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UNITED STATES DISTRICT COURT  
DISTRICT OF OREGON  
PORTLAND DIVISION

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

Plaintiffs,

v.

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

Defendants.

Case No.: 01-CV-640-RE

**FEDERAL DEFENDANTS'  
REPLY TO PLAINTIFFS'  
COMMENTS ON THE 2010  
ANNUAL PROGRESS  
REPORT**

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## INTRODUCTION

In August, this Court granted summary judgment in part against the Federal Defendants and directed that a new or supplemental biological opinion be issued by January 1, 2014. Following that ruling, Federal Defendants submitted their 2010 Annual Progress Report, which summarizes the agencies' implementation efforts in 2010. *See* Dkt. 1859. The 2010 Annual Report provides a strong foundation by which the agencies can evaluate past implementation of the reasonable and prudent alternative (RPA) actions. It shows that the agencies are effectively working with the sovereigns and the Region to make real and substantial progress on actions that can and do benefit the fish.

Federal Defendants are fully committed to following the Court's remand order (Dkt. 1855).<sup>1</sup> The agencies are aggressively implementing the RPA actions and obtaining scientific and technical data to support mitigation measures and the completion of a new or supplemental biological opinion by 2014. In particular, the agencies are continuing to work with local experts and through established forums to identify specific habitat restoration projects – in the estuary and tributary habitats – through 2018. Remand Order at 23. The agencies will comply with the Court's order regarding spring and summer spill. *Id.* at 24. And the agencies will continue to fully utilize the many functioning forums in the Region that allow for meaningful collaboration and independent science review. Remand Order at 23; 2010 Annual Report, § 1 at 37.

Nevertheless, in their comments on the Annual Report, Plaintiffs renew their request – previously denied by the Court – to appoint (i) a magistrate judge to convene a settlement conference to debate the scope of the remand process, and (ii) an independent panel of scientists to review implementation of the biological opinion. *See* NWF Br. (Dkt. 1865); OR Br. (Dkt. 1867); NPT Br. (Dkt. 1866). The 2010 Annual Report, which is intended to “describe the status

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<sup>1</sup> On September 30, 2011, the United States filed a notice of appeal in this action, *see* Dkt. 1858, but has not decided whether to pursue an appeal. *See, e.g., Hogg v. United States*, 428 F.2d 274, 277-79 (6th Cir. 1970) (United States could file a notice of appeal even though the Solicitor General had not yet authorized an appeal). Despite filing an appeal, Federal Defendants did not seek to stay this Court's remand order and fully intend to comply with the Court's direction.

of implementing all actions as of the end of the previous calendar year” and, *inter alia*, “describe the status of physical or biological metrics monitoring” in that year, provides no basis for the extraordinary additional procedures that Plaintiffs now request. Nor is Plaintiffs’ requested relief consistent with the Court’s direction that the remand period be a time “to ‘get out of the courtroom’ and get to work for the next two and a half years.” Remand Order at 19. Plaintiffs have not filed a motion in need of resolution by the Court, much less a brief that demonstrates reconsideration of the Court’s decision is either warranted or appropriate now.

Federal Defendants take the Court’s remand order seriously. Consistent with the Court’s order (Remand Order at 23), Federal Defendants will continue to collaborate with the States and Tribes in carrying out the remand, and the agencies are committed to ensuring transparency and that the remand is grounded in numerous points of independent scientific reviews. The imposition of additional process on top of the already extensive and transparent processes functioning under the RPA and in the Region ensures only one thing: that time and resources will be diverted from administrative actions to implement the RPA and address those deficiencies identified by the Court in its Remand Order. As the Court provided, now is the time for all parties to refrain from further litigation and instead work within the existing Regional forums and administrative avenues to make this remand successful.

## **BACKGROUND**

### **I. THE COURT’S AUGUST 2, 2011 REMAND ORDER**

On August 2, 2011, the Court granted summary judgment in part against the Federal Defendants, holding that the 2008/2010 BiOp, after 2013, was arbitrary and capricious due to NOAA’s reliance on “unidentified habitat mitigation actions.” Remand Order at 2. In issuing its ruling, the Court reviewed, among other things, the agencies’ implementation of habitat mitigation actions following issuance of the 2010 BiOp, identifying concerns relating to the extent of projects identified and the pace of implementation. *Id.* at 15-16. The Court expressly did not address the myriad of other issues raised by Plaintiffs during the litigation, but found one deficiency – the sufficiency of habitat mitigation actions post-2013. *Id.* And the Court made

clear that the “BiOp contains positive mitigation measures that provide adequate protection to the listed species through 2013,” as “even Plaintiffs acknowledge.” *Id.* at 19 (further noting that vacatur of the BiOp “would be disastrous for the listed species...”).

The Court provided that the BiOp “shall remain in place until December 31, 2013,” the agencies shall continue to implement the BiOp’s suite of mitigation measures through 2013, and NOAA Fisheries (“NOAA”) shall “produce a new or supplemental BiOp that corrects [the 2008/2010] BiOp’s reliance on mitigation measures that are unidentified, and not reasonably certain to occur” by January 1, 2014. *Id.* at 23. The Court also imposed procedural requirements on Federal Defendants, instructing them to, *inter alia*, “continue to collaborate with the sovereign entities” and “file with the court their annual implementation reports detailing the progress of the RPA.” *Id.* Finally, the Court issued injunctive relief, ordering Federal Defendants to “conduct spring and summer spill operations in a manner consistent with this court’s annual spill orders, and to provide monthly implementation reports.” *Id.* at 24.<sup>2</sup>

## **II. THE 2010 ANNUAL PROGRESS REPORT**

On September 30, 2011, Federal Defendants filed the agencies’ 2010 Annual Progress Report, which was prepared pursuant to the 2008/2010 BiOp, RPA Action 2. The 2010 Annual Report reports on the progress of implementing the RPA actions from January 1, 2010, through December 31, 2010, and is divided into three sections: Section 1 describes important implementation actions and progress that occurred in 2010 and will inform future RPA implementation; Section 2 provides a more in-depth discussion of implementation progress for each of the BiOp’s RPA actions; and Section 3 contains lists of projects and actions that were implemented in 2010, including identification of habitat metrics completed in 2010. 2010 Annual Report, § 1 at 3. The Annual Report captures the wide array of activities that have

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<sup>2</sup> The Court’s relief is largely directed at NOAA. *See, e.g.*, Remand Order at 24 (directing NOAA to “conduct spring and summer spill operations”). Since NOAA does not conduct spill operations, Federal Defendants are interpreting this (and other) provisions to apply to the U.S. Army Corps of Engineers (“Corps”), the Bureau of Reclamation (“BOR”), and NOAA (*i.e.*, the Federal Defendants) where appropriate given their respective authorities and obligations.

occurred under the RPA in 2010, as well as the resulting, tangible benefits that are accruing for salmon and steelhead throughout the Region.

## DISCUSSION

### **I. THE BIOP AND RPA ARE BEING ROBUSTLY IMPLEMENTED, AND THE TOOLS ARE IN PLACE TO ENSURE THAT THE REMAND IS SUCCESSFUL.**

#### **A. The 2010 Annual Report Satisfies RPA Action 2.**

Pursuant to RPA Action 2 and this Court's Remand Order, Federal Defendants are required to prepare and file an annual report that "describe[s] the status of implementing all actions as of the end of the previous calendar year" and, *inter alia*, "describe[s] the status of physical or biological metrics monitoring." RPA Action 2. This is precisely what the agencies did, as Plaintiffs must acknowledge. *See* NWF Br. at 6-7 (conceding that the Annual Report provides "similar summary information" and is "similar in form" as the 2009 and prior reports).<sup>3</sup>

Contrary to Plaintiffs' claims (*see, e.g.*, NWF Br. at 4-5; OR Br. at 7-8; NPT Br. at 8-9), the purpose of an annual report is *not* to compare the results of RPA implementation to the BiOp's survival improvement predictions, discuss the agencies' plans to address any shortcomings in the current estimated survival improvements as compared to those identified in the BiOp, or otherwise contain Plaintiffs' preferred compilation of survival analyses. *Compare* RPA Action 2 (annual progress reports), *with* RPA Action 3 (RPA Comprehensive Evaluations, containing these requirements). Nor was the 2010 Annual Report intended to address how the agencies will implement the Court's remand or other matters arising in 2011, as pursuant to the RPA, the agencies were reporting on RPA implementation that occurred in 2010. *See* NPT Br. at 4 (identifying purported failure of the report to address the Court's 2011 Remand Order); *see also* NWF Br. at 3-6 (criticizing the purported failure to address 2007 to 2009 activities

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<sup>3</sup> Oregon also agrees that the agencies reported the projects completed and the "physical metrics achieved in 2010," as required by the RPA. OR Br. at 7. However, they then argue that the report does not report the total metrics needed "to complete the project and achieve the estimated survival benefits, by project." *Id.* These claims are inaccurate. In Section 3, Attachment 3, the agencies provided for each tributary project the limiting factors to be addressed, a summary of planned metrics, and the metrics completed in 2010. *See* 2010 Annual Report, § 3 at 70-87.

associated with RPA 34 in the 2010 Annual Report); *id.* at 15 (improperly criticizing the agencies for failing to cite a August 2011 Fish Passage Center report, *see* Exhibit 1, but at the same time failing to mention other science developed in 2011 that does not support their views, such as ISAB’s review of FPC memoranda on delayed mortality, *see* Exhibit 2).

Plaintiffs other criticisms similarly miss the mark: Oregon’s contention (OR. Br. at 5) that there is no “empirical basis” to support statements that steelhead are responding well to recently installed surface passage facilities, *but see* Exhibit 3 at 62-63 (study excerpts, finding that the “increasing number of surface passage structures ... are reducing steelhead [fish travel times]”); Oregon’s contention (OR Br. at 4) that the agencies are utilizing hatchery fish for AMIP triggers, *but see, e.g.*, 2010 NOAA AR A.1 (AMIP, Appendix 4 at 3) (noting interim triggers are based on “estimates of naturally produced fish at the species level” and identifying methodology for the triggers);<sup>4</sup> and NWF’s contention that the report “does not even say how many estuary projects were completed,” NWF Br. at 8, *but see* 2010 Annual Report, § 2 at 51 (identifying “on-the-ground” projects completed during 2010 and those planned for 2011).

In short, the 2010 Annual Report fully satisfies the requirements of RPA Action 2 and this Court’s Remand Order directing the agencies to file their annual report with the Court. Remand Order at 23. Plaintiffs’ criticisms of the 2010 Annual Report are unfounded and simply do not demonstrate that modifications to the Court’s remand order or additional relief is needed a mere three months into the remand process.

**B. Federal Defendants Are Implementing The RPA And The Remand Order Using An Open, Collaborative Process.**

The relief Plaintiffs seek is also unwarranted in light of the concrete actions Federal Defendants have taken, and will continue to take, to implement the RPA in an open,

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<sup>4</sup> In fact, the agencies improved the AMIP’s significant decline trigger by incorporating a metric indicative of trend in 2010. *See* 2010 Annual Report, § 2 at 136. This metric was subject to review by the sovereigns, Oregon provided comments on the metric, and Oregon’s comments bear no resemblance to the critiques they set forth now. *See* Exhibit 4 (Oregon’s comments). If Oregon has a problem with the AMIP triggers, it has the opportunity to raise those concerns through the RIOG, where any concerns would be explored *on their scientific and technical merit*.

collaborative, and verifiable manner. These actions demonstrate that the appointment of a magistrate judge or independent science panel to oversee the implementation of the 2008/2010 BiOp or the remand process is not warranted.<sup>5</sup>

As the Court is well aware, in 2008, the agencies created the Regional Implementation Oversight Group (“RIOG”), an entity that “oversee[s] the implementation of the FCRPS BiOp ...” 2008 NOAA AR B.89 (2007 BA at 2-15); RPA Table at 1. This forum provides that the technical, scientific, and policy representatives of each sovereign (including Oregon and the Nez Perce Tribe) can coordinate “implementation of the FCRPS and related BiOps” and, where appropriate, seek further independent science review. *See* Exhibit 5 (RIOG, Collaboration Teams & Operational Guidelines (updated Jan. 7, 2010)). Through RIOG’s policy and technical teams, RPA implementation is extensively vetted with the sovereigns, and decisions benefit from data and input received through these collaborative efforts.<sup>6</sup>

In addition to the RIOG, Federal Defendants have and will continue to seek unbiased advice regarding the implementation of the RPA actions from such entities as the Independent Scientific Advisory Board (“ISAB”), which explicitly was “formed to provide independent scientific advice and recommendations regarding scientific issues posed by the respective agencies on matters that relate to [the Northwest Power Planning Council’s and NOAA’s] fish

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<sup>5</sup> Plaintiffs intimate such drastic measures are needed based on mischaracterizations of various press statements or editorials. For instance, they fault the agencies for indicating that, *inter alia*, the BiOp remains in place through 2013 and provides adequate protection for the species, NWF Br. at 17, even though this is what the Court said, *see* Remand Order at 19. Plaintiffs also criticize NOAA’s Regional Administrator for being “encourage[ed]” by this Court’s order. NWF Br. at 17. But there is nothing untoward here – NOAA, and the other agencies, were encouraged by the Court’s order, as it provided a path forward to implement the actual, on-the-ground RPA actions, in collaboration with the sovereigns, that benefit fish. It is difficult to discern how the agencies’ expressed interest in focusing on implementing the RPA, improving the BiOp’s mitigation measures, and obtaining more robust scientific data to support any mitigation is improper and justifies remedial action now.

