



Independent Scientific Review Panel

for the Northwest Power and Conservation Council
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Fiscal Year 2015 Statement of Work

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Project Title: Independent Scientific Review

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ISRP Fiscal Year 2015 Statement of Work

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General ISRP Review Responsibilities

The 1996 amendment to the Northwest Power Act directed the Northwest Power and Conservation Council (Council) to appoint an 11-member panel of independent scientists and additional peer review groups. These scientists provide advice and information regarding scientific aspects of projects that the Council may recommend for funding by the Bonneville Power Administration (Bonneville). The Independent Scientific Review Panel (ISRP) and peer review groups have responsibilities in three areas:

- Review projects proposed for Bonneville funding to implement the Council's Columbia River Fish and Wildlife Program (Program)

The Northwest Power Act directs the ISRP to review projects that are proposed for Bonneville funding to implement the Council's Program. The Act specifies the review standards that the ISRP is to use and the kinds of recommendations to make to the Council. The Council must fully consider the ISRP's report prior to making its funding recommendations to Bonneville and must explain in writing if the Council's recommendations differ from the ISRP's.

- Retrospective review of program accomplishments

The 1996 amendment also directs the ISRP, with assistance from the Scientific Peer Review Groups, to review annually the results of prior-year expenditures based upon the project review criteria and submit its findings to the Council. The retrospective review should focus on the measurable benefits to fish and wildlife made through projects funded by Bonneville. The ISRP's findings should provide biological information for the Council's ongoing accounting and evaluation of Bonneville's expenditures and the level of success in meeting the objectives of the Fish and Wildlife Program. Also as part of the ISRP's annual retrospective report, the ISRP should summarize major basinwide programmatic issues identified during project reviews.

- Review projects funded through Bonneville's reimbursable program

In 1998, the U.S. Congress' Senate-House conference report on the FY1999 Energy and Water Development Appropriations bill directed the ISRP to review the fish and wildlife projects, programs, or measures included in federal agency budgets that are reimbursed by Bonneville, using the same standards and making recommendations as in its review of the projects proposed to implement the Council's program.

The four major components of the reimbursable program are:

- 1) Columbia River Fisheries Mitigation Program (Corps of Engineers),
- 2) Fish and Wildlife Operations and Maintenance Budget (Corps of Engineers),
- 3) Lower Snake River Compensation Plan (U.S. Fish and Wildlife Service), and
- 4) Leavenworth Hatchery (Bureau of Reclamation).

Specific FY 2015 Reviews

For FY 2015, the ISRP has seven categories of review assignments:

- 1) Category and Geographic reviews: defining the next review process
- 2) Three-Step reviews for major capital construction projects and follow-up reviews
- 3) Columbia River Basin Accord projects
- 4) 2008 Federal Columbia River Power System Biological Opinion projects
- 5) Reimbursable reviews
- 6) Retrospective reviews
- 7) Research, Monitoring and Evaluation (RME) plans

Further details on the reviews are provided below. The ISRP's total FY 2014 budget to complete these and other potential reviews requested by the Council is \$500,000.

Regarding schedules, in an effort to make the schedule for the ISRP review and Council project decision process more efficient, the Council will assign work to the ISRP on a regular schedule once a month. The work includes Step Reviews, Accord Projects, BiOp Projects, and follow-up reports that are ready for ISRP review. "Ready for review" means projects/reports that Bonneville has received, processed, and sent to the Council ready for ISRP review. The submittal dates fall on the second Thursday of each month and are scheduled to potentially allow time for ISRP review and subsequent Council recommendations at the Council meeting two months following the submittal date.

1. Category and Geographic Reviews: Defining the Next Review Process

To implement the Fish and Wildlife Program, Bonneville and the Council regularly solicit for and review projects to benefit fish and wildlife populations affected by the Federal Columbia River Power System (FCRPS). Review processes have taken many forms including program-wide solicitations, rolling provincial reviews, targeted solicitations, and most recently Category and Geographic reviews. Over the next six months, the Council, BPA, and the ISRP, with feedback from the project sponsors, will develop the next review process. The next process will benefit from lessons learned from the Category and Geographic reviews and past reviews, taking the most effective elements from the reviews. It will be designed to meet the multiple purposes of reviews, recognizing the projects' review histories and the status of the evolving Fish and Wildlife Program. Specifically, the ISRP will define the scientific evaluation component of the next review process and participate in any new reviews.

In FY 2015, it is anticipated that wildlife and research, monitoring, and evaluation projects will be reviewed. But as described above, the exact process and schedule has yet to be defined.

