; *see also id.* at 7-36  
(data for the various lower Columbia River ESUs were generally not robust and that, where

1 components are clear.

2 (i) The Recovery-Prong Analysis Generally

3 The biological opinion's quantitative analysis as to the recovery-prong applies the three  
4 metrics discussed in the memoranda: average returns-per-spawner ("R/S"), median population  
5 growth rate or lambda, and NMFS's West Coast biological review team ("BRT") population trend  
6 methodology. BiOp at 7-22 – 7-26. The R/S metric, as its title indicates, attempts to measure the  
7 extent to which adults, here those naturally spawned, reproduce and "determines whether a  
8 population is maintaining itself, declining, or growing[.]" with simple maintenance reflected in a 1.0  
9 value. *Id.* at 7-22. NMFS deemed this metric as "the most realistic assessment of the likelihood that  
10 a population will trend toward recovery in the absence of continued hatchery programs." *Id.* at 7-23.  
11 It nevertheless has certain limitations because of its unavailability for some populations and, as to  
12 most stocks, for brood years after 1999. *Id.* The lambda measure embodies a four-year running  
13 average of natural and hatchery adult ESU population levels measured annually over time. BiOp at  
14 7-24. A value of 1.0 represents a stable average. *Id.* NMFS deemed that an appropriate measure of  
15 population maintenance but recognized "consideration of the mix of populations at higher levels [as]  
16 an important qualitative consideration for reaching species-level conclusions." *Id.* at 7-25. Given  
17 the nature of the running average, data for its use were unavailable, depending on the ESU, for  
18 periods after 2001-2004. *Id.*

19 The BRT population trend metric data were derived from a prior analysis directed to all  
20 listed West Coast salmonid stocks and, in relevant part, examined by year the number of natural  
21 origin spawners for all available Interior Columbia River ESU populations through, generally, 2001.

22  
23 available, "changes [reflected in the data] were expressed mainly in terms of direction  
24 (improvement/reduction) with qualitative descriptions of magnitude"); *id.* at 7-42 (discussing the  
25 "more qualitative approach" used in jeopardy analyses for the Lower Columbia, Willamette and  
26 Snake River Sockeye ESUs). The spawning locations and migration corridors of these ESUs are  
27 such that FCRPS operations have less and, in some instances, substantially less impact on their  
28 survival and recovery than on the Interior Columbia River ESUs. *Id.* at 7-3. NMFS similarly  
concluded that the listed stocks' potential for recovery and short-term survival likelihood would not  
be diminished by the RPA. *See, e.g.,* BiOp at 8.10-5 ("FCRPS impacts have been limited [for the  
Lower Columbia River Chinook ESU], but are most significant for the five populations that spawn  
in tributaries above Bonneville Dam").

1 *Id.* This metric "does not track the ability of the population to sustain itself and grow in the absence  
2 of hatchery production like the R/S estimates" but does provide "a useful characterization of status"  
3 insofar as it "reflects the most recent data more strongly than the other indices, since the most recent  
4 year's spawner abundance is weighted equally to all other years." *Id.* at 26. Each metric, therefore,  
5 examines different ESU-related population phenomena and possesses certain analytical strengths  
6 and limitations; overall, they provided a technically robust quantitative picture of species abundance  
7 and productivity.

8 Recovery-prong qualitative considerations relate to climate change and the VSP parameters.  
9 BiOp at 7-32 – 7-34, 7-35 – 7-37. With regard to climate change, NMFS assessed, for both  
10 recovery and survival-prong purposes, the extent to which the RPA "implement[s] recommendations  
11 by the ISAB [Independent Science Advisory Board] . . . to reduce impacts of climate change on  
12 anadromous salmonids." *Id.* at 7-32. As to the abundance and population VSP parameters, NMFS  
13 stated that data were not available for all populations and, consequently, "qualitative considerations  
14 include the similarity of populations without adequate data to populations with adequate data." *Id.*  
15 at 7-36. An important factor as to all ESUs was "whether improving trends in abundance and  
16 productivity [were] solely result of fortuitous climate conditions or if they are also a result of  
17 beneficial human activities." The spatial structure VSP analysis examined various considerations  
18 identified in prior technical recovery team studies with respect to the importance of "the number and  
19 spatial arrangement of major spawning areas (MaSA) and minor spawning areas . . . , the proportion  
20 of the historical range that is occupied, and increases or decreases in gaps between occupied  
21 MaSAs." *Id.* at 7-37. NMFS, relying on the same studies, examined the diversity VSP parameter  
22 by reference to "retention of major life history expressions (e.g., summer vs. spring runs),  
23 maintenance of phenotypic and genetic variability, maintenance of natural patterns of gene flow  
24 (including various criteria for assessing impacts of hatchery programs), and reduction of selective  
25 changes resulting from human activities (e.g., large fish selection in fisheries)." *Id.*

26 (ii) **The Survival-Prong Analysis Generally**

27 NMFS selected a 24-year time period for its survival-prong analysis because, *inter alia*, "[i]t  
28 has been . . . well-documented that the precision of the risk estimate decreases with longer time

1 horizons" and "the main purpose of the metric is to inform our judgment regarding the ability of the  
2 species to survive while actions to promote recovery are implemented under the Prospective Actions  
3 and through other processes." BiOp at 7-18. For purposes of its quantitative analysis, the agency  
4 established a quasi-extinction threshold ("QET") of 50 fish for four consecutive years, noting that  
5 "the use of absolute extinction as a criterion" was problematic since "it is very difficult to predict the  
6 dynamics of populations at extremely low abundance." *Id.* at 7-15.<sup>13</sup>

7 In addition to the VSP parameters considered in the recovery-prong analysis, NMFS  
8 assessed qualitatively for survival-prong purposes those factors identified in the September 2006  
9 memorandum: recent abundance, recent productivity, safety-net or supplementation programs,  
10 reduction of "limiting factors," and monitoring and adaptive management protocols. BiOp at 7-35.  
11 It viewed recent abundance and productivity as potentially "informative" given the "tendency for  
12 populations at low abundance to bounce around, possibly going to zero" and the fact that "relatively  
13 high abundance, especially if coupled with an indicator of sufficient productivity, would indicate a  
14 reduced likelihood of short-term extinction." *Id.* "[A] growing population" thus "can indicate a  
15 lower risk of short-term extinction." *Id.* As to the other factors, NMFS reasoned that "[s]ome  
16 hatchery programs provide a short-term cushion to prevent extinction while longer-term recovery  
17 measures are being implemented[;]" and in instances where difficulty or uncertainty exists in  
18 quantifying survival changes attendant to the RPA, "a qualitative description of the degree to which  
19 [the RPA] reduce limiting factors is relevant[;]" and "a monitoring program will ensure that  
20 unexpected reductions in species are detected in a timely manner so that contingent adoptive  
21 management actions can be implemented in response." *Id.* NMFS also weighed these additional  
22 factors in its recovery-prong analysis. *Id.* at 7-36.

23  
24 <sup>13</sup> NMFS stressed, by reference to an Independent Scientific Advisory Board ("ISAB")  
25 report, that the QET "should not be considered equivalent to the probability of biological  
26 extinction" but, rather, "should be interpreted as the probability of entering a state where the risk of  
27 extinction cannot be modeled but is considered to be unacceptably high." BiOp at 16. NMFS also  
28 performed QET statistical analyses using thresholds of 1, 10 and 30 fish for sensitivity purposes,  
observing that "there are certain populations that have dropped below 50 fish over four years (in  
some cases more than once) and that have not gone extinct." *Id.*; see also *id.* at 7-18 – 7-19  
(responding to comments concerning QET level).

LAW OFFICES  
GLASER, WEIL, FINK, JACOBS & SHAPIRO, LLP  
10250 CONSTELLATION BOULEVARD  
NINETEENTH FLOOR  
LOS ANGELES, CALIFORNIA 90067  
(310) 553-3000

1 (iii) Application of the Quantitative Metrics and Qualitative  
2 Considerations Generally

3 Because the jeopardy inquiry is directed at determining whether the RPA would maintain or  
4 increase an ESU's potential for recovery and assessing the short-term possibility of species  
5 extinction prior to the RPA's effects accruing, NMFS employed the quantitative metrics to estimate  
6 several "survival gaps"—base, current and future—to address both issues. BiOp at 7-7. The gap  
7 analysis provided a framework for assessing ESU status upon implementation of the RPA. *Id.* at 7-  
8 4. It estimated that status by sequentially applying the survival and recovery-prong metrics to the  
9 species' base condition (or ESU population performance during "approximately the 1980 through  
10 1999 brood years" as reflected in returns through 2003 or 2004); to its current condition (or  
11 estimated population performance "if the current management actions continue into the future" and  
12 including changes made during the base period); and, finally, to its future condition (or estimated  
13 population performance if the RPA is implemented). *Id.* at 7-11. The biological opinion sets out  
14 schematics for the Marsh Creek population of the Snake River Spring/Summer Fall Chinook ESU  
15 illustrating the basic methodology. *Id.* at 7-9 – 7-10 (Figs. 7.1-1 & 7.1-2).<sup>14</sup> NMFS reported the  
16 quantitative analysis with reference to major population groups within the various ESUs.