<sup>6</sup> *See, e.g.*, 2010 NOAA AR CC.200 (2010 RTC at 19) (documenting agencies’ decision not to curtail spill in 2010 following ISAB review of proposed transport operations and following “discussions with the [RIOG]”); Reply Peters Decl., ¶¶ 3-10 (Dkt. 1646) (detailing coordination and discussions within RIOG on the ISAB report on transport and spill, and the Federal agencies subsequent modification of 2009 operations to follow the ISAB’s recommendations).

and wildlife programs.” Exhibit 6 (ISAB Terms of Reference).<sup>7</sup> Its purpose is to “foster a scientific approach to fish and wildlife recovery and the use of sound scientific methods in research related to the programs of NMFS, the Council, and the Tribes.” *Id.* Another such entity for reviewing habitat mitigation actions is the Independent Science Review Panel (“ISRP”) -- a panel of scientists recommended by the National Academy of Sciences that represent a broad range of scientific expertise.<sup>8</sup> There are also tributary and estuary habitat expert panels, comprised of federal, tribal, state, and local scientists that are evaluating all RPA habitat projects. *See* RPA Action 35, 37; AMIP, Appendix 1 at 22.

With the availability of forums like the ISAB, ISRP, and the expert panels, critical issues have been, and will continue to be, subjected to scrutiny by the experts in the field. Moreover, the sovereigns, including Oregon and the Nez Perce Tribe, are participating in RIOG, where actions are reviewed and where scientific and technical data is brought to bear on RPA implementation. These and numerous other established processes for regional collaboration and independent science review belie Plaintiffs’ suggestions of a lack of transparency and ability to assess RPA implementation. *See* NWF Br. at 14. The needed processes are established, functioning, and working in a manner that greatly benefits RPA implementation and will benefit development of a new or supplemental BiOp for issuance in January 2014. *See* Exhibit 7 (demonstrative summary of various hydro and habitat regional collaboration and review forums).

Not only is Plaintiffs’ requested relief unwarranted, but such relief would impede RPA implementation and completion of the remand, as any time spent on these additional procedures will result in less time spent on implementing the RPA and completing the remand. If this

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<sup>7</sup> *See, e.g.,* [www.nwcouncil.org/library](http://www.nwcouncil.org/library) (documenting regular ISAB review of issues; for instance, the following reviews relating just to the Corps hydro operations: ISAB 2011-3, 2010-2, 2010-34, 2010-6, 2009-1, 2008-5, 2008-3, 2008-2, 2007-1); *see also* 2008 NOAA AR B.208 (ISAB (2006) review of COMPASS model); 2008 NOAA AR B.209 (ISAB (2006) review of COMPASS model); 2008 NOAA AR B.210 (ISAB (2007) review and report on latent mortality); 2010 Corps AR 293 at 7167-7230, 7231-37 (discussing development of the 2009-2010 kelt management plan, presented to the ISAB for independent science review).

<sup>8</sup> *See* [www.nwcouncil.org/fw/isab/members.asp](http://www.nwcouncil.org/fw/isab/members.asp) (last visited Nov. 15, 2011).

remand is to be successful, the parties – including Plaintiffs – need to allow for the issues to be vetted, discussed, and debated in the Region, and they should not be allowed to circumvent these processes and go directly to the Court whenever they perceive an issue is not being resolved to their liking. Nor should the Court simply appoint one or more scientists to review a matter that is being exhaustively reviewed by all of the sovereigns, their scientists and experts, in established scientific and technical review forums. Otherwise, the Court – not the scientists -- will become the first resort when tough scientific issues are faced, and the Court will become the arbitrator of which particular experts are sufficiently “independent” so as to have their views matter. This is not the proper role for the Court, *United States v. Washington*, 573 F.3d 701, 709 (9th Cir. 2009) (“The Constitution does not establish the district courts as permanent administrative agencies.”), and it will not facilitate development of enduring processes and actions that allow the Region to successfully protect the fish and the habitats upon which they depend.<sup>9</sup>

As the Court noted, the Region needs to get out of the courtroom and work on RPA implementation and the remand process.

## **II. PLAINTIFFS’ REQUEST FOR ADDITIONAL RELIEF IS IMPROPER AND WITHOUT BASIS.**

In addition to Plaintiffs’ requested relief being both unnecessary and counterproductive, Plaintiffs’ request that the Court alter the scope of the remand is improper. Just three months after the Court issued its Remand Order, Plaintiffs now express disagreement with the Court’s decision and broadly ask for “adjustments to the remand” in the form of a settlement conference between only “plaintiffs and federal defendants,” convened to debate the scope of the remand process, and appointment of an independent panel of scientists to review RPA implementation.

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<sup>9</sup> Plaintiffs’ asserted need for additional “accountability” in the remand process (NWF Br. at 2) implies, without justification, that the Administration, the States, the Tribes, and all of the region’s sovereigns will not be accountable for making progress on RPA implementation and evaluating the science in a manner required by the ESA and as ordered by the Court. Plaintiffs, Oregon, and the Nez Perce Tribe are not, by any means, the only parties interested in facilitating the protection and recovery of the listed species. The Administration (as demonstrated through the AMIP and 2010 BiOp), as well as all of the other sovereigns, are fully committed to ensuring accountability. Plaintiffs proffer nothing of substance to show that – a little over three months into the remand process – any party or sovereign will abdicate this responsibility on remand.

See NWF Br. at 21; OR Br. at 10-11; NPT Br. at 11. As this Court is aware, the parties repeatedly have litigated these issues in the past, the Court has consistently rejected these requests, and the Court declined to issue such relief in its Remand Order. See, e.g., Opinion and Order (Dkt. 1111) (Nov. 2, 2005); Dkts. 1099, 1325, 1433, 1458, 1871 (briefing and discussing similar claims). Plaintiffs' decision not to file a motion and demonstrate that reconsideration is warranted is telling, and means that the Court need not act in any manner now.

Nonetheless, to the extent the Court considers Plaintiffs' request in the absence of a motion, Plaintiffs' request is legally improper and should be denied. First, this Court lacks jurisdiction to alter the scope of the Remand Order. A remand order, with respect to the Federal government, is a final appealable order. See *Alsea Valley Alliance v. Department of Commerce*, 358 F.3d 1181, 1184 (9th Cir. 2004). On September 30, 2011, Federal Defendants filed a notice of appeal on the Court's Remand Order, and the appeal remains pending in the Ninth Circuit. As the Supreme Court has held, "[t]he filing of a notice of appeal is an event of jurisdictional significance – it confers jurisdiction on the court of appeals and divests the district court of its control over those aspects of the case involved in the appeal." *Griggs v. Provident Consumer Disc. Co.*, 459 U.S. 56, 58 (1982). As a consequence, jurisdiction over this matter lies with the Ninth Circuit while the Government's appeal is pending, and Plaintiffs' request to have the Court alter the *status quo* and the record on appeal through "adjustments to the remand" (NWF Br. at 21) is improper. See *Kern Oil & Ref. Co. v. Tenneco Oil Co.*, 840 F.2d 730, 734 (9th Cir. 1988) ("The appellate court is entitled to review a fixed, rather than a mobile, record").

Second, Plaintiffs provide no basis for seeking reconsideration of the Court's Remand Order. Regardless of the rule by which reconsideration is sought, "[i]t is well established in federal case law that reconsideration is indicated in the face of new evidence, an intervening change in the law, or as necessary to prevent manifest injustice." *Hogan v. NW Trust Servs., Inc.*, No. 10-6028-HO, 2010 WL 1872945, \*1-2 (D. Or. May 7, 2010), *aff'd*, --- Fed. Appx. ---, 2011 WL 2601563 (9<sup>th</sup> Cir. July 1, 2011); *American Intern'l Specialty Lines Ins. Co. v. KinderCare Learning Ctr., Inc.*, No. 07-642-KI, 2011 WL 3204770, \*1 (D. Or. July 27, 2011); *Motorola, Inc.*

*v. J.B Rodgers Mech. Contractors*, 215 F.R.D. 581, 583-86 (D. Ariz. 2003) (surveying all relevant standards in the Ninth Circuit). Here, Plaintiffs have provided neither new information nor facts demonstrating that this Court’s “decision was clearly erroneous or manifestly unjust.” *KinderCare*, 2011 WL 3204770, \*3.<sup>10</sup>

Instead, Plaintiffs argue that more judicial processes are needed because, in their view, the Region “will waste another two years tweaking and dabbling at the margins of a flawed strategy.” NWF Br. at 19. This argument shows that Plaintiffs simply want another chance to argue what they have argued to this Court over the past four years – *i.e.*, that nearly every aspect of the 2008/2010 BiOp is arbitrary and capricious and the agencies need to start over. *See, e.g.*, Remand Order at 10 n.3. The Court, however, did not adopt their positions, but rather limited its ruling to address only one aspect of the claims raised in this case – *i.e.*, NOAA’s reliance on post-2013 habitat mitigation actions. *Id.* at 10-11 & n.3. The Court’s remand order followed from this holding, and the Court was clear that the agencies need not, and should not, abandon the BiOp and start anew when developing a new or supplemental BiOp on remand. *Id.* at 21 (retaining jurisdiction specifically to guard against abrupt changes, abandonment of the BiOp, or failing to follow through with the BiOp’s commitments on remand). These issues have been litigated and decided, and Plaintiffs’ desire to re-litigate the merits is wholly insufficient to justify reconsideration now. *See Haskell v. State Farm Mut. Auto. Ins. Co.*, 187 F. Supp. 2d 1241, 1244 (D. Haw. 2002) (motions “may not be used to re-litigate old matters, or to raise arguments or present evidence that could have been raised prior to entry of judgment”).

In short, the Court’s remand is *to the agencies* to work in collaboration with the sovereigns, and this is the proper focus. *See INS v. Ventura*, 537 U.S. 12, 16 (2002) (remand appropriate because a “judicial judgment cannot be made to do service for an administrative

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<sup>10</sup> As discussed *supra*, Plaintiffs’ arguments regarding purported deficiencies in the 2010 Annual Report are unfounded and principally based upon a misconception of the purpose of an annual report issued pursuant to RPA Action 2. Such arguments do not constitute new evidence supporting reconsideration or otherwise demonstrate that this Court’s order is “clearly erroneous or manifestly unjust.” *KinderCare*, 2011 WL 3204770, \*3.

judgment” and a court “is not generally empowered to conduct a de novo inquiry into the matter being reviewed and to reach its own conclusions based on such an inquiry”) (citations omitted). Just as it would be improper for a court to itself act as a panel of scientists, so too would it be improper for the court to convene a panel of scientists or other processes to do what it otherwise cannot. *See Lands Council v. McNair*, 537 F.3d 981, 988 (9th Cir. 2008) (*en banc*) (courts are not to “act as a panel of scientists that instructs the [agency] how to validate its hypotheses regarding wildlife viability, chooses among scientific studies,” and “orders the agency to explain every possible scientific uncertainty”); *see also Gorton v. Todd*, --- F.Supp.2d ----, 2011 WL 2557508, \*12 (E.D. Cal. June 29, 2011) (noting appropriateness of denying requests for court-appointed experts “at a point in litigation where evidence is not being evaluated” by the court).<sup>11</sup> Plaintiffs have not demonstrated that reconsideration is warranted or that the relief they request is appropriate, and their requests for additional relief should be denied.

### **CONCLUSION**

The 2008/2010 BiOp includes numerous opportunities for collaboration, independent and objective scientific review, and regional oversight. These processes are established and actively utilized by those in the Region in implementing the RPA and will continue to govern during the Court-ordered remand period. We welcome the opportunities to engage the sovereigns in these proper forums. Now is the time to stay the course, capitalize on the momentum achieved, and take those remaining aggressive steps to improve and refine the holistic approach to salmon protection embodied in the FCRPS BiOp and RPA. For these reasons, we respectfully request that the Court decline Plaintiffs’ requested relief.

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<sup>11</sup> Despite their characterizations of the relief as “procedural,” NWF Br. at 21, Plaintiffs’ request that the Court compel Federal Defendants to fund and implement some form of a scientific review panel also constitutes injunctive relief. *Nken v. Holder*, 129 S. Ct. 1749, 1757 (2009) (an injunction “directs the conduct of a party, and does so with the backing of its full coercive powers.”); *Favia v. Indiana Univ. of Pa.*, 7 F.3d 332, 337 (3rd Cir. 1993) (“we must look beyond the motion's caption to its substance”). However, as this Court already found, “[t]he BiOp contains positive mitigation measures that provide adequate protection to the listed species through 2013.” Remand Order at 19. Plaintiffs therefore cannot show that further injunctive relief is “needed to guard against any present or imminent risk of likely irreparable harm.” *Monsanto Co. v. Geertson Seed Farms*, 130 S. Ct. 2743, 2760 (2010).