2. Three-Step and Follow-up Reviews of Fish and Wildlife Program Projects

Every year the ISRP participates in reviews of projects that 1) have unresolved scientific issues identified in previous ISRP reviews that the Council recommends that project proponents formally address and 2) are complex and expensive involving planning, design, construction, and implementation phases and, thus, are subject to the Council's Three-Step project review process. These reviews are iterative, and schedules depend on submittal of materials by the project proponents. For FY 2015, the Council will likely request ISRP review of many of the projects and issues listed below. Most of the potential review assignments below are Step reviews, but several originated in Category Reviews. There were many ISRP qualifications in the Category Reviews for RME, artificial production, and resident fish projects. Additionally in the Geographic Review, the ISRP recommendations include many qualifications, a number of which will entail follow-up reports by the project sponsors and subsequent ISRP review. The list below describes a sample of the projects with qualifications requiring significant reviews. Many other projects have qualifications that include an ISRP review that are not listed here. In addition, these projects include some that are Fish Accord and BiOp projects described below under sections 3 and 4.

Mountain Columbia

1991-019-03, Hungry Horse Mitigation Program - In the Resident Fish Category Review 2012, the ISRP recommended that the sponsors prepare a 10 to 20 year retrospective evaluation as a qualification for further support. The evaluation should address previous and long-term efforts within the context of how well actions have met or not met mitigation goals/objectives associated with the loss statement and mitigation plan. From this retrospective, the sponsors should construct within the next 18 to 24 months a prioritization framework for ongoing and future mitigation actions and RME. The Council recommended that prior to FY 2015, the sponsors co-lead development and submission of a retrospective report for the interconnected Flathead River system, as described by the ISRP for Project #1991-019-03 and to include a joint M&E plan as described for project #1991-019-04. The Council recommended that the project *1991-019-01, Hungry Horse Mitigation/Flathead Lake Restoration and Research, Monitoring, and Evaluation* participate in the development of the retrospective report for Hungry Horse mitigation described above. The ISRP will likely review these documents in FY 2015.

2002-008-00, Reconnect Kootenai River with the historic floodplain - In the Resident Fish Category review, the Council recommended that the sponsors develop a synthesis report for Kootenai River projects (1988-065-00, 1994-049-00, 2002-002-00, 2002-008-00, 2002-011-00) as described by the ISRP. The Council recommended that implementation of future reconnect projects be contingent on favorable ISRP review of a prioritization approach (Objective 2).

Intermountain

2007-372-00, Lake Roosevelt White Sturgeon Conservation Hatchery Project - A Step Review is possible in FY 2015.

Columbia Cascade

2007-212-00, Cassimer Bar Hatchery Master Plan - The ISRP reviewed an initial master plan in FY 2009 ([ISRP 2009-15](#)) and requested a revised master plan to better address the scientific step review elements. A revised master plan is expected to be submitted for review in FY 2015.

Mountain Snake

2008-906-00, Crystal Springs Fish Hatchery and Programs for Snake River Chinook Salmon and Yellowstone Cutthroat Trout - for Step One, the ISRP conducted two reviews of this project's master plan ([ISRP 2011-17](#) and [ISRP 2012-8](#)). In the reviews, the ISRP found the master plan and responses to be well organized, detailed, and thorough. The ISRP recommended that the project meets scientific review criteria with some qualifications pertaining to both the Chinook salmon and Yellowstone cutthroat trout elements of the project. Further Step review related to these qualifications is anticipated in FY 2015.

Columbia Plateau

2000-038-00, Walla Walla Spring Chinook Master Plan - In July 2013, the ISRP completed a review of a revised master plan, found the plan to be improved, and requested a response on several items related to justification for production levels in various phases of the project ([ISRP 2013-10](#); see also [ISRP 2010-17](#)). A response review is anticipated early in FY 2015.

1988-115-25, Yakima Subbasin Summer and Fall Run Chinook and Coho Salmon Hatchery Master Plan - In July 2013, the ISRP completed a response review concerning the master plan. The ISRP recommended that the master plan met scientific review criteria but raised a number of qualifications that could be addressed in Step Two ([ISRP 2013-8](#)). A Step Two submittal is anticipated late in 2014 or potentially in 2015.

Columbia Gorge

Master Plan for the Hood River Production Program (HRPP). This program is jointly managed and evaluated by the Warm Springs Tribes and Oregon Department of Fish and Wildlife (Projects 1988-053-03, 1988-053-04, 1988-053-07, 1988-053-08, and 1988-053-15). The physical habitat project (1998-021-00) is managed by the Warm Springs Tribes. The ISRP conducted a Step One review of this master plan in 2008 ([ISRP 2008-10](#)) and recommended Meets Scientific Review Criteria – In Part (qualified). Overall, the ISRP found the master plan to be an impressive step forward in concept, decision-logic, organization, and scientific justification. However, the ISRP qualified the recommendation because of several concerns. In

response to the ISRP's concerns and Council's subsequent recommendation, a final ISRP Step Review might be submitted in FY 2015.