17 NMFS' narrative assessment with respect to the RPA's anticipated effects, together with a  
18 summary of quantitative analysis where an Interior Columbia River ESU is at issue, is set out for  
19 each ESU by "H" and includes an independent discussion of impacts on predation. *E.g.*, BiOP at  
20 8.3-18 – 8.3-27 (Snake River Spring/Summer Chinook ESU). The biological opinion additionally  
21 discusses, by major population group, the aggregate impact of environmental baseline effects,  
22 cumulative effects and the RPA's effects. *Id.* at 8.3-27 – 8.3-39. The tabular summary of recovery  
23 prong-related estimates includes entries with respect to NMFS' assessment of the four VSP  
24

25 <sup>14</sup> Actual application of the survival gap analysis to the Interior Columbia River ESUs  
26 appears in chapter 8. *E.g.*, *id.* at 8.3-50 (Table 8.3.2-4) (survival gaps for Snake River  
27 Spring/Summer Chinook ESU population groups), 8.3-52 (Table 8.3.3-1) (base-to-current "survival  
28 adjustment" multipliers), 8.3-54 (Table 8.3.5-1) (current-to-future "survival adjustment"  
multipliers)). Other tables summarize the RPA's effect generally on the recovery prong (*e.g.*, *id.* at  
8.3-56 (Table 8.3.6.1-1)) and the survival prong (*e.g.*, *id.* at 8.3-58 (Table 8.3.6.1-2)).

1 parameters. *E.g., id.* at 8.3-66 (Table 8.3.6.1-1). The opinion thus explains in detail the rationale  
2 for the jeopardy-related quantitative and qualitative conclusions.

### 3                   2.       Adverse Modification Standard

4           The July 2006 memorandum stated that NMFS would consider, for purposes of making the  
5 adverse modification determination, "the same aggregate effects" as considered in the jeopardy  
6 analysis "from the perspective of the Primary Constituent Elements (PCEs) of designated critical  
7 habitat." B0343 at 3. The standard is whether, "after the addition of the proposed action, . . . habitat  
8 remains functional (or retains the current ability for the PCEs to become functionally established) to  
9 serve the intended conservation (i.e., recovery) role for the species." *Id.* at 4.

10           The biological opinion itself describes the analytical process generally (BiOp at 7-52) and  
11 applies that process to each of the listed species subject to the consultation (*e.g., id.* at 8.3-45). The  
12 PCEs themselves are summarized tabularly for certain ESU and narratively for others. *Id.* at 3-5 –  
13 3-6. In general terms, they address the suitability of spawning, rearing, migratory corridor and  
14 estuarine areas for the particular ESU and, therefore, focus on matters such as water quality,  
15 quantity, velocity and temperature; cover/shelter, riparian vegetation and food; and stream  
16 connectivity and obstructions. The biological opinion applies the adverse modification standard  
17 specified in the memoranda. *Id.* at 7-52.

### 18       IV.       STANDARD OF REVIEW

19           The judicial review provisions of the Administrative Procedure Act ("APA"), 5 U.S.C.  
20 §§ 701-706, govern resolution of the challenge to the 2008 biological opinion. *Bennett v. Spear*,  
21 520 U.S. 154, 174-77 (1997). Summary judgment practice under Fed. R. Civ. P. 56 is an accepted  
22 method for carrying out such review. *E.g., City & County of San Francisco v. United States*, 130  
23 F.3d 873, 877 (9th Cir. 1997); *Occidental Eng'g Co. v. INS*, 753 F.2d 766, 770 (9th Cir. 1985);  
24 *Home Builders Ass'n v. USFWS*, 529 F. Supp. 2d 1110, 1117 (N. D. Cal. 2007). However, as the  
25 seminal *Occidental Engineering* establishes, the role of a district court in APA-based judicial review  
26 differs markedly from that in a non-APA case. There, in rejecting an argument that the lower court  
27 had erred in finding the absence of disputed fact in an administrative review case, the Court of  
28 Appeals reasoned:

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[T]here are no disputed facts that the district court must resolve. That court is not required to resolve any facts in a review of an administrative proceeding. Certainly, there may be issues of fact before the administrative agency. However, the function of the district court is to determine whether or not as a matter of law the evidence in the administrative record permitted the agency to make the decision it did. *De novo* fact finding by the district court is allowed only in limited circumstances that have not arisen in the present case. . . . The appellant confuses the use of summary judgment in an original district court proceeding with the use of summary judgment where, as here, the district court is reviewing a decision of an administrative agency *which is itself the finder of fact*. In the former case, summary judgment is appropriate only when the court finds there are no factual issues requiring resolution by trial. In the latter case, summary judgment is an appropriate mechanism for deciding the legal question of whether the agency could reasonably have found the facts as it did.

753 F.2d at 766 (citations omitted; emphasis supplied). Consequently, to the extent that factual controversies may exist in the administrative proceeding, the agency—and not a reviewing court—is charged with determining how best to resolve them, with that determination subject to judicial review under ordinary APA standards. *See Cal. Forestry Ass'n v. Bosworth*, No. 2:05-cv-00905-MCE-GGH, 2008 WL 4370074, at \*5 (E.D. Cal. Sept. 24, 2008).

The governing APA standards are settled. As the Supreme Court explained in *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360 (1989), when "making the factual inquiry concerning whether an agency decision was 'arbitrary or capricious,' the reviewing court 'must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.'" *Id.* at 378 (quoting *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971)). Deference is warranted especially with respect to technical or scientific issues whose resolution has been committed to agency expertise by Congress. *Id.*

1 ("[w]hen specialists express conflicting views, an agency must have discretion to rely on the  
2 reasonable opinions of its own qualified experts even if, as an original matter, a court might find  
3 contrary views more persuasive"); *see also Motor Vehicle Mfrs. Ass'n, Inc. v. State Farm Mut. Auto.*  
4 *Ins. Co.*, 463 U.S. 29, 43 (1983) (deference owed unless the agency explanation "is so implausible  
5 that it could not be ascribed to a difference in view or the product of agency expertise").

6 The Court of Appeals recently reiterated the quite restricted scope of judicial review under  
7 the APA. *Lands Council v. McNair*, 537 F.3d 981 (9th Cir. 2008) (*en banc*). Especially pertinent  
8 here was its discussion of deference to agency technical expertise, there the United States Forest  
9 Service's determination "as to what evidence is, or is not, necessary to support wildlife viability  
10 analyses" under the National Forest Management Act, 16 U.S.C. §§ 1600-1614. *Id.* at 992. Existing  
11 circuit precedent, the Court reasoned, "requires us to defer to an agency's determination in an area  
12 involving a 'high level of technical expertise'" and "to be 'most deferential' when the agency is  
13 'making predictions, within its [area of] special expertise, at the frontiers of science.'" *Id.* at 993.  
14 The agency simply "must explain the conclusions it has drawn from its chosen methodology[] and  
15 the reasons it considers the underlying evidence to be reliable." *Id.* at 994.

## 16 V. ARGUMENT

### 17 A. THE JEOPARDY ANALYSIS.

#### 18 1. The 2008 Biological Opinion Adheres to the Remand Direction of 19 Independently Examining Survival and Recovery and Does So Through a 20 Jeopardy Standard That Asks Whether the Various Species' Potential 21 for Recovery Will Be Diminished Appreciably by the RPA

22 In the course of the remand of the 2004 biological opinion, NMFS complied with the remand  
23 order and has now fully considered whether the effects of the RPA, when aggregated with the  
24 environmental baseline and cumulative effects, will jeopardize either the survival or the recovery of  
25 the listed species.