Dated this 16th day of November, 2011.

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**CERTIFICATE OF SERVICE**

I certify that on November 16, 2011, the foregoing will be electronically filed with the Court's electronic filing system, which will generate automatic service upon on all Parties enrolled to receive such notice. The following will be manually served by overnight mail:

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/s/ Michael R. Eitel

# EXHIBIT 1

# ***FISH PASSAGE CENTER***

## ***2010 ANNUAL REPORT***



***Fish Passage Center  
of the  
Columbia Basin Fish &  
Wildlife Authority***

**August 2011**

**FISH PASSAGE CENTER  
2010  
ANNUAL REPORT**

**This report responds to the Fish Passage Center annual reporting requirements to the Northwest Power and Conservation Council under its Columbia River Basin Fish and Wildlife Program and the annual reporting requirements to the Bonneville Power Administration under its funding contracts which supported this work.**

**BPA Contract # 50744  
BPA Project #1994-033-00**

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**Michele DeHart**

**Fish Passage Center Manager**

**Fish Passage Center  
of the  
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**August 31, 2011**

## EXHIBIT 2



**Independent Scientific Advisory Board**

*for the Northwest Power and Conservation Council,  
Columbia River Basin Indian Tribes,  
and National Marine Fisheries Service  
851 SW 6<sup>th</sup> Avenue, Suite 1100  
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**Memorandum (ISAB 2011-3)**

**September 16, 2011**

**To:** ISAB Administrative Oversight Panel  
Bruce Measure, Chair, Northwest Power and Conservation Council  
Paul Lumley, Executive Director, Columbia River Inter-Tribal Fish Commission  
John Stein, Science Director, NOAA-Fisheries Northwest Fisheries Science Center

**From:** Rich Alldredge, ISAB Chair

**Subject:** ISAB Review of Three Fish Passage Center Technical Memoranda

**Background**

The Northwest Power and Conservation Council's 2009 amendments to the Columbia River Basin Fish and Wildlife Program call for the continuation of the fish passage related functions currently conducted by the [Fish Passage Center](#). The primary functions are to provide technical assistance and information to fish and wildlife agencies in particular, and to the public in general, on matters related to water management, spill, and other passage measures. The Program also calls for the Fish Passage Center's Oversight Board to ensure that the functions are implemented consistent with the Program. To do this, the Program specifies that the Oversight Board will work with the Center and the Independent Scientific Advisory Board (ISAB) to organize a regular system of independent and timely science reviews of the Center's analytical products.

This regular system of reviews includes evaluation of technical memos or analyses that meet criteria established in the October 12, 2010, *Review Guidelines for the Independent Scientific Advisory Board Review of Fish Passage Center Products*, and that would be of interest to the region. These criteria include whether new or novel analyses are introduced; new conditions or data bring old analyses into question; and/or consensus cannot be reached in the region on the science involved in the product. Three Fish Passage Center (FPC) technical memos on the topics of latent mortality and effects on in-river survival were identified as meeting the criteria for review. The three memos address latent mortality of in-river migrants due to route of dam passage.

The three FPC technical memoranda (with associated links) are:

- 1) Memo #134-10 dated October 5, 2010, “Delayed/latent Mortality and Dam Passage”  
[www.fpc.org/documents/memos/134-10.pdf](http://www.fpc.org/documents/memos/134-10.pdf)
- 2) Memo #135-10 dated October 6, 2010, “Delayed/latent Mortality and Dam Passage, Fish Passage Operations Implications” and  
[www.fpc.org/documents/memos/135-10.pdf](http://www.fpc.org/documents/memos/135-10.pdf)
- 3) Memo #08-11 dated January 19, 2011, “Effects of Passage through Juvenile Powerhouse Bypass Systems at Mainstem Dams on the Snake and Columbia Rivers.”  
[www.fpc.org/documents/memos/08-11.pdf](http://www.fpc.org/documents/memos/08-11.pdf)

Conversations between a member of the Fish Passage Center Oversight Board, Jim Ruff, Erik Merrill, and Rich Alldredge resulted in questions designed to guide and focus the ISAB review to be most useful to regional policy makers as they judge whether the conclusions in the memos are supported by “sound science.” The questions designed to frame this science review are provided below.

### **Review Questions and Answers**

- a) *Are the original FPC analyses cited in the memos scientifically rigorous and relevant to the topics in the memos?*

The memos all summarize evidence related to the hypothesis that passage of juvenile salmonids through bypass systems at Federal Snake-Columbia River hydropower dams reduces subsequent adult return rates. The earliest of the three memos (134-10) cites eleven references. Four of these references are refereed publications, and the remaining seven are unpublished agency reports or draft agency reports. The second memo (135-10) is essentially identical to memo 134-10 except for the addition of two paragraphs that address “Potential implications for fish passage operations.” The third and most recent memo (08-11) appends the earlier memo 135-10 and adds a short section on “Previous Fish Passage Center Analyses” that cites memos 71-09 (May 21, 2009) and 13-10 (February 3, 2010). These latter two memos, which report original FPC analyses, are discussed below.

Memo 71-09 compares the adult returns of juvenile Chinook that were detected in the juvenile bypass system at Ice Harbor Dam in 2006 with returns of juvenile Chinook that passed the dam undetected (data for the 2005 outmigration are also reported, but with the comment that adult returns were too few for the data to be useful). The hypothesis of no difference between passage routes is tested by calculating the ratio of smolt-to-adult returns for detected (SAR-d) and

undetected (SAR-ud) fish, i.e. SAR-d/SAR-ud, with 90% confidence limits. In the absence of an effect and without error, this ratio would be 1.0. For Chinook salmon outmigrating in 2006 the ratio is about 0.6, with an upper 90% confidence limit of approximately 0.95. However, no information is given on the sample sizes for undetected juveniles or for returning adults in the “detected as smolts” and “undetected as smolts” categories (the total number of adults returning was 127).

Memo 13-10 compares the adult returns of juvenile spring/summer Chinook and juvenile steelhead that were detected in the juvenile bypass system at Lower Monumental Dam in 2006 and 2007 with returns of, respectively, juvenile Chinook and juvenile steelhead that passed the dam undetected. Using the same methodology as described above for the analysis reported in memo 71-09, this memo reports that for the four tests (two species in two years) the SAR-d/SAR-ud ratio is above 1.0 in two instances and below 1.0 in two instances. Confidence limits (90%) are wide and broadly overlap 1.0 in three instances. For one group (Chinook in 2007) the point estimate for the ratio is about 0.5 and the upper 90% confidence bound falls just below 1.0. Again, no information is given on sample sizes for detected or undetected juveniles or for returning adults in the “detected as smolts” and “undetected as smolts” categories. Providing this information would clarify the origin of particular SARs. In this memo (as in memo 71-09), several reasons are given why the experimental conditions could have biased SAR-d/SAR-ud ratios upward by increasing estimated SARs for detected fish and decreasing estimated SARs for undetected fish. These biases potentially decreased the possibility of detecting differences between detected and undetected groups.

Memo 71-09 fairly concludes, “These results are preliminary at best.” This memo and memo 13-10 provide weak support for the hypothesis that exposure to juvenile fish bypasses can decrease long-term survival.

*b) Does the work by others cited in the memos represent the “universe” of studies or information relevant to the topics addressed by the memos?*

In general, the references summarize most of the key analytical efforts on the topic. The cited work by others is relevant to the memos. However, there is not much of an effort to use the broader biological and ecological literature in an effort to explain variation in SARs and issues relevant to data reliability (e.g., propagation of error). In view of the focused intent of the memos, the approach used by the FPC may be justified, but other factors may affect interpretation of the analyses presented. For example, the following publications also reported relevant analyses.

Sandford, B.P. and S.G. Smith. 2002. Estimation of smolt-to-adult return percentages for Snake River basin anadromous salmonids, 1990–1997. *Journal of Agricultural, Biological, and Environmental Statistics* 7(2):243–263.

Zydlewski J., Zydlewski, G., Danner, G.R. 2010. Descaling injury impairs osmoregulatory ability of Atlantic salmon smolts entering seawater. Transactions of the American Fisheries Society, Volume 139, Issue 1, 2010, Pages 129 – 136.

NOAA Technical memo. 2005. Effects of the Federal Columbia River Power System on Salmonid Population. NMFS-NWFSC-63, by Williams et al.

- c) *Does the FPC completely and accurately characterize the work by others cited in the memos with respect to their relevance to the topics addressed in the memos (e.g., does the FPC accurately and objectively describe what was done, why it was done, what was found and what it may mean)?*

The ISAB notes that the FPC produces a large amount of work, often on a very short time line. This is especially true for FPC technical memoranda. The technical memos reviewed were very succinct, which is typical of FPC memoranda. Despite these time and space constraints, the memos clearly described what was done, the results, and some possible implications. In general, the FPC has improved the completeness and accuracy with which it characterizes the work cited in technical memos.

- d) *Are the syntheses of the results from the relevant studies and original FPC analyses scientifically sound; i.e. are the interpretations of the weight of evidence represented by the body of work cited in the memos reasonable and scientifically defensible?*

Please see the response to part e below.

- e) *Are the conclusions reached as a result of the syntheses and interpretations of the relevant studies and original FPC analyses reasonable and scientifically defensible? Can one reach other reasonable and scientifically defensible conclusions based on the “universe” of studies or information relevant to the topics addressed by the memos?*

The conclusions reached are reasonable and scientifically defensible based on the data used. However, other reasonable conclusions could also be reached, and issues remain concerning the data used. For example, as noted in technical memo 134-10 when summarizing Buchanan et al. (2010), “The ROSTER model could have assumption violations due to heterogeneity in capture probabilities for smolts at dams.” The concern about biased sampling also may apply to Tuomikoski et al. (2010). The issue of possible bypass selectivity for less-fit fish, for example injured, diseased, less advanced in the smoltification process, smaller, or with lower energy reserves, rendering them less likely to survive to return remains unresolved and is in need of evaluation. The complex issue of the relationships among descaling, disease resistance, osmoregulation capability, and survival (See Zydlewski et al. reference above) is another issue in need of investigation. These largely unexamined biological and ecological factors potentially

affecting SARs have not been thoroughly evaluated. The memos use analytical approaches taking SARs at face value without discussing these unexamined factors.

The technical memos report that according to Petrosky and Schaller (2010), “Best fit, simplest models indicate that lower survival rates for Chinook salmon are associated with warmer ocean conditions, reduced upwelling in the spring and with slower river velocity during the smolt migration or multiple passages through powerhouses at dams.” It should be noted that multiple powerhouse passages appeared in some models for Chinook but not all. However, multiple powerhouse passages were not included in the best-fit models for steelhead, and this should be noted in the memos. A critical evaluation of this cited work might also include mention of the use of indirect estimates of delayed mortality with attendant difficulties in assessing variation in estimation when one is attempting to detect subtle responses of mortality rates. Another concern that could be raised when interpreting support for the latent mortality hypothesis is the difficulty of separating delayed effects of the passage system over the long time period from confounding effects and long-term trends, perhaps undocumented, in-river conditions.

The interpretation that Schaller and Petrosky (2007) provide that latent mortality occurs in fish passing the powerhouse collection bypass systems should also include mention of the ISAB concern over using comparisons of upriver and downriver stocks to make such conclusions due to confounding from other factors in establishing cause(s) of upriver/downriver differences (see [ISAB 2007-1](#) and [ISAB/ISRP 2007-6](#)<sup>1</sup>). Another concern that could be raised before accepting the latent mortality conclusion is the issue of propagation of error when analyses are conducted with models, such as the Ricker model, for estimating productivity due to difficulties in assessing the appropriateness of this approach and the sensitivity of its results.

Other works cited in the technical memos provide little or no support for the latent mortality hypothesis. The Ferguson et al. (2006) work does not directly address fish entering the bypass system but rather focuses on fish passage through turbines. As the FPC memos correctly state, Ham et al. (2009) found little evidence of bypass effects and Weiland et al. (2010) found that bypass increased survival through John Day Dam. It was useful to have this literature cited in the memos, demonstrating consideration of other results related to latent mortality.

- f) *Is there adequate evidence available to establish that latent mortality associated with bypass passage/powerhouse passage is indeed an issue for juvenile fish and fish passage management?*

Based on our review, the studies and analyses cited in these technical memos do not provide an adequate base of reliable information to support a “weight of evidence” conclusion on the strength of a relationship between multiple bypass passage and latent mortality of juvenile

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<sup>1</sup> ISAB Latent Mortality Report. 2007-1. <http://www.nwcouncil.org/library/isab/isab2007-1.htm> and ISAB and ISRP Review of the CSS Ten-Year Retrospective Summary Report, 2007-6, <http://www.nwcouncil.org/library/isab/isab2007-1.htm>

Chinook and steelhead. That is, the relationships observed between latent mortality and bypass passage are confounded with other factors that obscure unambiguous interpretation.