Klickitat Master Plan: Yakima Fisheries Project Design and Construction, Project 1988-115-25 (1995-068-00 and 1997-013-35). The ISRP has participated in an iterative step review for the Klickitat project. The ISRP first reviewed a Step One submittal in FY 2005 ([ISRP 2005-7](#)) and a response to that review ([ISRP 2005-16](#)). A 2008 ISRP review ([ISRP 2008-6](#)) found the revised master plan to be a well-balanced, relatively thorough plan that was generally responsive to past ISRP comments. The ISRP noted some issues that could be addressed in future step reviews. The ISRP completed an initial Step Two review in 2012 and a response review in 2013 ([ISRP 2013-1](#)). The ISRP review split the master plan into three components. The ISRP found that the McCreeley Creek Steelhead Supplementation and Spring Chinook Integrated Harvest and Colonization components met criteria with qualifications that could be addressed in Step Three. However, the ISRP requested further response to issues regarding the Segregated Steelhead Harvest component. A response review is anticipated in FY 2015.

Habitat Restoration Effectiveness Monitoring

In response to the Council's RME and AP Category Review decision, the project sponsors for the Columbia Habitat Monitoring Program (CHaMP) and the Integrated Status and Effectiveness Monitoring Program (ISEMP) developed a lessons learned report for review by the ISRP and the Council. The review of these lessons learned reports was intended to help ensure that all habitat status and trends monitoring is providing data necessary to support program priorities. In addition, Bonneville developed a plan titled Action Effectiveness Monitoring of Tributary Habitat Improvement (AEM) to cover project effectiveness monitoring. In January 2013, these three documents were submitted for ISRP review along with a framework document developed by Bonneville to show how the projects fit in with their long-term monitoring and evaluation plans. The ISRP completed a review of the reports in March 2013 ([ISRP 2013-2](#)). Based on the review findings, the Council recommended that the ISRP and Council review the progress of the projects annually, with the next review scheduled for March 2015.

White Sturgeon

In 2013, the ISRP reviewed the [Draft Columbia Basin White Sturgeon Planning Framework](#) (February 2013) (see [ISRP 2013-5](#)). The Framework emphasized a move to pursue sturgeon hatcheries and supplementation. The Columbia River Inter-Tribal Fish Commission is developing a sturgeon hatchery master plan under their Accord. In the Framework review, the ISRP raised some issues to consider in developing potential production plans. The ISRP will look to see how the issues are addressed in future Framework and master plan documents. In addition, the ISRP may be requested to review updated proposals for Lower Columbia River sturgeon projects.

Lamprey

In 2012, the ISAB reviewed the *Synopsis of Lamprey-Related Projects Funded through the Columbia River Basin Fish and Wildlife Program*. The ISAB found that the Synopsis demonstrated the type of information being collected about Pacific lamprey but did not adequately compile and evaluate existing lamprey findings ([ISAB 2012-3](#)). In FY 2015, a revised synthesis may be submitted for ISAB review. It is also possible that the Columbia River Inter-Tribal Fish Commission and the Yakama Nation, through their Accords, may submit a master plan for Pacific lamprey artificial production and stocking. The ISAB and ISRP will coordinate any requested reviews of lamprey documents or plans.

3. Columbia River Basin Fish Accord Projects

In 2008-2009, Bonneville, the U.S. Army Corps of Engineers, and the U.S. Bureau of Reclamation (the "Action Agencies") signed agreements with the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation, the Confederated Tribes and Bands of the Yakama Nation, and the Columbia River Inter-Tribal Fish Commission. After the first set of agreements, the Action Agencies also signed agreements with the Confederated Tribes of the Colville Reservation, the Shoshone-Bannock Tribes, and the states of Idaho, Montana, and Washington (for estuary work). In 2012, the Kalispel Tribe signed an agreement. These agreements, the Columbia Basin Fish Accords, are intended to provide firm commitments to hydro, habitat and hatchery actions; greater clarity about biological benefits; and secure funding for 10 years.

As with all projects in the Fish and Wildlife Program, Accord projects are subject to review by the ISRP, and the Council provides funding recommendations based on full consideration of the ISRP's report and the Council's Program. Since November 2009, the ISRP has conducted scientific review of [new Accord projects](#) to ensure that they meet the ISRP's scientific review criteria specified in the 1996 amendment. Existing projects converted to Accord status were included in performance check-ins using the Geographic and Category reviews. Those reviews focused primarily on project performance – accomplishments, reporting of results, whether expected results are being achieved, and whether the project's actions and methods reflect new information gained from those results.