26 NWF and Oregon's critique of NMFS' section 7 analysis is concerned principally with the  
27 jeopardy standard used to assess the recovery prong. However, rather than demonstrating any  
28 fundamental legal defect in NMFS' analysis, the critique is essentially an expression of their

1 *preferred* manner for analyzing recovery. While their proposed format may be one manner in which  
2 to address recovery, there is no basis to conclude that the methodology employed by NMFS runs  
3 counter to the ESA's text, NMFS and FWS' guiding regulations, or binding legal precedent.  
4 Furthermore, despite NWF and Oregon's facial recognition that the development of a proposed set  
5 of actions for future operation of the FCRPS does not require the development and implementation  
6 of a recovery plan, their analysis of the manner in which a listed species' potential for recovery must  
7 be considered under section 7 of the ESA serves to blur, if not eliminate, this distinction. In order to  
8 undertake a response that avoids any improper blurring of obligations, this portion of our response  
9 brief begins with a review of the statutory and regulatory requirements that must guide NMFS'  
10 biological opinion.<sup>15</sup>

11 Section 7(a)(2) of the ESA requires federal agencies to “insure that any action authorized,  
12 funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any  
13 endangered species or threatened species or result in the destruction or adverse modification of  
14 [designated critical] habitat....” 16 U.S.C. § 1536(a)(2). The duty to avoid jeopardizing activities is  
15 further defined by regulation: “jeopardize the continued existence of” means “to engage in an action  
16 that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of  
17 both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers,  
18 or distribution of that species.” 50 C.F.R § 402.02. The section 7(a)(2) substantive duty was  
19 facilitated procedurally when the FCRPS action agencies consulted with NMFS to obtain its  
20 biological opinion ascertaining whether the RPA – future operation of the FCRPS – avoids  
21 jeopardizing listed salmonids. This case now focuses on the question of whether NMFS' biological  
22 opinion - concluding that the FCRPS action agencies RPA will not jeopardize listed salmonids or  
23 two other species - was conducted in accordance with the avoidance requirements of section 7(a)(2).

24 The Ninth Circuit has further made clear that the jeopardy portion of the section 7(a)(2)  
25 analysis “requires NMFS to consider both recovery and survival impacts.” *NWF*, 524 F.3d at 931.  
26 In the course of reaching this conclusion, the Court of Appeals relied heavily on the explanation  
27

28 <sup>15</sup> Section 7(a)(2)'s adverse modification prohibition is discussed separately in Section II below.

1 provided when the regulatory definitions of jeopardy was promulgated. The court observed that  
2 “there was some controversy over the reference to ‘both the survival and recovery,’” but noted that  
3 the regulation’s preamble described the existence of a “‘joint survival and recovery concept.’” The  
4 word “both” was added in the 1986 revisions “to emphasize that, *except in exceptional*  
5 *circumstances*, injury to recovery alone would not warrant [a jeopardy finding].” *Id.* at 932.

6 Accordingly, NMFS must address independently *both* the survival and recovery of a listed  
7 species in its section 7 jeopardy analysis; *i.e.*, there is a procedural obligation, flowing from the  
8 ESA's substantive requirements, to consider whether the proposed action will impair *either* the  
9 survival of the listed species *or* its potential for recovery if the proposed action is implemented—  
10 even though the likelihood of impermissible impairment of recovery where survival is not  
11 diminished appreciably will be the “exceptional” case. *Id.* at 933 (“recovery impacts alone may not  
12 *often* prompt a jeopardy finding”).

13 Nevertheless, the recovery and survival jeopardy-analysis prongs do not demand wholly  
14 independent inquiries but seek to shed light on a “joint survival and recovery concept.” This is  
15 consistent with the Ninth Circuit’s observation that Congress viewed conservation and survival as  
16 distinct, though complementary, goals. *Gifford Pinchot Task Force v. USFWS*, 378 F.3d 1059, 1070  
17 (9th Cir. 2004). It is also consistent with the consultation guidance issued in 1998 that links  
18 persistence and recovery of listed species in its discussion of how a species’ survival must be  
19 appreciated - “survival is the condition in which a species continues to exist into the future while  
20 retaining the *potential for recovery*.” *Endangered Species Consultation Handbook* (Mar. 1998)  
21 (emphasis supplied); *see also NWF*, 524 F.3d at 932-33 (reasoning that survival and recovery  
22 constitute “intertwined needs,” and noting favorably that the 1995 and 2000 BiOps considered  
23 whether FCRPS operations would leave listed salmonids both with the ability to survive and “an  
24 adequate potential for recovery”). The Court of Appeals thus identified as a significant defect in the  
25 2004 biological opinion - its exclusive focus on the survival prong - a defect absent from the 2008  
26 biological opinion.

27 Before considering the deficiencies alleged by NWF and Oregon concerning NMFS’ efforts  
28 to embrace this legal obligation, it is useful to consider the overall effect of the *Gifford Pinchot* and

1 *National Wildlife Federation* cases. Prior to these cases, there had been a trend away from the  
2 federal government's initial recognition that recovery considerations were an important aspect of the  
3 section 7 analysis. The federal government's 1975 explanations of the required analysis had  
4 initially affirmed that the ESA is "intended to prevent the further decline, and to bring about the  
5 restoration, of Endangered and Threatened Species." Endangered and Threatened Species, Notice on  
6 Critical Habitat Areas, 40 Fed. Reg. 17,764 (Apr. 17 1975). Accordingly, the joint service's  
7 guidance on the section 7 analysis specified that impacts to critical habitat would be significant if  
8 they place a listed species in "further jeopardy, or restrict the potential and reasonable expansion or  
9 recovery of that species." *Id.* at 17,765. Subsequent regulatory enactments, explanations and  
10 interpretations attempted to limit the notion that impacts to recovery alone might give rise to a  
11 jeopardy or adverse modification call. *See generally* Daniel J. Rohlf, *Jeopardy Under the*  
12 *Endangered Species Act: Playing a Game Protected Species Can't Win*, 41 Washburn L.J. 114, 126-  
13 36 (2001) (discussing regulatory history and agency interpretations). That trend towards a more  
14 limited role for recovery considerations was halted as to adverse modification determinations, at  
15 least in the Ninth Circuit, when the *Gifford Pinchot* court rejected the notion that adverse  
16 modification to critical habitat would only be called if impacts to both survival and recovery were  
17 demonstrated. For purposes of the FCRPS, any trend toward a diminished role for recovery in the  
18 section 7 jeopardy analysis was halted when the 2004 BiOp was rejected on the basis that its  
19 jeopardy analysis was improperly limited to only survival impacts.

20 Overall, the effect of these two decisions prevents a limited section 7 analysis where the  
21 connection between survival and recovery becomes so tenuous that it might tolerate a species' "slow  
22 slide into oblivion." *NWF*, 524 F.3d at 930 (observing that a limited section 7 analysis - focusing  
23 primarily on incremental impacts to the survival of a species - may have negative consequences for  
24 the long term prospects of a listed species that are inconsistent with the ESA's ultimate conservation  
25 objective). Instead, survival and recovery must now be considered so that there is not only a  
26 continued persistence over time, but there is also the "adequate potential for recovery." *Id.* at 932-  
27 33 (noting previous recovery aims in the 1995 and 2000 BiOps). The *Gifford Pinchot* and *NWF*  
28 opinions thus were animated by a desire to balance the "interrelated" survival and recovery prongs

1 of section 7-based analysis generally. The do-no-harm objective of section 7(a)(2) remains a guard  
2 against a listed species' slow slide towards extinction, while section 7(a)(1) is assigned the objective  
3 of recovery planning and implementation on a broader scale.

4 The 2008 biological opinion faithfully adheres to the teachings of *Gifford Pinchot* and *NWF*.  
5 Indeed, the opinion's key objective in its jeopardy analysis is whether the RPA will appreciably  
6 compromise the various species' potential for recovery and integrates the survival prong into this  
7 inquiry by asking whether the species' short-term survival prospects will be appreciably reduced  
8 when the effects of the RPA are aggregated with the environmental baseline and any cumulative  
9 effects. Recovery plans and objectives inform the analysis, but full implementation of those plans  
10 remains a task for the Columbia Basin region a whole. Again, although this is not the approach  
11 *NWF* or Oregon favors, NMFS' jeopardy analysis complies with the spirit and letter of *NWF*.