**References from the [FPC Tech Memo 134-10](#) and others cited in this ISAB memo**

Buchanan, R., R. Townsend, J. Skalski, K. Hamm. 2010. DRAFT REPORT: The Effect of Bypass Passage on Adult Returns of Salmon and Steelhead: An Analysis of PIT-Tag Data Using the Program ROSTER.

Budy, P., G.P. Thiede, N. Bouwes, C.E. Petrosky, and H. Schaller. 2002. Evidence linking delayed mortality of Snake River salmon to their earlier hydrosystem experience. *North American Journal of Fisheries Management* 22:35-51.

Ferguson, J. W., R. F. Absolon, T. J. Carlson, and B. P. Sandford. 2006. Evidence of delayed mortality on juvenile pacific salmon passing through turbines at Columbia River dams. *Transactions of the American Fisheries Society* 135: 139-150.

Ham K.D., C.I.I. Arimescu, M.A. Simmons, J.P. Duncan, M.A. Chamness, and A. Solcz. 2009. Synthesis of biological research on juvenile fish passage and survival 1990-2006: McNary Dam. Report prepared for U.S. Army Corps of Engineers, Contract W9127N-06-D-005.

Marsh D.M., B.P. Sanford, S.G. Smith, G.M. Matthews, W.D. Muir. 2009 Transportation of Columbia River salmonids from McNary Dam: Final Adult Returns from Hatchery Spring Chinook of 2002-2004 and hatchery Steelhead of 2003-2005. Draft report prepared for the U.S. Army Corps of Engineers.

McMichael, G.A., R.A. Harnish, B.J. Bellgraph, J.A. Carter, K.D. Ham, P.S. Titzler, and M.D. Hughes. 2010. Migratory behavior and survival of juvenile salmonids in the Lower Columbia River and estuary in 2009. Draft report for the U.S. Army Corps of Engineers.

Petrosky C., and H. Schaller 2010. Influence of river conditions during seaward migration and ocean conditions on survival rates of Snake River Chinook salmon and steelhead. *Ecology of Freshwater Fish* 2010. 2010 John Wiley & sons A/C

Schaller, H. A, and C. E Petrosky. 2007. Assessing hydrosystem influence on delayed mortality of Snake River stream-type Chinook salmon. *North American Journal of Fisheries Management* 27, no. 3: 810–824.

Scheuerell, M, and R.Zabel. 2006. Seasonal differences in migration timing leads to changes in the smolt-to-adult survival of two anadromous salmonids. Unpublished Draft technical paper. This work has been published as: Mark D. Scheuerell, Richard W. Zabel and Benjamin P. Sandford. Relating juvenile migration timing and survival to adulthood in two species of threatened Pacific salmon (*Oncorhynchus* spp.) *Journal of Applied Ecology* 2009, 46, 983–990

Tuomikoski, J., J. McCann, T. Berggren, H. Schaller, P. Wilson, S. Haeseker, J. Fryer, C. Petrosky, E. Tinus, T. Dalton, and R. Ehlke. 2010. DRAFT REPORT: Comparative Survival Study (CSS) of PIT-tagged Spring/Summer Chinook and Summer Steelhead, 2010 Annual Report, Project No. 1996-020-00. <http://www.fpc.org/documents/CSS/CSSDRAFTRPT2010.pdf>

Weiland, M.A., G.R. Ploskey, J.S. Hughes, Z. Deng, T. Fu, T.J. Monter, G.E. Johnson, F. Khan, M.C. Wilderding, A.W. Cushing, S.A Zimmerman, D.M. Faber, K.M. Carter, J.W. Boyd, R.L. Townsendm, J.R. Skalski, J. Kim, E.S. Fischer, and M.M. Meyer. 2010. Acoustic telemetry evaluation of juvenile salmonid passage and survival proportions at John Day Dam, 2009. Draft report prepared for the U.S. Army Corps of Engineers (PNNL-19422 DRAFT).

## EXHIBIT 3

1 **COMPARATIVE SURVIVAL STUDY (CSS)**  
2 **of PIT-tagged Spring/Summer Chinook and**  
3 **Summer Steelhead**

4  
5  
6 **2011 Annual Report**

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10 **BPA Contract #19960200**

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13  
14  
15 **Prepared by**

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31 **Michele DeHart, Fish Passage Center**

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38 **DRAFT 08/31/2011**

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DRAFT

1  
2  
3 **Chapter 1**  
4 **Introduction**  
5

6 The Comparative Survival Study (CSS; BPA Project 199602000) began in 1996 with the  
7 objective of establishing a long term dataset of annual estimates of the survival rate of  
8 generations of salmon from their outmigration as smolts to their return to freshwater as adults to  
9 spawn (smolt-to-adult return rate; SAR). The study was implemented with the express need to  
10 address the question of whether collecting juvenile fish at dams, transporting them downstream  
11 of Bonneville Dam (BON) and then releasing them was compensating for the effect of the  
12 Federal Columbia River Power System (FCRPS) on the survival of Snake Basin spring/summer  
13 Chinook salmon that migrate through the hydrosystem.

14 The CSS is a long term study within the Northwest Power and Conservation Council's  
15 Columbia Basin Fish and Wildlife Program (NPCC FWP) and is funded by Bonneville Power  
16 Administration (BPA). Study design and analyses are conducted through a CSS Oversight  
17 Committee with representation from Columbia River Inter-Tribal Fish Commission (CRITFC),  
18 Idaho Department of Fish and Game (IDFG), Oregon Department of Fish and Wildlife (ODFW),  
19 U.S. Fish and Wildlife Service (USFWS), and Washington Department of Fish and Wildlife  
20 (WDFW). The Fish Passage Center (FPC) coordinates the PIT-tagging efforts, data management  
21 and preparation, and CSSOC work. All draft and final written work products are subject to  
22 regional technical and public review and are available electronically on FPC and BPA websites:

23 FPC: <http://www.fpc.org/documents/CSS.html> and  
24 BPA: <http://www.efw.bpa.gov/searchpublications/index.aspx?projid>

25 The completion of this annual report for the CSS signifies the 14th outmigration year of  
26 hatchery spring/summer Chinook salmon marked with Passive Integrated Transponder (PIT) tags  
27 as part of the CSS. It's also the 12th complete brood year return as adults of those PIT-tagged  
28 fish, covering adult returns from 1997-2009 hatchery Chinook juvenile migrations. In addition,  
29 the CSS has provided PIT-tags to on-going tagging operations for wild Chinook since 2002  
30 (report covering adult returns from 1994-2009 wild Chinook juvenile migrations). The CSS  
31 tagged wild steelhead on the lower Clearwater River and utilized wild and hatchery steelhead  
32 from other tagging operations in evaluations of transportation, covering adult returns from 1997-  
33 2007 wild and hatchery steelhead migrations.

34 The primary purpose of the 2011 annual report is to update the time series of smolt-to-  
35 adult survival rate data and related parameters with additional years of data since the completion  
36 of the CSS 10-yr retrospective analysis report (Schaller et al 2007). The 10-yr report provided a  
37 synthesis of the results from this ongoing study, the analytical approaches employed, and the  
38 evolving improvements incorporated into the study as reported in CSS annual progress reports.  
39 This current report specifically addresses the constructive comments of the most recent regional  
40 technical review conducted by the Independent Scientific Advisory Board and Independent  
41 Scientific Review Panel (ISAB and ISRP 2007) and the comments on the CSS study found in  
42 ISAB 2010. This report includes complete return data for smolt outmigration year 2007 for wild  
43 and hatchery Chinook and steelhead (all returns are to Lower Granite Dam). For wild and  
44 hatchery Chinook, this report provides completed 3-salt returns from smolt migration year 2008  
45 and 2-salt returns from smolt migration year 2009. For wild and hatchery steelhead, completed  
46 2-salt returns are provided from the 2008 smolt migration and 1-salt returns from 2009.

1  
2  
3 **Results**  
4

5 Estimates of mean  $F\hat{T}T_i$ ,  $\hat{Z}_i$  and  $\hat{S}_i$  of cohorts of juvenile yearling and  
6 subyearling Chinook, steelhead and annual estimates of sockeye along with predicted  
7 values for these parameters are shown in Figures 3.1, 3.3, and 3.5 (LGR-MCN reach) and  
8 Figures 3.2, 3.4, and 3.6 (RIS-MCN and MCN-BON reaches). Mean  $F\hat{T}T_i$ ,  $\hat{Z}_i$  and  $\hat{S}_i$   
9 varied considerably over the period of 1998-2010 in the LGR-MCN each, both within-  
10 and across-years (Figures 3.1, 3.3, 3.5). While there were some special cases, mean  
11  $F\hat{T}T_i$  generally decreased over the season,  $\hat{S}_i$  either increased or decreased over the  
12 season, and  $\hat{Z}_i$  increased over the season. Within-year estimates of  $\hat{S}_i$  varied by up to 39  
13 percentage points for both wild yearling Chinook and steelhead, and by up to 32  
14 percentage points for hatchery yearling Chinook. Across all years and cohorts, estimates  
15 of  $\hat{S}_i$  varied by up to 64 percentage points for yearling Chinook and 76 percentage points  
16 for steelhead. The large within- and across-year variation in  $\hat{S}_i$  demonstrates a high  
17 degree of contrast in  $\hat{S}_i$  over this 1998-2010 timeframe. For hatchery subyearling  
18 Chinook in the LGR-MCN reach, there was a dramatic reduction in FTT following the  
19 implementation of court-ordered spill in the summer of 2005 (Figure 3.1). The average  
20 FTT for across subyearling release groups during 1998-2004 was 25 days, while the  
21 average FTT across years 2005-2010 (the years of court-ordered summer spill) was 11  
22 days.

23 In the MCN-BON reach, cohorts of yearling Chinook and steelhead demonstrated  
24 within-year mean  $F\hat{T}T_i$ ,  $\hat{Z}_i$  and  $\hat{S}_i$  patterns similar to those observed in the LGR-MCN  
25 reach, varying considerably both within- and across-years (Figures 3.2, 3.4, and 3.6). For  
26 both species, mean  $F\hat{T}T_i$  generally decreased over the migration season. Yearling  
27 Chinook in 2001 demonstrated the largest within-year variation in mean  $F\hat{T}T_i$ , ranging  
28 from 22 days early in the season to 8 days late in the season (Figure 3.2). Due to  
29 imprecision in the estimates of  $\hat{S}_i$ , general patterns in the estimates of  $\hat{S}_i$  and  $\hat{Z}_i$  in the  
30 MCN-BON reach were difficult to discern (Figures 3.4 and 3.6). For both Chinook and  
31 steelhead,  $\hat{Z}_i$  generally increased over the season. Steelhead  $\hat{S}_i$  generally decreased over  
32 the season, but no general patterns were evident for Chinook  $\hat{S}_i$ .

33 The best fitting models (based on AICc) for mean  $F\hat{T}T$  consistently had model  
34 forms with Julian day, water transit time and spill. The signs of the model coefficients  
35 for these variables indicated that juvenile yearling and subyearling Chinook, steelhead  
36 and sockeye all migrated faster as water velocity increased (i.e., WTT was reduced) and  
37 as spill percentages increased. Juvenile yearling and subyearling Chinook and steelhead  
38 also migrated faster as the season progressed. Because we were not able to develop  
39 within-season estimates of  $F\hat{T}T$  for sockeye, we were not able to determine whether  
40 sockeye share similar increases in migration speed as Julian day increases. For steelhead

1 in the LGR-MCN reach and the MCN-BON reach, we observed a significant effect of the  
2 number of surface passage structures in place on *FTT*, with the increasing number of  
3 surface passage structures at Little Goose, Lower Monumental, Ice Harbor and John Day  
4 dams reducing steelhead *FTTs*. Hatchery subyearling Chinook also demonstrated a  
5 reduction in *FTT* associated with the presence of surface passage structures in  
6 combination with high spill levels. We also identified a significant effect ( $P < 0.001$ ) of  
7 the percentage of hatchery steelhead in the LGR-MCN reach, with hatchery steelhead  
8 taking two days longer on average to migrate through the LGR-MCN reach than wild  
9 steelhead. Hatchery and wild steelhead in the RIS-MCN reach had reduced *FTT* when  
10 WTT was low and spill levels were high. Hatchery and wild yearling Chinook in the  
11 RIS-MCN reach had reduced *FTT* when WTT was low and as Julian day increased. The  
12 best fitting model (based on AICc) for sockeye *FTT* contained only spill. The models  
13 that were developed for all species captured a very high degree of the variation in mean  
14 *FTT* of all species (Table 3.1).