12 **2. The Quantitative and Qualitative Jeopardy Analytical Framework of the**  
13 **2008 Biological Opinion Embodies a Permissible Method of Determining**  
14 **Whether the Potential for Recovery Is Diminished Appreciably**

15 The 2000 biological opinion described the objective of its jeopardy analysis as a  
16 determination of “whether the species can be expected to survive with an adequate potential for  
17 recovery under the effects of the proposed or continuing action” when aggregated with the  
18 environmental baseline and any cumulative effects. 2000 BiOp at 1-8. Step four of the 2008  
19 biological opinion adopts the same objective when evaluating the effects of implementing the RPA  
20 aggregated with the environmental baseline and any cumulative effects – to ascertain “whether the  
21 species can be expected to survive with an adequate potential for recovery.” BiOp at 1-10. In this  
22 respect, the 2000 and 2008 biological opinions share the same fundamental recovery consideration  
23 when conducting the section 7(a)(2) jeopardy analysis – an evaluation of whether the listed species  
24 retain an “adequate potential for recovery.”

25 The quantitative metrics and qualitative analysis in both biological opinions to evaluate  
26 whether there is a sufficiently low risk of extinction and an adequate potential for recovery use  
27 similar elements (*e.g.*, extinction thresholds, VSP parameters, population trends and recovery  
28 trajectories), but the specific form of the quantitative and qualitative analyses, discussed above in

1 the Statement, have evolved to reflect input from the various working groups of the collaborative  
2 remand effort, to make the best use of recovery planning data, and to respond to the evolving case  
3 law defining the jeopardy obligation. In particular, the 2008 jeopardy analyses facilitated the action  
4 agencies' focus on the identification and analysis of population specific survival and recovery needs  
5 taking into account the limiting factors for each population of fish. The RPA was developed in an  
6 iterative process employing the expected jeopardy analysis to create a suite of actions that would  
7 meet the needs of each ESU. NMFS concurred with the results of the Basin's sovereigns,  
8 concluding that under the RPA the listed species would not face a significant risk of extinction and  
9 would continue to have an adequate potential for recovery.

10 NWF and Oregon take particular exception to the biological opinion's use of the "trending  
11 towards recovery" concept as one criterion for assessing recovery in the jeopardy analysis. They  
12 argue that the biological opinion's recovery analysis is fundamentally flawed because it "looks  
13 backwards" (NWF Br. at 12) and "has nothing to do with the likelihood of recovery" (OR Br. at 7).  
14 Instead, NWF and Oregon propose an alternative three-step analysis based upon desired population  
15 levels and growth needed for full recovery, the time needed to attain this full recovery level, and the  
16 probability of attaining full recovery within that time frame. *E.g.*, NWF Br. at 9-10. They assert  
17 that this is the only way to address the issue posed by the jeopardy regulations – whether the RPA  
18 will "reduce appreciably" the listed species' prospects for continued survival and eventual recovery.  
19 These arguments reflect an erroneous representation of the jeopardy analysis actually outlined in the  
20 2008 biological opinion, a misapplication of the regulations and legal principles surrounding the  
21 jeopardy analysis, and simply reflect their own preferred form of analysis.

22 The 2008 biological opinion is not simply a look backwards. Its jeopardy analysis is "a  
23 forward looking evaluation of the listed species" which considers the effects of the RPA's  
24 implementation in conjunction with the environmental baseline and cumulative effects. BiOp at 1-  
25 12. An examination of the quantitative and qualitative analyses shows this is not an empty promise.  
26 For the six ESUs with sufficient data to perform a full quantitative analysis, the analyses described  
27 earlier in this brief begin by considering the "retrospective performance of populations during a  
28 historical time period" using several VSP based life cycle metrics. Past performance is then

1 adjusted to the present in a “base-to-current” adjustment to reflect “ongoing and completed  
2 management activities that are likely to continue into the future.” *Id.* at 7-11) This yields an  
3 expected population trajectory with the assumption that “*future performance*” of the populations  
4 will continue on that trajectory if no further action is taken. *Id.* (emphasis supplied). At this point  
5 “a similar process is used to estimate the survival changes likely to occur as a result of the  
6 Prospective Actions and cumulative effects, and to calculate the product of the changes as the  
7 ‘current-to-prospective survival adjustment factor.’” *Id.*

8 NMFS’ three-step approach to considering recovery is inherently forward looking - using  
9 past performance, combined with current activity absent the RPA, to predict the trajectory of each  
10 population upon the RPA’s implementation. The significance of this approach in terms of future  
11 FCRPS actions becomes more readily apparent in light of the fact that the “trending towards  
12 recovery” concept informed the collaborative remand and much of NMFS’ jeopardy analysis. The  
13 RPA was developed by the remand parties in light of the stated objective of “maintaining or starting  
14 an ESU trending towards recovery.” AR B0344 at 3. The RPA utilizes a suite of actions responsive  
15 to each population’s limiting factors to maintain any base-to-current trend to recovery and to  
16 actually improve them - place them on a trend to recovery – if a population is not predicted to be on  
17 such a trend. *Id.* at 6. NMFS’ jeopardy analyses are independent confirmation that the “current-to-  
18 prospective” adjustment achieves this “trend to recovery” objective for each ESU.

19 The quantitative analysis is supplemented with qualitative analysis grounded in the listing  
20 factors set forth in section 4(a)(1) of the ESA and the VSP parameters that have been embraced  
21 universally as the guideposts for recovery of listed salmonids. BiOp at 7-34 - 7-35. Where data are  
22 insufficient to perform a quantitative analysis, the qualitative analysis must stand on its own but  
23 remains a detailed analysis utilizing the prospects for recovery standard discussed generally above.  
24 This is not, as NWF insists, a barren recovery concept without any grounding in science. NWF Br.  
25 at 7-8.

26 NWF’s outline of its preferred form of recovery analysis speaks in terms of future  
27 population trajectories, but that is no reason to reject NMFS’ own detailed and forward looking  
28 approach as a matter of law. The skeletal approach suggested by NWF is not specifically mandated

1 by the text of the ESA, its implementing regulations or any guidance documents developed by the  
2 services that prepare biological opinions. Accordingly, NWF’s alternative recovery analysis is  
3 really just a disagreement with NMFS over the best approach to considering recovery. That kind of  
4 disagreement cannot be a basis for overturning NMFS’ detailed and reasoned approach to the  
5 consideration of recovery in the jeopardy analysis. *See Lands Council*, 537 F.3d at 993 (courts are  
6 “not free to impose on the agency [their] own notion of which procedures are best . . . [n]or may  
7 [they] impose procedural requirements not explicitly enumerated in the pertinent statutes” (internal  
8 citations, brackets and quotation marks deleted). NMFS recovery analysis involved a high level of  
9 technical expertise and its reasoning was fully explained, together with an explanation of why it did  
10 not choose other alternatives analyses that had been proposed. *See NMFS’ Response to Comments*,  
11 Issue 1, p. 3. In those circumstances, NMFS’ jeopardy analyses of the impact associated with  
12 implementing the RPA across the various ESUs are entitled to a “particularly deferential review.”  
13 *Lands Council*, 537 F.3d at 993.

14 NWF argues that the “trending towards recovery” concept represents a mistaken application  
15 of law resulting from NMFS’ erroneous reading of this Court’s 2005 decision in *American Rivers* –  
16 an interpretation that application of the jeopardy analysis must “halt and reverse the trend towards  
17 species extinction.” NWF Br. at 7. The States concur that the Regional Administrator Lohn’s  
18 memoranda proposed a trending towards recovery approach based upon this interpretation of the  
19 decision. They are at a loss, however, to understand how that standard falls below the jeopardy  
20 threshold established under section 7. It bears emphasis, in this regard, that the Ninth Circuit  
21 clarified the scope of the section 7 jeopardy analysis and the recovery considerations that are  
22 required subsequent to the memoranda’s issuance. There is no obligation to take *affirmative* steps to  
23 implement either survival or recovery. Instead, there is an obligation to ensure that the RPA will not  
24 have the effect of impairing the listed species’ survival and recovery when aggregated with the  
25 baseline environment and any cumulative effects. *NWF*, 524 F.3d at 936 (the section 7 obligation  
26 does not import the ESA’s separate recovery planning provisions and “simply provides some  
27 reasonable assurance that the agency will not appreciably reduce the odds of success for future  
28 recovery planning by tipping a listed species too far into danger”). The significance of the

1 memoranda for present purposes is that they established a system of metrics to inform determination  
2 of whether the RPA's implementation would contribute toward establishing, maintaining or  
3 increasing an ESU's trend towards recovery — a quantitative methodology faithfully and  
4 exhaustively applied in NMFS' scrutiny of the Corps' and BOR's prospective actions where the  
5 necessary data existed.