15 The best fitting models (based on AICc) for *Z* also had model forms primarily  
16 with Julian day, water transit time and spill. For steelhead in the LGR-MCN reach, the  
17 lowest AICc model contained Julian day, spill and the number of surface passage  
18 structures, with *Z* predicted to increase with Julian day and *Z* predicted to decrease as  
19 percent spill increased and as the number of surface passage structures increased. For  
20 wild yearling Chinook in the LGR-MCN reach, the lowest AICc model contained Julian  
21 day, WTT, an interaction between Julian day and WTT, and the number of surface  
22 passage structures, with *Z* predicted to increase with Julian day or with increases in WTT  
23 and *Z* predicted to decrease as the number of surface passage structures increased. For  
24 hatchery yearling Chinook in the LGR-MCN reach, the lowest AICc model contained  
25 Julian day, WTT and spill, with *Z* predicted to increase with Julian day and WTT, and *Z*  
26 predicted to decrease as spill increases. The lowest AICc model for sockeye in the LGR-  
27 MCN reach contained only WTT, with *Z* predicted to increase as WTT increases. For  
28 hatchery subyearling Chinook in the LGR-MCN reach, *Z* was predicted to decrease with  
29 decreases in WTT. For hatchery and wild yearling Chinook in the RIS-MCN reach, *Z*  
30 decreased as spill levels increased at Wannapum and Priest Rapids dams, and as WTT  
31 and Julian day were reduced. For hatchery and wild steelhead in the RIS-MCN reach, *Z*  
32 was predicted to decrease as WTT decreased and as average spill levels increased. For  
33 combined hatchery and wild Chinook in the MCN-BON reach, the lowest AICc model  
34 contained only Julian day, with *Z* predicted to increase with Julian day. For combined  
35 hatchery and wild steelhead in the MCN-BON reach, the lowest AICc model contained  
36 only temperature, with *Z* predicted to increase as water temperatures increase. However,  
37 the survival estimates for steelhead in the MCN-BON reach were the least precise among  
38 those species-reach combinations that we examined, so some caution is warranted in  
39 judging the relative importance of temperature versus other factors for steelhead in this  
40 reach.

41 Combining the models for predicting mean *FTT* and *Z* resulted in generally high  
42 accuracy in predicting reach survival rates for the species-reach combinations that we  
43 examined (Table 3.1). As mentioned above, the models developed for *FTT* explained a  
44 very high proportion of the observed variation in *FTT*. Although the models for *Z*  
45 explained a lower proportion of the variability in *Z*, when the models for *FTT* and *Z* were  
46 combined to make predictions for survival, a relatively high proportion of the variation

## EXHIBIT 4



## Department of Energy

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

ENVIRONMENT, FISH AND WILDLIFE

December 23, 2010

In reply refer to: KE-4

Mr. Will Stelle, Jr.  
Regional Administrator  
National Marine Fisheries Service, Northwest Region  
7600 Sand Point Way NE  
Seattle, WA 98115

Dear Mr. Stelle:

As you know, the Adaptive Management Implementation Plan (AMIP) calls for the incorporation of a metric indicative of trend into the existing abundance-based Significant Decline Trigger. This task is to be completed by the end of this calendar year. Over the course of the past number of months, staff from the Action Agencies and NOAA Fisheries have been working together to complete this task and can now report that the four agencies are in agreement on our preferred approach.

Staff took as their starting point the example included in AMIP Appendix 4 of a possible approach to combining trend and abundance metrics. The proposed approach to combining the two metrics was deemed sound. Staff then examined three possible methods of estimating short-term trend and after a rigorous analysis determined that the so-called "BRT trend" method was preferable to the other trend estimators considered.<sup>1</sup> Though differences between the three were slight, the BRT trend metric returned – on average – the highest rate of success in predicting a Significant Decline, the fewest failures to predict a Significant Decline, and the second-lowest rate of false positives.

The proposed approach was taken to the RIOG for comment on November 17. RIOG members were invited to submit written comments on this proposal by December 7. Comments received were from the State of Oregon and the Spokane Tribe. We enclose a document summarizing the comments from these two sovereigns and our response.

This correspondence sent on behalf of the Action Agencies memorializes our compliance with a component of RPA Action 1a by incorporating a trend metric into the Significant Decline Trigger. The new trigger will be in effect beginning in calendar year 2011. We also enclose an

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<sup>1</sup> The BRT trend is the slope of the regression of log-transformed spawner counts against time. In this case, a 5-year trend estimate is the basis for the new trigger. The other two methods analyzed were 5 year geometric means of relative abundance and 5 year geometric means of relative 4-year rolling averages of abundance.

Excel file in which we have used the AMIP's exceedence curve approach to identify the 90th percentile exceedence levels for the trend metric for the six Interior Columbia River species to which the new triggers will apply.

Sincerely,

A handwritten signature in cursive script that reads "Lorri Bodi".

F. Lorraine Bodi  
Acting Vice President, Environment, Fish and Wildlife

2 Enclosures

cc:

Kate Puckett, Bureau of Reclamation  
Rock Peters, Corps of Engineers  
Barry Thom, NOAA Fisheries

Enclosure 1

Consideration of Comments on a Metric Indicative of Trend  
December 23, 2010

On November 17, Action Agency and NOAA Fisheries staff briefed RIOG members on the Federal Agencies' proposed approach to incorporating a metric indicative of trend into the AMIP's abundance-based triggers as called for in the AMIP. RIOG members were invited to submit comments on this approach. Comments were received from the State of Oregon and the Spokane Tribe. The Action Agencies briefly summarize and respond to those comments below.

State of Oregon's Comments

Oregon, while acknowledging that the addition of a trend metric made the Significant Decline Trigger more sensitive, and therefore more likely to provide the region with advance notice of a sharp decline in abundance, reiterated its view that the AMIP's triggers represented a lowering of the jeopardy standard. We do not agree with their conclusion. The AMIP's Early Warning Indicator and Significant Decline Trigger are not a substitute for the BiOp's jeopardy standard. Instead, these specific biological triggers are precautionary tools that, if tripped, set in motion additional rapid response actions designed to have immediate benefits. They provide a cautionary approach, or safety-net, in addition to the performance standards and RM&E in the FCRPS RPA that ensure the Action Agencies are not likely to jeopardize listed species.

Spokane Tribe Comments

The Spokane Tribe indicates an interest in reviewing our analysis comparing the three trend metrics. We note that during the November 17 RIOG meeting, we offered to supply that analysis to any RIOG member. Pursuant to the Tribe's December 10 request, we have forwarded the analytical results to Mr. Howard Funke.

The Tribe also expresses a concern that listed Upper Columbia River spring Chinook Salmon and Steelhead could "virtually or literally disappear in less than two years without tripping either trigger at the ESU level." The Tribe's proposed remedy for this possibility is a hybrid or weighted means metric at the population level. However, indices at the population and/or Major Population Group levels were considered during development of the AMIP and were not adopted due to the lack of timely information on status below the ESU/DPS level (AMIP footnote 7). We note that the addition of a trend metric to the existing abundance-based AMIP triggers enhances the sensitivity of the triggers and makes it more likely they will provide notice of an impending significant decline. We also restate our intention to develop Rapid Response plans for Upper Columbia stocks first.

The Tribe suggests quantifying and weighing each of the Viable Salmonid Population parameters, particularly productivity, in any trend metric. We have a number of concerns about this suggestion. The first is that VSP parameters apply at the population level. For the reason described above, population-level data was not chosen for AMIP triggers due to the fact that

such data are not available until years after the fact. Secondly, the TRTs have developed a structured approach to assessing the VSP parameters of spatial structure and diversity, but we are confused by the suggestion that these parameters be further quantified and included in a trend metric. The independent scientists who reviewed the 2008 BiOp at the Obama Administration's request suggested triggers based on declines (or trends) in abundance. The AMIP's requirement to develop such an indicator is directly responsive to that suggestion.

We don't understand the Tribe's concern that existing abundance-based triggers have been rounded to the nearest 25 fish and that such rounding can "arbitrarily create the appearance that fish are present when, in fact, they are not present." The existing abundance triggers are based on the 80<sup>th</sup> and 90<sup>th</sup> percentile exceedences of rolling four year averages of natural-origin adult returns. The fact that the precise values of the 80<sup>th</sup> and 90<sup>th</sup> percentile exceedences have been rounded to the nearest 25 fish does not lead to the result indicated in the Tribe's comments. The Tribe is no doubt aware that the AMIP calls for the development of one or more additional Early Warning Indicators. These indicators are intended to provide even greater sensitivity to possible future declines in abundance and will hopefully address the Tribe's concern.

Finally, the Tribe indicates a concern with the source of the data used for the AMIP triggers. Presently those data are supplied by the Northwest Fisheries Science Center. The NWFSC obtains these data from a variety of sources. We agree that this process should be more transparent and will seek to make it so.

## EXHIBIT 5

## FCRPS BiOp Implementation 2008-2018

RIOG - REGIONAL IMPLEMENTATION OVERSIGHT GROUP

### **Collaboration Teams & Operational Guidelines**

*Updated 1-7-10*

#### **Introduction**

Federal, tribal and state governments share jurisdiction over salmon and steelhead and related water management issues across the Columbia Basin. In response to a court order, these governments have participated in a multi-year collaboration process to inform the federal Action Agencies and NOAA regarding the development of the 2008 Biological Opinion (BiOp) for the Federal Columbia River Power System (FCRPS). Priorities for implementing the BiOp are based on the needs of the ESA listed salmon and steelhead, hydro impacts and opportunity to address key limiting factors.

As described in the BiOp and related documents, the Regional Implementation Oversight Group (RIOG) has been established to provide a high-level policy forum for discussion and coordination of the implementation of the FCRPS and related BiOps. The overall purpose of the group is to inform the federal, state and tribal agencies that are actively engaged in salmon recovery efforts regarding implementation issues from each sovereign's perspective.

FCRPS BiOp Implementation will consider a broad, long-term fish recovery context and ecosystem (All H) approach. The RIOG will consider results and adaptive management at the species, or ESU/DPS, level.

The RIOG is a forum for interagency coordination and does not supplant existing federal, state or tribal decision making authorities. All decisions under the authority of the federal government will continue to be made by the appropriate federal agency with the statutory authority to make such decisions.

This document describes the approach, expectations and members of the various RIOG Teams. *Refer also to RIOG Guidelines, 10-31-2008.*

#### **RIOG Structure**

Supporting the RIOG Senior Policy Group there are two team levels – Senior Technical Teams [which focus on long term planning and consideration of RME results] and Technical Teams for the Hs [which focus on more immediate, narrower issues]. Some of these groups currently exist, and some are still under development.

In general, Senior Technical Teams are expected to meet at least once a year or at the request of the RIOG to review progress in implementation and/or discuss adaptive management. Technical Teams for the Hs will meet as needed, based on specific assignments or issues. (*Refer also to the RIOG chart, 10-31-2008.*) For some existing groups, such as the TMT and SCT, the new structure may result in 1) less frequent meetings and 2) collaboration and recommendations focused within the framework and

## FCRPS BiOp Implementation 2008-2018

RIOG - REGIONAL IMPLEMENTATION OVERSIGHT GROUP

### Collaboration Teams & Operational Guidelines

performance metrics of the FCRPS BiOp. This shift in expectations may take some time to fully accomplish.

#### Requirements for all Technical Teams

1. **Membership:** RIOG sovereigns should appoint one member and one alternative to the various RIOG teams.
2. **Chair:** The team chair should be a federal agency representative, although a state or tribal representative may serve as a coordinator or co-chair.
3. **Charters:** Each team should develop processes for conducting business, developing work products, and collaborating on relevant issues.
4. **Agendas and Materials:** Agendas will be developed by the technical team chairs, with input by team members. Agenda topics shall be within scope of the RIOG guidelines and focus on FCRPS BiOp implementation. Agendas and materials should be available ahead of time & posted on FCRPS website. A goal is to have materials available one week in advance.
5. **Administrative Record Keeping:** Agendas, materials, attendance lists and meeting notes should be maintained by each team, posted on the RIOG website and retained as federal administrative records at the respective agency.
6. **Assignments:** Assignments will come from the RIOG chair to the respective team chair, and the details transmitted via the RIOG template (see attached). There are three types of assignments:
  - a) Assignments based on the scope of work for each technical team as identified in the RIOG guidelines and this paper,
  - b) Assignments based on a specific request for collaboration and input from the Action Agencies or NOAA, and,
  - c) Assignments based on a specific request from the RIOG.
7. **Reporting Progress to the RIOG:** Assignments made by the RIOG should be completed by the deadline, except as mutually agreed. The technical team chair is responsible for developing, coordinating, and reporting these results in a timely manner.
8. **Raising Policy issues or disputes to the RIOG:** When policy guidance is needed or if there is a dispute, the issue should be brought to the RIOG through the RIOG Chair. Technical teams will make a reasonable effort to resolve proposals within the team, and allow issues to be fully developed. If a team is unable to reach resolution, the members will frame the issue using the RIOG Policy Issues template (see attached). The team chair should notify the RIOG chair who will notify the RIOG.