6 **B. ADVERSE MODIFICATION OF CRITICAL HABITAT**

7 **1. NMFS Applied the Correct Adverse Modification Standard.**

8 ESA regulations define the term "destruction or adverse modification of critical habitat" as  
9 "a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the  
10 survival and recovery of a listed species." 50 C.F.R. § 402.02. The NMFS and FWS *Endangered*  
11 *Species Consultation Handbook* (Mar. 1998) provides further that the term "appreciably diminish  
12 the value" means "to *considerably reduce* the capability of designated or proposed critical habitat to  
13 satisfy the requirements essential to both the survival and recovery of a listed species." *Id.* at 4-34  
14 (emphasis supplied); *see Pac. Coast Fed'n of Fishermen's Ass'ns v. Gutierrez*, No. 1:06-CV-00245  
15 OWW GSA, 2008 WL 2851568, at \*10-\*11 (E.D. Cal. Jul. 18, 2008) (extending deference under  
16 *Skidmore* deference to *Consultation Handbook's* construction of "appreciably diminish").

17 NMFS made the adverse modification determination here with reference to same survival  
18 and recovery goals as the jeopardy standard; *i.e.*, it made "a forward looking evaluation of the listed  
19 species and critical habitat once the action is implemented and thus added to the ongoing and future  
20 effects of the environmental baseline and activities with cumulative effects" for the purpose of  
21 determining "the resulting survival and recovery potential." BiOp at 1-12. Its adverse modification  
22 analysis thus addressed the question whether "[a]fter implementation of the action, would the  
23 critical habitat remain functional (or retain the current ability for the PCEs to become functionally  
24 established) to serve the intended conservation role for the species in the near and long terms." *Id.*  
25 at 7-52; *see* 16 U.S.C. § 1530(3) (defining "conservation" as "to use or the use of all methods and  
26 procedures which are necessary to bring any endangered species or threatened species to the point at  
27 which the measures provided under pursuant to [the] Act are no longer necessary").

28 While NMFS's adverse modification standard fits squarely within the relevant statutory,

1 regulatory and agency guidance criteria, NWF finds fault for two reasons.<sup>16</sup> It contends first that the  
2 "standard centers on the status quo rather than on critical habitat's role in promoting recovery"  
3 because "habitat conditions need only be sufficient to support a slight positive improvement in  
4 salmon survival rather than be of high enough quality to support salmon survival rates that will lead  
5 to recovery." NWF Br. at 42. NWF next argues that the standard "manipulat[es] the baseline" by  
6 "focus[ing] on the current condition of critical habitat as a benchmark" and thereby "takes as a given  
7 the action agencies' past decisions to provide levels of flow and spill that are inadequate for salmon  
8 recovery." *Id.* at 43-44. These arguments logically collapse into the general assertion that section  
9 7(a)(2) does more than require NMFS to compare the status of the critical habitat "baseline"—the  
10 presumed equivalent of the "status quo" as the terms are used by NWF—with critical habitat status  
11 following the proposed action's implementation for the purpose of determining whether the current  
12 ability of the PCEs to support survival and recovery will be diminished appreciably.

13 NWF's reading of section 7(a)(2) ignores the regulations and the Consultation Handbook.  
14 Those sources plainly proscribe only agency actions that "considerably reduce" the ability of critical  
15 habitat to support survival and recovery over current conditions. Consequently, where existing  
16 critical habitat conditions are adverse to survival and recovery, an agency action that does not  
17 "considerably reduce" the existing likelihood of those objectives being achieved is permissible. Not  
18 surprisingly, NWF cites no binding authority holding the contrary. The two Ninth Circuit decisions  
19 relied upon faulted NMFS or FWS for limiting its adverse modification analysis or determination to  
20 the proposed action's effect on the likelihood of survival and thereby giving short shrift to the  
21 recovery prong. *NWF*, 524 F.3d at 934 ("agree[ing] with the district court that NMFS's adverse  
22 modification analysis did not adequately consider recovery needs"); *Gifford Pinchot Task Force v.*  
23 *FWS*, 378 F.3d 1058, 1069 (9th Cir. 2004) (rejecting construction in 50 C.F.R. § 402.02 of the  
24 adverse modification requirement that effectively "explicitly requires appreciable diminishment of  
25 the critical habitat necessary for survival before the 'destruction or adverse modification' standard  
26 could ever be met"). A third decision, *Nez Perce Tribe v. NOAA Fisheries*, No. CV-07-247-N-

27 <sup>16</sup> Oregon's several paragraph discussion of the adverse modification issue adds nothing substantive  
28 to NWF's. Or. Br. at 32-33.

1 BLW, 2008 WL 938430 (D. Idaho Apr. 7, 2008), found that a biological opinion not only failed to  
2 consider adequately the recovery prong (*id.*, at \*8, \*11) but also improperly concluded that  
3 continued operation of a federally owned irrigation project, that otherwise was found to adversely  
4 modify critical habitat, would improve habitat conditions (*id.*, at \*10, \*11).<sup>17</sup> Those are decidedly  
5 not the facts of this case.

6           **2. NMFS Properly Relied on Anticipated Surface Passage Route**  
7           **Modifications.**

8           NMFS, according to NWF, relies "in large part . . . on the same future surface bypass  
9 modifications it relied on in both the 2000 and 2004 BiOp [*sic*]" when "paint[ing] an unrealistically  
10 optimistic picture of how migration condition will improve over time," since "whether and when  
11 these modifications will actually materialize is far from certain." NWF Br. at 46. NWF relies  
12 exclusively on one RPA item in support of this assertion: No. 22 dealing with the Ice Harbor Project  
13 configuration and operational plan ("COP"). *Id.* (quoting BiOp App. (RPA Table Item 22) at 25). It  
14 argues that such an agency commitment lacks the requisite assurance of resources and improvement  
15 specificity identified by the Court of Appeal. *Id.* (citing *NWF*, 524 F.3d at 936).

16           RPA Item 22 provides for the Corps to complete the Ice Harbor COP in 2008 and to update  
17 it periodically. BiOp App. (RPA Table Item 22) at 24. Under the RPA item, the agency commits to  
18 implementing modifications "to reduce passage delay and increase survival of fish through the  
19 forebay, dam, and tailrace as warranted." *Id.* at 25. It identifies certain "[i]nitial modifications" as  
20 "likely" inclusions as part of the Phase I of the implementation process. Two conclusions follow  
21 from Item 22. First, the Corps has committed to making fish passage modifications and has  
22 specified the nature of the changes. That the specific modifications are characterized as "likely"  
23 does not mean that the Corps has unfettered discretion about whether to carry forward with those  
24 commitments; it means only the precise nature of the modifications must be coordinated, as the

25 \_\_\_\_\_  
26 <sup>17</sup> The *Nez Perce* district court stated that the action agency had an obligation under section 7(a)(2)  
27 "to stop the destruction of critical habitat." 2008 WL 938430, at \*8 (emphasis supplied). To the  
28 extent this statement meant that the agency could not reduce appreciably the likelihood of survival  
and recovery—*i.e.*, not *add to* in an appreciable manner critical habitat destruction that had resulted  
from the existing project's operations—it is entirely consistent with the States' analysis above.

1 RPA item states, through a regional forum and is subject to alteration "as new biological and  
2 engineering information is gathered." BiOp App. (RPA Table Item 22) at 25. The RPA item, in  
3 short, embodies "a clear, definite commitment of resources for future improvements." *NWF*, 524  
4 F.3d at 936. NMFS' inclusion of their anticipated effects as part of its jeopardy analysis was entirely  
5 appropriate. *See* BiOp at 8.3-21, 8.4-17, 8.5-21.

6 **C. HABITAT ACTIONS**

7 The 2008 biological opinion, just like the 2000 biological opinion, relies upon off site habitat  
8 actions, though the 2008 commitment is far greater than in prior biological opinions. *NWF* and  
9 Oregon levy a number of charges against the 2008 biological opinion's use of off-site habitat actions  
10 as part of the RPA's effort to address the survival and recovery needs of listed salmon and steelhead  
11 – an approach utilized with some approval in past biological opinions. The complaints are both  
12 technical in nature, and raise legal questions concerning whether the proposals are reasonably  
13 certain to occur.

14 The States are particularly familiar with this aspect of the collaborative remand effort,  
15 having participated in the habitat work groups. Washington State, in particular, played a leading  
16 role in the development of recovery plans that include a significant number of habitat projects.  
17 Oregon, a participant in the Habitat Work Group as well, now raises technical arguments disputing  
18 the science, relying upon the Bowles declaration, a document that is not a part of the record and  
19 should not be received by the Court. (For example, Oregon claims that NMFS analyses rely on  
20 implausible survival benefits (Or. Br. at 28-29) and that there is no scientific basis to rely upon  
21 habitat mitigation to help offset hydro impacts (*id.* at 31-32)). Even if the impropriety of  
22 predicated arguments on extra-record materials is put aside for a moment, these alleged deficiencies  
23 at most reflect different perspectives in an area that, in fairness to all sides, must be characterized as  
24 laden with uncertainty and divergent viewpoints. The existence of an opposing view thus does not  
25 mean that NMFS has failed to use the best available data and science or that it reached an arbitrary  
26 or capricious determination. So long as NMFS has made and explained a reasoned choice for its  
27 analysis, *NWF* and Oregon cannot legitimately claim that their preferred analysis should be  
28 accorded deference. Indeed, the fact that Oregon attempts to impeach the determination through

1 introduction of extra-record material in this proceeding serves to underscore the reasonableness of  
2 the agency action, since the very need to submit a declaration means that the administrative record is  
3 insufficient to justify Oregon's science-based objection.

4       Aside from such purely technical issues, NWF's and Oregon's arguments reduce to a  
5 common complaint that the habitat measures and benefits are not reasonably certain to occur,  
6 particularly in the "out-year" period from 2010 to 2018. NWF Br. at 22-27; Or. Br. at 26 & 29-31.  
7 Yet it was reasonable for the remand habitat work group, the action agencies, and NMFS to  
8 conclude that specific projects in the 2010-2018 period will be identified, funded and implemented  
9 in a manner that produces benefits which may be relied upon, both quantitatively and qualitatively.  
10 To begin with, the 2008 RPA and biological opinion are able to rely upon specific habitat actions  
11 identified, scoped and planned in NMFS-approved recovery and subbasin plans that were  
12 unavailable when the 2000 biological opinion was drafted. These plans create the context and  
13 content for identifying, selecting, funding and implementing projects throughout the term of the  
14 biological opinion. Recovery plans identify and assess habitat conditions that are limiting factors  
15 for salmon/steelhead viability and then develop actions, including habitat measures, to address these  
16 habitat limiting factors. The recovery and subbasin plans provide the detailed information on  
17 habitat actions that the RPA relies upon. These habitat actions have already been through an initial  
18 screen for basic technical, social and economic feasibility. AR C274 (Habitat Work Group;  
19 tributary tables)

20       Specifically detailed habitat projects are identified through 2009. Beyond that time period,  
21 the Habitat Work Group had to acknowledge that it could not delineate projects in the out years with  
22 the same specificity because of the need to preserve the flexibility to build in prior successes and  
23 learn from any setbacks. Indeed, pretending to describe highly detailed projects for the out years  
24 would only be subject to the entirely plausible criticism that such specificity was unrealistic.  
25 Instead, the Habitat Work Group relied upon generally described habitat actions and projects that  
26 are identified in recovery and subbasin plans as a basis for the out-year improvements and estimates  
27 of reasonably predictable benefits. This approach is, in essence, a form of adaptive management –  
28 relying upon specific forms of habitat mitigation that address limiting factors for ESUs, with

1 specific targets to implement, that will more fully crystallize into detailed projects in the future as  
2 circumstances dictate in those out years. Adaptive management is a highly respected basis for  
3 implementing projects over time in light of the fact that longer time frames introduce an element of  
4 uncertainty and where there is a desire to maximize both the utility of projects and their future  
5 ability to produce the desired outcome.

6 The States acknowledge a measure of tension between adaptive management that is  
7 employed over a time period and general notions of what may be reasonably certain to occur.  
8 However, that tension does not mean that adaptive management cannot co-exist with the reasonable  
9 certainty called for in a biological opinion. *See, e.g., Natural Res. Def. Council v. Kempthorne*, 506  
10 F. Supp. 2d 322, 350-355 (E.D. Cal. 2007). The tension is accommodated by recognizing that “a  
11 mitigation strategy must have some form of measurable goals, action measures, and a certain  
12 implementation schedule; i.e., that mitigation measures must incorporate some definite and certain  
13 requirements that ensure needed mitigation measures will be implemented.” *Id.* at 355. The RPA  
14 meets these standards. There are population specific targets for habitat improvements (BiOp at RPA  
15 35, Table 5), a process for select and reviewing projects that will be implemented to ensure that the  
16 projects are designed to provide the benefits needed (AR B.89; BiOp at RPA 35, Table 5), and a  
17 robust research, monitoring and evaluation process to evaluate progress, learn from successes and  
18 failures, and implement corrective action (*id.*). Contrary to Oregon’s reading of the RPA, and its  
19 insinuation of bad faith (Or. Br. at 30-3), the biological opinion does commit to the improvement  
20 targets and includes a commitment to the funding needed to achieve those targets. BiOp at RPA 35,  
21 Table 5.

22 It was also reasonable for NMFS to conclude that implementing habitat actions in recovery  
23 plans will provide the anticipated benefits that provide for increased survival for fish life stages  
24 within the improved habitat. The estimates in the biological opinion of survival improvements were  
25 based upon the best available information and the professional judgment of local experts that were  
26 knowledgeable on habitat conditions and local projects implemented and planned to improve  
27 habitat. BiOp at 7-45; CA App. C at 1-9, 11, 12. Estimated changes in habitat condition and the  
28 associated benefits were limited to those that will accrue through 2018 and form the basis for the

1 expected survival increases. *Id.* at 1-16. Continuing improvements in habitat conditions that will  
2 likely accrue after 2018 from previously implemented actions were not used in the estimates of  
3 survival increases.

4 The estimates of survival increases that would result from a given level of habitat  
5 improvement were based on the best available science regarding the relationship of improved  
6 habitat conditions to the maximum natural survival rate in pristine, high quality habitat for chinook  
7 and chum salmon, and for steelhead. BiOp at 7-45; CA App. C at 1-17 - 1-30. The estimated  
8 habitat improvements in Washington, for example, were all consistent with habitat improvements  
9 built into recovery plans and expected to occur as a result of recovery plan implementation. BiOp  
10 Chap. 7-46. Consistency with recovery plans was a primary consideration in working with local  
11 recovery planners and technical experts in the development of the habitat improvement estimates  
12 included in the biological opinion. CA App. C p. 1-8 – 1-9. These recovery plan derived estimates  
13 will also be evaluated and validated or adjusted as needed based upon the monitoring that is  
14 included in the biological opinion and the more comprehensive monitoring programs that are an  
15 integral part of recovery plans. BiOp at RPA 56, 57. Biological opinion monitoring commitments  
16 include: (1) measurement of adult fish and juveniles passing the hydro dams (BiOp at RPA 52, 53);  
17 (2) research and monitoring to quantify the relationship between habitat conditions and fish  
18 productivity together with habitat status and trends in six pilot study river basins (BiOp at RPA 56);  
19 and (3) monitoring to evaluate the effectiveness of habitat actions in three special studies in pilot  
20 basins together with project and watershed level assessments of habitat, habitat restoration and fish  
21 productivity in three basins (BiOp at RPA 57).

22 The 2000-2006 survival increases in the base-to-current period were based on the estimates  
23 of habitat change observed by local recovery planners and technical advisors (*e.g.*, Tucannon,  
24 Asotin, Upper Columbia populations). These local experts were familiar with the habitat actions  
25 implemented in 2000-2006 and their estimates of habitat improvement resulting from those projects  
26 were considered by the remand Habitat Work Group and then used by the action agencies as the  
27 basis for their quantification of habitat change and survival increase estimates for the base-to-current  
28 period. CA App. C at 1-11 - 1-12. The work of the remand collaboration compared the 2004

1 biological opinion's qualitative analysis of habitat improvements against the 2008 estimates of the  
2 local experts and then converted the 2004 qualitative analysis into an equivalent numeric value. The  
3 habitat estimates were then assigned using a conservative selection of the calculated estimates. CA  
4 App. C at 1-10 – 1-11. Similarly, the estimates of survival benefits in the estuary resulting from  
5 estuary habitat actions are based upon the best professional judgment of specialists familiar with  
6 estuary habitat. C.535, C.536 and C.E-mail 1311 [Yerxa, 5-17-07, atch. 5].