## FCRPS BiOp Implementation 2008-2018

RIOG - REGIONAL IMPLEMENTATION OVERSIGHT GROUP

### **Collaboration Teams & Operational Guidelines**

The RIOG may take up policy issues and disputes from technical teams. Team members may be asked to supply additional information during the process. If the issue requires a short-term decision, (such as with in-season hydro operations) the RIOG may hold a conference call to address the issue in a timely manner.

At times, technical team and RIOG meetings may include a polling of sovereign views on a given issue. Sovereign views will be made by designated representatives (or their alternates) registering consent, objection, or abstention to a decision made at a noticed meeting or conference call.

Each member organization is responsible for having a representative or alternate present at these meetings (in person or by conference call) to register consent, objection, or abstention on a decision. Every effort will be made to ensure that those members who feel strongly about an issue can be present at the meeting at which the issue will be discussed.

The RIOG may include an opportunity for public input into a policy issue or dispute. If so, timely notice and relevant materials will be made available to the public.

The federal agency with the authority to make the decision will notify the RIOG and technical team members about its decision and rationale in a timely manner. Agency decisions, RIOG comments and supporting materials will be posted on the RIOG website and maintained in the respective federal administrative records.

Policy issues and disputes may be further elevated to the Regional Executives, which include the federal administrative heads, Governors and Tribal Chairs.

#### 9. Logistics & support:

# FCRPS BiOp Implementation 2008 - 2018

RIOG - REGIONAL IMPLEMENTATION OVERSIGHT GROUP

## Collaboration Teams & Operational Guidelines

### RIOG Assignment to Technical Teams

<b>Technical TEAM NAME</b>	
<b>Objectives:</b> <i>Assignment in a Nutshell</i>	
<b>Specific Deliverable</b>	
<b>Scope</b>	
<b>Primary Considerations</b>	
<b>Other Considerations</b>	
<b>Time Frame:</b> <i>Deadline, Milestones, Resources</i>	
<b>Contacts</b>	

# FCRPS BiOp Implementation 2008 - 2018

RIOG - REGIONAL IMPLEMENTATION OVERSIGHT GROUP

## Collaboration Teams & Operational Guidelines

### RIOG BRIEFING PAPER TEMPLATE

<b>Technical TEAM NAME</b>	
<b>Statement of Issue: <i>in a Nutshell</i></b>	
<b>Timeframe for Decision</b>	
<b>Species at Issue</b>	
<b>Status of Species</b>	
<b>Decision Options</b>	
<b>Relevant Scientific Information</b>	
<b>Other Considerations/ Impacts</b>	
<b>Views / Positions of Team Members &amp; Brief Explanation</b>	
<b>Contacts</b>	

## FCRPS BiOp Implementation 2008 - 2018

RIOG - REGIONAL IMPLEMENTATION OVERSIGHT GROUP

### **Collaboration Teams & Operational Guidelines**

## RIOG - Senior Policy Team

**Role and Scope:** Per the RIOG guidelines, this is a high-level policy forum for discussion and coordination of the implementation of the FCRPS and related BiOps between the federal agencies, states and tribes, including to:

- jointly and thoroughly discuss issues that arise in the implementation of the 2008 FCRPS BiOps;
- provide an opportunity for input to inform federal decision-making on these issues;
- resolve policy disputes that arise at the technical team level;
- notify state and tribal partners of the decisions that the federal government has or has not made as they relate to these issues, including how the state and tribal input was used in the decision-making process;
- focus on the longer term implications of short term management actions;
- make the necessary links to other “H”-team efforts in the recovery process;
- jointly develop criteria to support decisions or changes to current management practices;
- identify opportunities for improved coordination and partnerships to increase efficiencies and avoid unnecessary duplication;
- increase awareness and include consideration of BiOp actions on non-listed species, cultural and other resources, and the multi-purposes of the FCRPS and the competing needs with the Columbia River Basin; and
- facilitate an open communication process that can keep the public and other agencies informed of on-going progress and the rationale behind the decisions that are made through the RIOG.

### Adaptive Management:

The RIOG will play a significant role in the annual and comprehensive progress reviews of FCRPS BiOp implementation and in adaptive management based on those results. Annual progress reports will include suggestions for adaptive management for discussion amongst the RIOG Senior Technical Teams and Senior Policy Team in the fall. Adjustments to implementation actions will be captured in the subsequent implementation plans

In addition, the RIOG will play a role in implementation of the 2009 Adaptive Management Implementation Plan.

## FCRPS BiOp Implementation 2008-2018

RIOG - REGIONAL IMPLEMENTATION OVERSIGHT GROUP

### **Collaboration Teams & Operational Guidelines**

## Hydro Coordination Senior Technical Team (Hydro Team)

**Role and Scope:** Per the RIOG guidelines, this is a team for long-term planning and adaptive management on overall hydro operations. It operates at a broader scale and higher level than the hydro technical teams such as TMT and SCT. Its primary focus is on achievement of hydro performance standards and metrics as described in the FCRPS BiOp. It will also cover predation management. The Hydro Team may review technical issues from other hydro technical teams upon request by the Senior Policy Team.

There will be at least one meeting of the group each year. The group will assess action agency implementation results in Progress Reports and discuss adaptive management issues. This will likely take place in the fall based on current Progress Report schedules. Results will be reported out to the RIOG and captured in the annual Water management Plan and supplemental implementation plans. Other assignments and meetings may be made at the specific request of the Action Agencies, NOAA, or the RIOG itself. These assignments will include development of long-term contingency actions by 2012 and other implementation activities per the 2009 Adaptive Management Implementation Plan.

The Hydro Team will have a significant role in the 2013 and 2016 Diagnostics and adaptive management recommendations to the RIOG. This is expected to be a major focus of the group, based on the cumulative Progress Reports.

## Habitat Coordination Senior Technical Team (Habitat Team)

**Role and Scope:** Per the RIOG guidelines, this is a team for long term planning and adaptive management on overall habitat actions. It operates at a broader scale and higher level than the technical teams or expert panels. Its primary focus is on achievement of habitat performance standards and metrics as described in the FCRPS BiOp. Its focus will be at the species level. The federal agencies will work to ensure coordination with Fish Accord commitments.

There will be at least one meeting of the group each year. The group will assess action agency implementation results from the habitat expert panel processes and other implementation activities. The Habitat team will consider results and adaptive

## FCRPS BiOp Implementation 2008-2018

RIOG - REGIONAL IMPLEMENTATION OVERSIGHT GROUP

### **Collaboration Teams & Operational Guidelines**

management recommendations in annual Progress Reports in the fall of each year. Results will be reported out to the RIOG. Other assignments and meetings may be made at the specific request of the Action Agencies, NOAA, or the RIOG itself.

The Habitat Team will have a significant role in the 2013 and 2016 Diagnostics and adaptive management recommendations to RIOG. This is expected to be a major focus of the group, based on the cumulative Progress Reports.

### **Hatchery & Harvest Coordination Senior Technical Team (Hatchery & Harvest Team)**

**Role and Scope:** Per the RIOG guidelines, this is the team for long term planning and adaptive management on BiOp hatchery and harvest actions. It operates at a broader scale and higher level than the hatchery/harvest technical team. Its primary focus is on implementation of the actions described in the FCRPS BiOp, and its focus will be at the ESU level. The federal agencies will also work to ensure coordination with US v. Oregon and Fish Accord commitments.

There will be at least one meeting of the group each year. The group will assess action agency implementation results from consultation processes and other implementation activities. The Hatchery & Harvest Team will consider results and adaptive management recommendations in annual Progress Reports in the fall of each year. Results will be reported out to the RIOG. Other assignments and meetings may be made at the specific request of the Action Agencies, NOAA, or the RIOG itself.

The Hatchery & Harvest Team will have a significant role in the 2013 and 2016 Diagnostics and adaptive management recommendations to RIOG. This is expected to be a major focus of the group, based on the cumulative Progress Reports.

## EXHIBIT 6

# Independent Scientific Advisory Board

Northwest Power Planning Council

National Marine Fisheries Service

Columbia River Basin Indian Tribes

## Terms of Reference

August 20, 1996, amended December 2, 2002, amended July 15, 2004

### Preface

In 1996, the Northwest Power Planning Council (Council) and the National Marine Fisheries Service (NMFS) established the Independent Scientific Advisory Board (ISAB). The ISAB was formed to provide independent scientific advice and recommendations regarding scientific issues posed by the respective agencies on matters that relate to their fish and wildlife programs.

Effective the date of this agreement, these Terms of Reference are amended to add Columbia River Basin Indian Tribes as equal and permanent partners in the sponsorship of the ISAB.

### I. Purpose

The ISAB is to foster a scientific approach to fish and wildlife recovery and the use of sound scientific methods in research related to the programs of the NMFS, the Council, and the Tribes. It is understood that the interests of NMFS relate particularly to anadromous fish conservation and management, while those of the Council and the Tribes include all fish and wildlife populations affected by operation and development of the hydroelectric system. NMFS is responsible for Federal stewardship of the Nation's marine and anadromous fish, and marine mammals. The Council is charged to "protect, mitigate and enhance" fish (anadromous and resident) *and* wildlife as affected by operation and development of the Columbia Basin hydroelectric system. The Tribes manage fish and wildlife resources on their respective reservations, are co-managers on ceded lands, and are responsible to ensure treaty provisions governing natural resources are secured to future generations.

### II. Administrative Oversight Panel

An Administrative Oversight Panel consisting of the chair of the Northwest Power Planning Council, the Regional Administrator of the National Marine Fisheries Service and the Director of the Northwest Fishery Science Center as joint participants and a senior representative of the Columbia Basin Indian Tribes will provide administrative oversight for the ISAB and approve the annual work plan and budget. The panel will make appointments to the ISAB from a list of nominees developed by the Selection

ISAB Terms of Reference: August 20, 1996, amended December 2, 2002, amended July 15, 2004: FINAL

Screening Panel appointed by the National Research Council. Final selection of ISAB members is made by majority vote of the three members of the Administrative Oversight Panel.

### **III. Scope of ISAB activities.**

#### **A. Relationship to sponsoring agencies.**

The ISAB will address scientific and technical issues relating to the Council's Fish and Wildlife Program, tribal fish and wildlife programs, and the National Marine Fisheries Service Recovery Program for Columbia River Basin salmonids. Principal activities include, but are not limited to, the following:

- 1) Evaluate the Council's Fish and Wildlife Program scientific principles to ensure they are consistent with the best available science.
- 2) Evaluate the Council's Fish and Wildlife Program on its scientific merits in time to inform amendments to the fish and wildlife program and before the Council requests recommendations from the region.
- 3) Evaluate National Marine Fisheries Service recovery activities for Columbia River Basin stocks and aspects of the recovery process when requested.
- 4) Review the scientific and technical issues associated with efforts to improve anadromous fish survival through all life stages, based on adaptive management approaches.
- 5) Review and provide advice on priorities for conservation and recovery efforts, including research, monitoring, and evaluation.
- 6) Provide scientific advice and review of topics identified as critical to fish recovery and conservation in the Columbia River Basin.
- 7) Evaluate the scientific merits of plans and measures proposed to ensure satisfaction and continuation of tribal treaty fishing rights in the Columbia River Basin and other tribal efforts to restore and manage fish and wildlife resources.

#### **B. Relationship to other agencies.**

To the extent allowed by time and resources, the group should be responsive to questions and issues posed by the region's management agencies and other parties. Questions for consideration by the Board should be submitted to the Science Coordinator as described in (III.D.) below. The Council, Tribes, and NMFS will use the existing policy making bodies within the basin to review work

ISAB Terms of Reference: August 20, 1996, amended December 2, 2002, amended July 15, 2004: FINAL

plans, schedules, and products for the ISAB. These parties should also use these forums to suggest ideas and issues for consideration by the ISAB.

**C. ISAB role in setting its agenda.**

The Board may also propose review of questions that are suggested by its own analysis. These will be submitted to the Science Coordinator and considered in development of the work plan described below.

**D. Procedure for development of an annual work plan.**

The ISAB is to review questions that are amenable to scientific analysis and investigation. Many questions pertaining to the recovery of the Columbia River ecosystem contain both scientific and policy aspects. The ISAB should confine itself to dealing only with scientific aspects of issues. The Board should review questions that are submitted to it and decide if the questions are amenable to scientific analysis. If not, the Board may respond that it is unable to address the questions or it may suggest aspects of the questions for which scientific insight would be useful.

Questions for consideration by the Board should be submitted to the Science Coordinator (IV.E.2). The Science Coordinator will bring these to the Executive Committee (V.C.2.a), which will schedule consideration of the issue within the ISAB work plan and identify needed personnel and other resources.