7 Ultimately, the 2008 biological opinion relies on tributary habitat improvements in concert  
8 with improvements in other actions affecting the listed species as part of a comprehensive analysis  
9 of factors affecting survival and the prospects for recovery consistent with the general approach  
10 utilized in recovery plans. The science relied upon in the biological opinion is directly applicable to  
11 the estimates of survival increases that can be reasonably expected from improved habitat functions  
12 resulting from identified habitat actions. CA App. C at 1-17 – 1-30. None of the alternate science  
13 cited in Oregon's brief (suggesting, for example, that there may be reason to doubt whether habitat  
14 improvement can provide survival benefits) is directly applicable to the circumstances analyzed by  
15 the 2008 biological opinion and quite clearly does not constitute an evaluation of either the opinion's  
16 analysis or of the expected survival contributions.<sup>18</sup> Because NMFS relied upon the best available  
17 science, made a reasoned choice where different opinions existed and explained its choices its  
18 analyses are entitled to the highly deferential review normally associated with this kind of complex  
19 and uncertain scientific analysis. *Lands Council*, 537 F.3d at 993.

#### 20 **D. HYDRO ACTIONS**

21 NWF and Oregon claim that NOAA's analyses of the effects of the FCRPS hydro operations  
22 intentionally understate the impacts, while overstating the benefits of the actions included in the  
23 RPA. Most pointedly, they argue that positive data were "cherry-picked" to support a

24 \_\_\_\_\_  
25 <sup>18</sup> Oregon also questions higher estimates of habitat improvement and survival benefits for the 2010-  
26 2018 time period. Or. Br. at 29. Those estimates, however, are entirely reasonable and attributable  
27 to (1) the ramping up of investment in projects for the 2010-2018 period; (2) a longer time period  
28 for implementing actions (9 years vs. 3 years); and (3) the realization of additional, delayed benefits  
in habitat improvement from projects that were implemented in the prior period (2000-2009). The  
higher levels of improvement in 2010-2018 compared to 2007-2009 are actually quite modest and  
conservative for the Washington populations cited (Tucannon – 7 percent compared to 10 percent;  
Entiat – 10 percent compared to 12 percent). BiOp at RPA 35, Table 5.

1 predetermined outcome. These assertions do not find support in the extensive administrative record  
2 vetted and analyzed by all of the other sovereigns and experts who participated in the collaborative  
3 process. Indeed, much of the technical information Oregon now submits in this litigation was not  
4 submitted to the collaborative remand process for review by the other sovereigns. As such, and  
5 given that the NWF and Oregon's arguments are based on declarations that add to the administrative  
6 record information that was not available to the collaborative remand, all of these claims should be  
7 summarily rejected.<sup>19</sup>

8 **1. Plaintiffs' Comparison of Flow and Spill to the 2004 BiOp does not**  
9 **reflect the scientific information and the ESU-based approach used in the**  
10 **collaborative remand.**

11 NWF and Oregon plainly have made the litigation calculation that because this Court was  
12 skeptical of the flow and spill provisions in the 2004 biological opinion, a showing by them that the  
13 2008 opinion includes less flow or spill basin-wide would *a fortiori* demonstrate that the 2008 BiOp  
14 must be defective. However, a simple volumetric comparison of the 2004 and 2008 biological  
15 opinions is neither scientifically appropriate nor legally relevant. While the States are confident the  
16 Court will find that the 2008 BiOp represents significant improvement over previous versions, that  
17 of course is not the legal standard - what matters is whether the administrative record supports the  
18 conclusions in the BiOp. Furthermore, it is technically impossible to review Oregon's analysis  
19 critically because neither the data nor the analytic methods that Oregon used are provided or  
20  
21

22 <sup>19</sup> Because these declarations run counter to the record-review requirements of the APA, (NWF and  
23 Oregon made no attempt to even show whether an exception applies), the States join in the federal  
24 defendants' motion to strike. Should that motion not be granted in whole, they reserve the right to  
25 submit opposing declarations. Additionally, if a motion to strike the declarations is denied,  
26 Montana reserves the right to again file the motion it brought in the 2005 injunctive relief  
27 proceedings; *i.e.*, if purported scientific evidence is to be received from sources outside the  
28 administrative record, the Court should exercise its "gatekeeper" function under the principles  
enunciated in *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579 (1993), and *Kumho Tire Co.*  
*v. Carmichael*, 526 U.S. 137 (1999), governing the admission of all expert evidence under Fed. R.  
Evid. 702. The Court, in sum, must make a preliminary determination that the expert's testimony is  
admissible, reliable and will assist it in understanding or determining a fact at issue. *Daubert*, 509  
U.S. at 591-94.

1 referenced. This opacity in Oregon's analysis contrasts starkly to the transparent analysis developed  
2 in the collaborative remand and which is provided by NMFS in the biological opinion.

3 The biological opinion's fundamental focus on the specific needs of each ESU is described in  
4 more detail elsewhere in this memorandum, but among other things that approach highlights the fact  
5 that survival and recovery of salmon and steelhead cannot be accomplished with hydro actions  
6 alone. The participants in the collaborative remand found, after much discussion and analysis, that  
7 measures pertaining to spill and flow in this biological opinion are based upon the best available  
8 scientific information. There are small changes in flow that will occur, such as the commendable  
9 inclusion of a portion of the Northwest Power and Conservation Council's (Council) Mainstem  
10 Amendments to the Council's Fish and Wildlife Program. The Council recommended changes to  
11 the operation of Libby and Hungry Horse dams that would more effectively balance the impacts on  
12 resident fish with potential benefits for Snake River fall chinook in July through September, as the  
13 biological opinion explains:

14 July and August flows would be slightly reduced at Brownlee, Lower Granite,  
15 McNary, and Bonneville dams compared to current conditions. In some years, a  
16 substantial fraction of the annual juvenile fall Chinook migration takes place in July  
17 and this small reduction in July flows may slightly increase travel time for fall  
18 Chinook. If viewed independently, this flow reduction would be expected to slightly  
19 decrease juvenile SR fall Chinook survival. However, recent research is showing that  
20 the proclivity of juvenile SR fall Chinook to continue migrating as subyearlings  
21 diminishes during July (Cook et al. 2006) and through the summer an increasing  
22 fraction of SR fall Chinook entering Lower Granite reservoir residualize and migrate  
23 during the following year as yearlings. Thus, water temperature, which affects the  
24 survival of both migrating and residualized fish, becomes increasingly important.  
25 During the hot summer months of July and August, operations at Dworshak Dam,  
26 designed to release sufficient cold water to maintain Lower Granite Dam tailrace  
27 water temperatures at or below 20 degrees C, likely become the most important  
28 factor affecting juvenile SR fall Chinook survival through Lower Granite reservoir.

23 BiOp, p. 8-9. Put simply, these small flow changes are a good example of how the 2008 BiOp  
24 pursues the eminently reasonable goal "to better protect listed species while minimizing effects on  
25 flows for listed salmon and steelhead." 2008 BiOp, Issue Summary, p. 9.

26 The Montana Operation was reviewed by the ISAB, which found that in addition to  
27 benefiting other listed and resident species in Idaho and Montana, the effect on salmon downstream  
28 is so small it cannot be scientifically measured. *Id.* at p. 10 (citing 2004 ISAB evaluation of the

1 Montana Operation). Moreover, the ISAB noted that shifting the timing of the flows results in a  
2 benefit to returning adult Snake River fall chinook. *Id.* Ironically, this action was undertaken to at  
3 least in part to meet the needs of one particular ESU, but is now criticized by Plaintiffs because it  
4 causes a tiny reduction in flow in July and August.

5 Montana, working through the Council, sought and received an independent scientific  
6 review of its proposal, from the perspective of impacts on downstream ESA-listed species. Because  
7 of its approach to the issue, the collaborative remand was able to accept the Montana Operation as  
8 scientifically appropriate, taking the entire system into account. 2008 BiOp, Issue Summary at 10.  
9 As such, the adoption of the Montana Operation vividly illustrates both the quality of the 2008  
10 biological opinion's comprehensive approach to take actions that reflect – despite the long-held view  
11 of some about flows from Montana – the latest scientific information and assessment. In short,  
12 NMFS chose to include in the 2008 biological opinion the operation recommended by all four  
13 Northwest States (including Oregon itself) in the Council's Mainstem Recommendation to the Fish  
14 and Wildlife Program after this operation was reviewed and supported on a scientific basis by the  
15 ISAB.