**IV. Membership**

Members of the ISAB should be experienced scientists with demonstrated achievement and high standing in their field. They will be chosen to fill specific areas of expertise that are needed by the group. Membership shall include scientists with expertise in Columbia River anadromous and resident fish ecology, statistics, wildlife ecology, and ocean and estuary ecology, fish husbandry, genetics, geomorphology, social and economic sciences, and other relevant disciplines. There should be a balance between scientists with specific knowledge of the Columbia River Basin and those with more broad and diverse experience. Members will be expected to provide objective scientific advice in a timely and professional manner, and work effectively in a multi-disciplinary setting. ISAB membership will be open to individuals employed by all agencies, institutions and organizations with the exception that members may not be salaried employees of the Council, the Tribes, or NMFS, or be a member of the Selection Panel.

To ensure coordination and avoid redundancy of efforts between the Independent Scientific Review Panel<sup>1</sup> and the ISAB, at least two members of the Independent

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<sup>1</sup> The Independent Scientific Review Panel (ISRP) is established by the Northwest Power Planning Council under provisions of the Northwest Power Act (amended) to review proposals submitted for funding by the Bonneville Power Administration under the Council's Fish and Wildlife Program and related efforts.

ISAB Terms of Reference: August 20, 1996, amended December 2, 2002, amended July 15, 2004: FINAL

Scientific Review Panel shall be on the ISAB. ISAB members should also be considered for appointment to the Independent Scientific Review Panel's Peer Review Groups.

**A. Appointment Procedures**

Members of the ISAB will be appointed by majority vote of the chair of the Northwest Power Planning Council, the Regional Administrator of the National Marine Fisheries Service, and a senior Tribal representative. They will base their appointments on a pool of candidates submitted by an ad hoc Selection Panel who will review nominees and make recommendations. Nominations to the board shall be solicited from the sponsoring entities as well as other agencies, groups and the public. While nominations to the ISAB may come from any of a variety of sources, members of the Board are independent scientists and do not represent the interests of the nominating entity or any other entity.

**1) Purpose of the Selection Panel.**

An independent Selection Panel will be constituted with the specific purpose of providing a pool of suitable candidates for board membership to the Council, NMFS, and Tribes. The selection panel will make recommendations regarding membership on the board giving careful consideration to the advice of the ISAB and Ex-Officio members regarding membership and needed expertise. They will also review nominations for qualifications to fill these needs using criteria specified below as well as their best professional judgment.

**2) Constitution of the Selection Panel.**

To maintain consistency and efficiency with selection process for Independent Scientific Review Panel members, the National Research Council will convene a three-member Selection Panel. Committee members shall be senior scientists familiar with the operation of scientific panels and the scientific issues faced by the Council, NMFS, and Tribes. A selection panel will be convened when vacancies arise on the Board.

**3) Procedure of the Selection Panel.**

The Panel will evaluate the credentials of the nominees, submit additional nominees if necessary, and recommend a pool of qualified candidates for potential appointment. This pool of candidates should span the areas of needed expertise and meet the membership criteria for the ISAB. The pool should be large enough to last through several rounds of appointments. The Selection Panel will operate with the advice and assistance of the Science Coordinator and the Ex Officio members of the Board. The Panel will make its recommendations to the Council, NMFS, and Tribes in writing, after which the Panel will dissolve.

ISAB Terms of Reference: August 20, 1996, amended December 2, 2002, amended July 15, 2004: FINAL

**B. Criteria for Membership**

The following specific criteria should be considered in selecting members:

- 1) High achievement in a relevant scientific discipline which may include biology, ecology, fisheries, hydrology, river geomorphology, statistics, wildlife ecology, ocean and estuary ecology, fish husbandry, genetics, social and economic sciences, and other relevant disciplines.
- 2) A strong record of scientific accomplishment documented by contribution to the peer-reviewed literature or other evidence of creative scientific accomplishment.
- 3) High standards of scientific integrity, independence and objectivity.
- 4) Ability to forge creative solutions to complex problems.
- 5) Interest in and ability to work effectively in an interdisciplinary setting.

**C. Length of Appointments.**

Appointment to the ISAB will normally be three years. Appointments can be renewed once by majority vote of the Oversight Panel. Term limits of the members should be staggered to ensure continuity of effort. After an absence from the Board, ex-members are eligible for reappointment using the normal appointment procedures outlined above.

**D. Ex Officio Members.**

The Council, Tribes, and NMFS can each appoint one Ex Officio member to the group. Ex Officio members are excluded from voting membership on the Board. These members should be senior staff scientists that meet the criteria for ISAB membership (IV.B) and are familiar with the fish and wildlife recovery plans of the Council, Tribes, and NMFS. They will be expected to provide their scientific advice independent of the policies of their employing agencies.

**E. Staff**

**1) Support Staff.**

Meeting arrangement, fiscal management and other support functions will be provided by the Council, Tribes, or NMFS who may elect to use the services of another umbrella organization.

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## **2) Science Coordinator**

A Science Coordinator may be appointed by the Administrative Oversight Panel to assist the ISAB and to act as liaison between the Council, Tribes, and NMFS and the ISAB. The Science Coordinator will work closely with the Chair of the ISAB in establishing agendas, workplans and scheduling of projects by the group. The Science Coordinator may be supported under the general ISAB budget. The Science Coordinator will also be the point of contact between the ISAB and other organizations and committees in the region. He/She will act as a resource to the board and should be familiar with the policy and scientific issues that are likely to come before the board

## **F. Ad Hoc Members**

The Independent Scientific Advisory Board may enlist ad hoc members to assist in reviews that require outside expertise. Ad hoc members may include Independent Scientific Review Panel and Peer Review Group Members. Such appointments can be made by the Executive Committee (section V.C.2) and as allowed by budget limitations. Temporary appointees to the group should be selected using the same criteria as for regular members (section IV.B) and are subject to the same rules regarding bias and conflict of interest as regular members (VI).

## **V. Procedures**

The ISAB is a standing group that meets regularly throughout the year on a schedule established by the Chair of the Board and the Science Coordinator. Recommendations from the ISAB are reached by consensus. ISAB reviews should include the opportunity for outside input such as briefings from managers and other interested parties so that the ISAB understands the context of issues and potential management implications of ISAB technical advice. Where appropriate, ISAB reviews should include the evaluation of the technical impacts of alternative options relevant to an assigned question.

### **A. Meetings**

The ISAB will meet on a regular basis. Members responding to assignments from the Chair of the ISAB will conduct much of the ISAB's work. Meetings will provide the opportunity to discuss work and formulate Board positions on assignments. Members are expected to place a high priority on attendance and participation in ISAB meetings.

Meetings are normally to be held at a location within the boundaries of the member states of the Council at intervals appropriate to the requirements of business. Summaries of meetings will be prepared by the support staff and approved by the Chair and will include the agenda, summary of actions taken, work assignments, and schedules.

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## **B. Communication**

The Chair of the ISAB will normally act as spokesperson unless another member is designated by the Chair to speak on specific topics. The ISAB will normally respond to questions or issues in writing, and public statements should be based on written opinions. All written communications shall be submitted to the Science Coordinator who will be responsible for distributing them to the Administrative Oversight Panel.

The Science Coordinator will act as the point of contact for requests to the ISAB. The Coordinator will ensure that these communications are conveyed to the ISAB.

## **C. Organization**

### **1) Officers**

a. Elections. Officers of the ISAB will be elected by secret ballot of the members presided over by the Science Coordinator. Ex Officio members are excluded from serving as officers or voting. Election of officers should occur at least 30 days prior to the expiration of the previous officer's term. An election of officers will occur each year.

b. Officers and Terms. Officers of the ISAB shall consist of the Chair and Vice-Chair who will serve one-year terms. At-large members of the Executive Committee (IV.D.2) a., below) will be elected and serve one year terms.

c. Duties of the Chair. The Chair is the executive officer of the Board. The Chair acts as the main spokesperson of the group. The Chair arranges for the time and place of meetings, makes or causes to be made a record of the minutes, sends or causes to be sent minutes and other documents to the membership. The Chair conducts the meetings; seeing that business is conducted in a timely and efficient manner and that each member has the opportunity to be heard.

d. Duties of the vice-Chair. The vice-Chair acts as Chair in the absence of the Chair and assists the Chair in preparation of agendas, minutes, and other duties.

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## 2) Committees

- a. Executive Committee. A standing Executive Committee shall be formed that will consist of the Chair, the Vice-Chair, Science Coordinator and two at-large members of the Board. Ex Officio members of the Board will serve as non-voting members of the Executive Committee. The Executive Committee will address issues of procedure, workplan, and internal matters of the Board.
- b. Subcommittees. The Chair of the ISAB can designate members of the ISAB to form subcommittees to address specific topics. Each subcommittee should have a designated Chair who will be responsible for overseeing completion of the task. Subcommittees can include experts from outside the ISAB as necessary. Subcommittee members from outside the ISAB will be designated using the procedure outlined in III.F, above.

## VI. Conflict of Interest

For the ISAB to function effectively, it must maintain its status and credibility as a deliberative scientific board. Members must not only avoid activities that create a conflict of interest, but those activities that may represent a significant appearance of conflict of interest or otherwise impair the credibility or status of the board. Given the controversial nature of many of the questions/issues that the ISAB must deal with, questionable professional or personal activities could easily undermine the effectiveness of the individual members and ultimately the ISAB as a whole. The goal of establishing these conflict of interest guidelines is to maintain the integrity of ISAB opinions. These guidelines incorporate the “Bias and Conflict of Interest” policy that is described in the ISAB terms of reference. As a general principle, the ISAB will follow the guidelines for bias and conflict of interest outlined in, “The National Research Council Policy on Disclosure of Personal Involvements and Other Matters Potentially Affecting Committee Service”(November 1992)(“the NRC Conflict of Interest Guidelines”).

### ***“Bias” and “Conflict of Interest”***

“Bias” relates to views stated or positions taken that are largely intellectually motivated or that arise from the close identification or association with a particular point of view or the positions or perspectives of a particular group. Such potential sources of bias are not necessarily disqualifying for purposes of ISAB service. Indeed, membership of the ISAB is intended to include individuals with a variety of interests, backgrounds and expertise. However, where bias impairs a member’s ability to view matters in a scientific manner and give fair consideration to new information it can jeopardize the member’s usefulness to the board.

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“Conflict of interest” means any financial or other interest which conflicts with the service of the individual because it 1) impairs the individual’s objectivity or 2) could create an unfair competitive advantage for any person or organization.

***Examples of Activities that Should Be Avoided***

1) Members should avoid direct involvement in or public endorsement of projects or activities that will likely be subject to ISAB review such as those connected to the Fish and Wildlife Program of the Northwest Power Planning Council and the National Marine Fisheries Service Endangered Species Act recovery programs in the Columbia River Basin. Such an involvement would create a conflict of interest that would preclude participation of that member in the review of a project or activity, and could lead to questions regarding the ability of the ISAB as a whole to objectively judge the merits of the subject research or to provide objective scientific advice.

2) Members should avoid financial relationships with organizations receiving substantial economic benefit from the programs and activities connected to the Fish and Wildlife Program of the Northwest Power Planning Council and the National Marine Fisheries Service Endangered Species Act recovery programs in the Columbia River Basin. Such a relationship could potentially create a conflict of interest, particularly if the ISAB is asked to review the scientific merits of a project being proposed or conducted by the employing organization. Even though a member may excuse him or herself from reviewing such projects, the mere association with such a member may unduly influence other members of the ISAB.

3) Members, as individuals, should avoid taking public positions on issues related to the Fish and Wildlife Program of the Northwest Power Planning Council and the National Marine Fisheries Service Endangered Species Act recovery programs in the Columbia River Basin. Members should be especially conscientious in ensuring that their opinions as individuals are not perceived or construed to be those of the board or to result from board activities. Whenever possible, members should refer the public to NMFS, the Council or the Chair. The Council and NMFS, through the coordinators, should be kept informed of all outside contacts.

4) Members should avoid to the extent practicable identification as a major advocate for particular scientific, intellectual, or social causes that provide the appearance of undue bias relative to matters likely to come before the board.

***Procedures***

1) Conflict of Interest Review Committee. The committee is composed of the NMFS, Council, and Tribal Ex Officio members and the Chair of the ISAB. The committee will review disclosure forms and decide on actions to take when conflicts of interest arise.

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2) Disclosure. By April 1 of each year, ISAB members will submit a completed “Disclosure of Personal Involvements” form to the Conflict of Interest Committee. Within the year, members are required to update this information if necessary. Disclosure information includes:

- Financial interests
- Research support
- Agency or group affiliations
- Public statements and positions
- Other circumstances or information

Disclosure information should identify any connection between the individual and programs or activities of the NPPC, NMFS, BPA, regional fishery managers and Indian Tribes, Northwest energy interests or other users of the Columbia River. Information submitted will be considered confidential.

Members are expected to take the responsibility of ensuring that real or perceived bias or conflict of interest on their part is identified prior to taking part in any project.

3) Review of Disclosure. Within 30 days of receiving the disclosure forms, the Conflict of Interest Committee will review the forms, meet and, if necessary, take actions as described below.

4) Actions. In the event a conflict of interest is identified, the Conflict of Interest Committee, in consultation with the member, will decide on the appropriate actions to take to resolve the conflict or the appearance of the conflict. The committee will use the NRC Conflict of Interest Guidelines for direction and, in some cases, will consult with the NMFS and NPPC staff attorneys. Potential actions to resolve a conflict or the appearance of a conflict include:

- a) The member can disengage from the activity that creates the conflict of interest;
- b) The member can resign;
- c) The member can be excused from all deliberations and decisions on matters arising in the course of the review for which that individual has a conflict of interest. The committee will maintain a written record of the deliberations and decisions from which an individual has been excluded; OR,
- d) The member can be assigned a minor role in the review at issue.

Effective the date of this agreement, these Terms of Reference are amended to add Columbia River Basin Indian Tribes as equal and permanent partners in the sponsorship of the ISAB.

ISAB Terms of Reference: August 20, 1996, amended December 2, 2002, amended July 15, 2004: FINAL

/s/

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Judi Danielson  
Chair, Northwest Power and Conservation Council

/s/

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D. Robert Lohn  
Regional Administrator, NOAA Fisheries (NMFS)

/s/

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Dr. Usha Varanasi  
Science Director, Northwest Fisheries Science Center, NOAA Fisheries

/s/

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Olney Patt, Jr.  
Executive Director, Columbia River Inter-Tribal Fish Commission

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# EXHIBIT 7

## **REGIONAL TECHNICAL AND POLICY FORUMS**

*There are a number of regional sovereign forums involved in a variety of aspects of implementing the FCRPS Biological Opinion (BiOp) and Reasonable and Prudent Alternative (RPA). All sovereigns typically are invited to participate in any of these groups, as summarized below.*

**Regional Implementation Oversight Group (RIOG)** – The RIOG provides a high-level policy forum for discussion and coordination of the implementation of the FCRPS BiOp. The overall purpose of the group is to inform the federal, state and tribal agencies that are actively engaged in salmon recovery efforts regarding implementation issues from each sovereign’s perspective. The RIOG is a spin-off from the Policy Work Group (PWG) that was used for the collaboration required by Judge Redden for the 2008 BiOp.

**Collaboration and Review Groups** – Several collaborative groups were formed as part of the 1995 BiOp and continue today under the 2010 BiOp. The objective of these various groups is to provide information to the Action Agencies on management actions, including: projects operations, design, and operations of fish facilities; research to assess effectiveness of passage improvements; identification, review, and implementation of tributary and estuary habitat projects; and other matters arising under the RPA. For hydro and habitat actions, these groups include the Technical Management Team, System Configuration Team, Fish Passage Operations and Maintenance, Fish Facility Design Review Work Group, Studies Review Work Group, RPA 35 Expert Panels, the Science Work Group, and the Expert Regional Technical Workgroup. *See, e.g., Attachment 1.*

**1. RIOG - Hydro Coordination Senior Technical Team (Hydro Team).** Pursuant to the RIOG guidelines, this is a team for long-term planning and adaptive management on overall hydro operations. It operates at a broader scale and higher level than the hydro technical teams such as the Technical Management Team (TMT) and the System Configuration Team (SCT). Its primary focus is on achievement of hydro performance standards and metrics as described in the FCRPS BiOp. It also covers predation management. The Hydro Team reviews technical issues from other hydro technical teams upon request by the Senior Policy Team. The group assesses action agency implementation results in Progress Reports and discusses adaptive management issues. Results are reported out to the RIOG. Other assignments and meetings may be made at the specific request of the Action Agencies, NOAA, or the RIOG itself. These assignments will include development of long-term contingency actions by 2012 and other implementation activities per the Adaptive Management Implementation Plan. The Hydro Team will have a significant role in the 2013 and 2016 Diagnostics and adaptive management recommendations to the RIOG.

**2. Technical Management Team (TMT).** The TMT’s mission is specifically to ensure broad technical participation and use of the best available technical information concerning conditions for fish, and to encourage consensus for recommending FCRPS operations to the federal agency with the operation responsibility. When consensus is not achieved, the TMT ensures that the basis for participants' recommendations and Federal agency decision is fully explained and documented. In such situations, questions can be elevated to the RIOG for resolution if requested by a TMT member. The TMT meets bi-weekly unless more frequent meetings are warranted, often weekly during the fish passage season.

**3. System Configuration Team (SCT).** The SCT provides recommendations to the Corps on funding prioritization of the Columbia River Fish Mitigation Program (congressionally appropriated funds) on an annual basis to improve fish passage and survival at the Corps' FCRPS dams. The SCT meets monthly.

**4. Fish Passage Operations and Maintenance Team (FPOM).** The FPOM focuses on actions related to the operation and maintenance of fish passage infrastructure at the dams, and its regional coordination team provides an opportunity for the Corps to inform regional participants of upcoming operation and maintenance activities, enabling the region to provide recommendations on prioritization of these activities. The FPOM meets monthly, with more frequent subgroup meetings as required.

**5. Fish Facility Design Review Workgroup (FFDRWG).** The FFDRWG collaborates on the operation and construction of existing and new fish passage facilities at the FCRPS dams. Participants interact and provide recommendations on the design of new fish passage structures and also the operation of existing fish passage facilities. The FFDRWG meets bi-monthly, with more frequent subgroup meetings as necessary.

**6. Studies Review Workgroup (SRWG).** The SRWG collaborates to develop and review study designs for Corps-funded research at the dams and includes many subgroups that focus on specific areas, such as juvenile fish passage and survival, adult passage, avian predation, and other areas. The SRWG meets on a near-monthly basis, however, more frequent subgroup meetings often occur throughout the year.

**7. Columbia River Forecast Group (CRFG).** The Group was formed in 2009 to fulfill a provision in the 2008 FCRPS BiOp (Reasonable and Prudent Alternative Action 7) to help advance water supply forecasting tools and information in the Columbia River Basin. Improved forecasting can in turn help federal hydro operators to better manage reservoir operations for the benefit of fish and the region as a whole.

**8. RPA 34 Expert Panels.** Pursuant to Reasonable and Prudent Alternative Action 35, the Action Agencies convene expert panels comprised of state, tribal, and federal specialists familiar with local habitat conditions. The expert panels evaluate specific habitat actions to be implemented or available for implementation, evaluate the limiting factors addressed, and estimate the associated habitat improvements. These expert panels include:

**a. Upper Columbia.** Tributary habitat projects are developed and implemented by watershed action teams through the Upper Columbia (UC) Salmon Recovery Board and brought to the Action Agencies through the Expert Panel process. The Board utilizes a UC Regional Technical Team to advise them on project development and selection. This means that the projects supported by the Action Agencies are coordinated with representatives from the following groups, as appropriate, Chelan County, Douglas County, Okanogan County, the Colville Tribe, the Yakama Nation, Washington State (including the Governor's office, Washington Department of Fish and Wildlife, Washington Department of Ecology), Washington Water Trust, Bureau of Land Management, Natural Resources Conservation Service, U.S. Forest Service, U.S. Fish and Wildlife Service, Chelan County Public Utility District PUD, Douglas County PUD, and NOAA Fisheries.

**b. Lower Snake, Tucannon.** The Action Agencies work the tributary habitat projects through the watershed action teams and through the Lower Snake River Salmon Recovery Board. Tributary projects supported by the Action Agencies are thus coordinated with representatives from the following groups as appropriate, Whitman County, Asotin County, Garfield County, Columbia County, Walla Walla County, Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Washington Department of Fish and Wildlife, and various federal agencies.

**c. Upper Salmon.** The Action Agencies work the tributary habitat projects through the Idaho Office of Species Conservation and the Upper Salmon Basin Watershed Project. Tributary projects supported by the Action Agencies are thus coordinated with representatives from the following groups as appropriate, Idaho Department of Fish and Game, Idaho Department of Water Resources, Lemhi and Custer Soil and Water Conservation Districts, Shoshone-Bannock Tribes, NOAA Fisheries, and various other federal agencies.

**d. Lower/Middle Fork Salmon.** The Action Agencies work the tributary habitat projects through the Idaho Office of Species Conservation, Idaho Department of Fish and Game, the Nez Perce Tribe, and the U.S. Forest Service.

**e. Grande Ronde/Imnaha.** The Action Agencies work the tributary habitat projects through the stepwise process of the Grande Ronde Model Watershed and its Technical Committee. Tributary projects supported by the Action Agencies are thus coordinated with representatives from Oregon Department of Fish and Wildlife, Union and Wallowa Soil and Water Conservation Districts, Oregon Watershed Enhancement Board, Oregon Freshwater Trust, Oregon Water Resources Department, Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, the U.S. Forest Service, and other federal agencies.

**f. Clearwater.** The Action Agencies work the tributary habitat projects through the Idaho Office of Species Conservation, Clearwater Focus group, Idaho Department of Fish and Game, the Nez Perce Tribe, and the U.S. Forest Service.

**g. John Day.** Action Agency projects in the John Day Basin are coordinated with The Confederated Tribes of the Warm Springs Indian Reservation, Confederated tribes of the Umatilla Indian Reservation, Grant Soil and Water Conservation District, Oregon Watershed Enhancement Board, Oregon Department of Fish and Wildlife, and various federal agencies.

**9. Science Work Group (SWG).** The SWG Provides advice and support to the Board of Directors and Estuary Partnership staff on scientific and technical issues. Its primary role is to oversee and coordinate technically oriented work and implementation of the habitat restoration program, long term monitoring strategy, and data management efforts. The SWG helps ensure the Estuary Partnership is working collaboratively and in coordination with partners, supporting regional needs. The SWG also provides a forum for the exchange of scientific information about the lower river and estuary and for the development of collaborative approaches to implementing the projects that are based on sound science and build upon partners' efforts. The group assists the Estuary Partnership in implementing the Aquatic Ecosystem Monitoring Strategy (or long-term monitoring strategy) that builds on existing efforts and seeks to establish

sustained monitoring in the lower river to direct contaminant reduction and habitat restoration actions. The SWG meets monthly and is staffed by the Estuary Partnership's Chief Scientist.

**10. Expert Regional Technical Workgroup (ERTG):** The purpose of the Expert Regional Technical Group is to assign estimated survival benefits units for ocean- and stream-type juvenile salmon from estuary habitat actions implementation by the Action Agencies as called for in the Federal Columbia River Power System BiOp. The FCRPS BiOp, Reasonable and Prudent Alternative Action 37 provides: “This group [ERTG] will use the habitat metrics to determine the estimated change in survival which would result from full implementation ... The expert regional technical group will use the approach originally applied in the FCRPS Biological Assessment (Attachment B.2.2; Estimated Benefits of Federal Agency Habitat Projects in the Lower Columbia River Estuary) and all subsequent information on the relationship between actions, habitat and salmon productivity models developed through the FCRPS RM&E to estimate the change in overall estuary habitat and resultant change in population survival ...” The ERTG was formed in 2009 and includes formal, open meetings with interested parties and includes site visits, presentations, and information exchanges between ERTG and project sponsors.

### **INDEPENDENT SCIENTIFIC REVIEW PANELS**

**Independent Scientific Advisory Board (ISAB).** The ISAB serves NOAA Fisheries, the Columbia River Indian Tribes, and the Northwest Power and Conservation Council by providing independent scientific advice and recommendations regarding scientific issues that relate to the respective agencies' fish and wildlife programs. The ISAB was formed to provide independent scientific advice and recommendations regarding scientific issues posed by the respective agencies on matters that relate to their fish and wildlife programs. In 2002, the Columbia River Basin Indian Tribes were added as partners in the sponsorship of the ISAB. The purpose of the ISAB is to foster a scientific approach to fish and wildlife recovery and the use of sound scientific methods in research related to the programs of NOAA Fisheries, the Council, and the Tribes. The members of the Independent Scientific Advisory Board are recommended by the National Academy of Sciences, and the Council, NOAA Fisheries, and the Columbia River Indian Tribes appoint ISAB members. See <http://www.nwcouncil.org/fw/isab/>.

**Independent Scientific Review Panel (ISRP).** Pursuant to a 1996 amendment to the Northwest Power Act, the Independent Scientific Review Panel was established to advise the Northwest Power and Conservation Council regarding projects that are funded by Bonneville Power Administration under the Council's Fish and Wildlife Program. Projects proposed for funding by BPA are reviewed for scientific integrity by the ISRP, which reports on its opinion as to whether the proposed projects: are based on sound science principles; benefit fish and wildlife; have clearly defined objectives and outcomes; and have provisions for monitoring and evaluation of results. The ISRP is comprised of a panel of scientists recommended by the National Academy of Scientists and represents a broad range of scientific expertise. <http://www.nwcouncil.org/fw/isrp/Default.asp>.

## **Attachment 1**

## 2008-2018 FCRPS BiOp Coordination

- Operating within BiOp parameters to achieve BiOp Performance Standards
- As appropriate, independent science review (ISRP, ISAB)

**FCRPS BiOp**

Other Programs:

- NOAA Recovery Plans
- NPCC's Fish & Wildlife Program
- PCSRF
- *US v. OR*
- MOA Fish Accords