16 2. **NWF and Oregon's Arguments About Spill Reduction Ignore the**  
17 **Documented Needs of the Fish.**

18 The spill claims highlight the need to remind the Court that in evaluating any aspect of the  
19 2008 biological opinion, one should constantly remain firmly fixed on considering which ESU is  
20 relevant to any particular action or measure. More spill, without regard to the location, the timing,  
21 the length and the rate, is not going to benefit all ESUs, may not benefit any, and may harm some.  
22 Contrary to this straightforward proposition, NWF and Oregon continue to advocate a “one size fits  
23 all” theory, which rests on the proposition that more spill is always better. In comparison to the  
24 body of peer-reviewed scientific and technical information that was brought to bear in the  
25 collaborative remand, those arguments do not reflect what should, in fact, be a far more  
26 sophisticated and complex assessment of the specific conditions under which additional spill  
27 provides enhanced and documented biological benefit for ESA-listed fish when evaluated against  
28 the specific limiting factors for each ESU. It was even more important for the collaborative remand

1 was to avoid spill at times when it reduces the survival of some fish. This was particularly  
2 problematic for Snake River steelhead where scientific data showed that spill during late May would  
3 reduce the survival of B-run steelhead, a particularly important component of the Snake River  
4 steelhead DSP.

5 Oregon's arguments about spill reduction with the installation of removable spillway weirs  
6 (RSWs) conflate the concepts of more spill with the survival benefits of surface passage. Consistent  
7 with the rigid "more spill is always better" approach, those arguments fail to acknowledge that when  
8 RSWs or other surface oriented passage devices (structural modifications this Court has repeatedly  
9 encouraged) are installed, less spill is needed to insure that the most fish can pass these through  
10 these structures with the highest possible survival rates. The result is the additional benefit of  
11 reducing dissolved gas problems, while providing higher overall passage survival. The BiOp  
12 includes, in RPA's 18 – 28, the requirement for the Corps to prepare specific Configuration and  
13 Operational Plans (COP) for each Mainstem dam. These COPs are designed to systematically  
14 adjust dam operations to insure survivals are maximized by modifying specific dam operations as  
15 surface passage and other improvements are made. (BiOp RPA 18 – 28) In addition RPA 29  
16 proposes initial spill operations and says, "[t]he Corps and BPA will continue to evaluat6e and  
17 optimize spill passage survival to meet both the hydrosystem performance standards and the  
18 requirements of the Clean Water Act." *See* BiOp RPA Table, p. 32 of 98.

19 As much as any other area addressed in the BiOp, this is one in which the federal  
20 government should be given deference, especially where the record amply shows that the issues  
21 received hundreds of hours of attention in the Collaborative Remand, and there are complex  
22 tradeoffs where increased spill has been shown to harm some fish at certain times.

23 **3. NMFS's Measurement of Transportation Benefits Is Amply Supported in**  
24 **the Administrative Record.**

25 NWF and Oregon criticize NMFS's analysis of fish transport on various grounds, but the  
26 main themes are: (1) the COMPASS model is biased in favor of transport because fish that have  
27 gone through multiple mechanical bypass events survive at a lower rate than those that have not, so  
28 only "in-river" survival of fish should be used as the baseline for measuring transportation benefits;

1 (2) COMPASS modeling did not include recent years of improved river conditions, thereby making  
2 reductions in spill less justified; and (3) removing numerous fish from the river to transport them  
3 greatly impacts the remaining in-river migrants. All of these issues received full consideration  
4 during the collaborative process and the experts made reasoned judgments on how to deal with  
5 them, as the administrative record reflects.

6 As the Court is no doubt aware, the effects of the transportation system are measured by the  
7 difference between outmigrating smolt-to-adult returns (SARs) for in-river migrants versus  
8 transported fish. That analysis has found that that the effects vary by species, their origin and by the  
9 timing of outmigration. The COMPASS model was reviewed and supported by ISAB review and  
10 took these statistical differences into account. *See e.g.* BiOp, p. 11-3. The biological opinion's  
11 approach allows NMFS to design an RPA that balances spill with transport to maximize SAR for  
12 each ESU. That would not be the case if, for example, NMFS used the Oregon approach to include  
13 only in-river migrants, because it ignores the fact that, even without transport, many fish will  
14 continue to pass dams though the bypass systems designed to divert fish from passing through the  
15 turbines. NMFS used in the COMPASS model the most logical and scientifically appropriate  
16 approach, by measuring the effectiveness of transportation in comparison to fish that will pass dams  
17 through a combination of spill, turbines and the bypass systems, because that is what actually  
18 happens.

19 Adult returns from one or two years ago are not yet known, so in essence the Plaintiffs are  
20 asking NMFS to hypothesize regarding SARs and design an RPA accordingly. However, NMFS  
21 has the benefit of years of data from PIT - tagging, and made its reasoned judgment based on that  
22 data, which is the best scientific information available. It would be entirely beyond the permissible  
23 scope of review in an APA case for the Court to find the BiOp deficient based on the concept that  
24 NMFS chose scientific data over supposition.

25 Obviously the act of transporting fish is not a natural one, but NMFS is required to apply the  
26 best available technology to maximize fish survival. Transportation is but one tool that can be used  
27 to help fish survive as they migrate past dams in the Snake and Lower Columbia Rivers. By  
28 definition taking the fish out of the river through transport leaves fewer in-river migrants. However,

1 to argue as Plaintiffs do that removing fish affects the travel time and predation rates for fish  
2 remaining in the river, is speculative, given that the data upon which Oregon relies to make the latter  
3 claim are not part of the administrative record and were not transparently assessed in the remand.  
4 Oregon did not present any new data or analysis to the remand technical teams assessing either fish  
5 density, travel time or predation on in-river migrants as part of the collaborative remand process, or  
6 for that matter in their recent submissions to the Court. Certainly, had NMFS had used such  
7 speculation to support any one of its findings, the agency would have been heavily criticized by the  
8 experts in the remand collaboration.

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1 **VI. CONCLUSION**

2 The summary judgment motions filed by NWF and Oregon should be denied. The States'  
3 summary judgment motion should be granted.

4 DATED: October 24, 2008

GLASER, WEIL, FINK, JACOBS  
& SHAPIRO, LLP

6 BY: /s/ MARK L. STERMITZ  
7 Mark L. Stermitz, OSB No. 03144  
8 Attorneys for *Intervenor-Defendant*,  
9 State of Montana

10 ROB MCKENNA  
11 Attorney General

12 /s/ MICHAEL S. GROSSMANN  
13 MICHAEL S. GROSSMANN, WSBA#15293  
14 Assistant Attorney General  
15 Attorneys for *Intervenor-Defendant*  
16 State of Washington

17 LAWRENCE G. WASDEN  
18 ATTORNEY GENERAL  
19 CLIVE J. STRONG  
20 STEVEN W. STRACK  
21 DEPUTY ATTORNEYS GENERAL  
22 STATE OF IDAHO

23 /s/ CLAY R. SMITH  
24 CLAY R. SMITH  
25 ISB # 6385  
26 (208) 334-2400  
27 Attorneys for *Intervenor-Defendant*  
28 State of Idaho

**CERTIFICATE OF SERVICE**

Pursuant to Local Rule Civil 100.13(c), and Fed.R. Civ. P. 5(d), I certify that on October 24, 2008, the foregoing:

**JOINT MEMORANDUM OF WASHINGTON, IDAHO AND MONTANA IN  
OPPOSITION TO PLAINTIFFS' SUMMARY JUDGMENT MOTION AND IN SUPPORT  
OF CROSS-MOTION FOR SUMMARY JUDGMENT**

will be electronically filed with the Court's electronic court filing system, which will generate automatic service upon on all Parties enrolled to receive such notice. The following will be manually served by United States mail:

Seth M. Barsky  
U.S. Department of Justice  
Wildlife & Marine Resources Section  
Environmental & Natural Resources Div.  
Ben Franklin Station, P.O. Box 7369  
Washington, DC 20044-7369

Clarkston Golf & Country Club  
Hoffman, Hart & Wagner  
1000 SW Broadway  
20th Floor  
Portland, OR 97205

Confederated Tribes of the Colville Reservation  
Office of the Reservation Attorney  
P.O. Box 150  
Nespelem, WA 99155

Walter H. Evans , III  
Schwabe Williamson & Wyatt, PC  
1600-1900 Pacwest Center  
1211 SW Fifth Avenue  
Portland, OR 97204

James W. Givens  
1026 F Street  
P.O. Box 875  
Lewiston, ID 83051

Thomas L. Sansonetti  
U.S. Department of Justice  
P.O. Box 663  
Washington, DC 20044-0663

*/s/ Mark L. Stermitz*