In FY 2010 through 2012, the ISRP completed or initiated reviews of most new proposals agreed to in the Accords. However, on about a dozen reviews, the ISRP asked for responses or included qualifications that called for future ISRP review of proposal products such as final statistical designs or Three Step master plans. In addition, a few proposals for projects listed in the Accords are still under development and will likely be submitted and reviewed in FY 2015, for example Kalispel projects.

4. New Projects to Implement the 2008 FCRPS BiOp

The ISRP will continue to conduct scientific review of [proposed new projects](#) that are requested for implementation as part of the 2008 Biological Opinion and subsequent supplements in 2010 and 2014. From FY 2010 through 2014, new projects covered chum enhancement, predation research, RME gaps ([fast track projects](#)), and habitat restoration in the Upper Columbia, Estuary, Snake and Willamette subbasins. In addition, many BiOp related projects were included in the RME and Artificial Production (AP) Category Review and the Geographic Review. For FY 2015, the ISRP will review new BiOp projects and responses to past reviews when submitted.

5. Reimbursable Reviews

The Council and the ISRP have approached “reimbursable program” reviews sequentially over the past decade. The ISRP has reviewed the portions of the program that are the most visible, expensive, and amenable to scientific review. These reviews have included reviews of Lower Snake River Compensation Plan projects (see [ISRP 2014-6](#)) and multiple evaluations of the U.S. Army Corps of Engineers’ Columbia River Fish Mitigation Program projects, specifically those under the Anadromous Fish Evaluation Program (AFEP). However, the ISRP has not reviewed many of the projects funded through the Corps’ Fish and Wildlife Operations and Maintenance Budget, primarily because the scientific elements of these O&M projects are minimal. Although the Hatchery Science Review Group has reviewed the Bureau of Reclamation’s Leavenworth Hatchery, the ISRP has not, and the Council staff and ISRP will explore a potential review of Leavenworth Hatchery in FY 2015.

Anadromous Fish Evaluation Program

In 2009, the Council, Corps, and ISRP agreed to sequence reviews of AFEP projects by topic. In 2010, The ISRP reviewed the AFEP projects for the estuary ([ISRP 2010-6](#)) and raised some scientific concerns that as agreed by the Council and the Corps would be addressed in the FY 2011 versions of the proposals. The ISRP reviews of those revised proposals were mostly favorable, and the ISRP offered some general comments on how to improve the review of other AFEP projects in the future (see [ISRP 2010-34](#)). In 2011, the ISRP reviewed the Corps’ comprehensive RME Plan for the Willamette Basin projects and proposals for specific actions under the plan ([ISRP 2011-26](#)). The Willamette work is occurring as specified in the NMFS and USFWS Willamette Basin biological opinions. In December 2012, the ISRP completed a review of the Corps-funded lamprey passage projects ([ISRP 2012-19](#)). For the end of FY 2014 and FY 2015, the ISRP might be asked to review adult fish passage studies and a draft management plan and studies for avian predation work.

6. Retrospective Reviews

The ISRP complies with its retrospective charge in three basic ways.

a. Proposal Reviews

A major element of the ISRP's reviews of ongoing projects is an examination of each project's reporting of past results consistent with the retrospective review charge. The proposal form specifically asks for a concise summary of biological results, a discussion of the adaptive management implications of those results, and notice that the ISRP will use the information submitted for its retrospective review. In the Geographic Review and the Resident Fish, Data Management, and Regional Coordination Category Review, the ISRP included a specific section in each project comment field for a retrospective analysis. In addition to review comments on each project, the general sufficiency of results reporting and incorporation of project accomplishments into future planning is summarized by the ISRP in the programmatic section of Category and Geographic reviews.

b. ISRP Retrospective Reports

The ISRP has released four distinct "retrospective" reports. In 2005, the ISRP completed its first retrospective report, *Independent Scientific Review Panel's Retrospective Report 1997-2005* ([ISRP 2005-14](#), August 2005). The report focused on programmatic issues and observations identified in ISRP reviews dating back to the ISRP's first report in 1997. In 2006, the ISRP's review of Fiscal Year 2007-09 proposals included an examination of the results reported by ongoing projects. The ISRP reported the results of that analysis in its *ISRP 2006 Retrospective Report* ([ISRP 2007-1](#), March 2007). The ISRP's *Retrospective Report 2007: Adaptive Management in the Columbia River Basin* ([ISRP 2008-4](#), April 2008) focused on how projects are changing their objectives, strategies, and methods based on learning from the results of their actions. The ISRP accomplished this by looking at themes that emerged in previous ISRP retrospectives, examining a subset of projects that were reviewed in Fiscal Year 2007, and investigating how proponents applied the results of their past projects to proposed future actions and monitoring. The ISRP's *Retrospective Report 2011* ([ISRP 2011-25](#)) expanded on the results review of projects evaluated in the RME and AP Category Review. The review focused on sets of projects in three major topical areas: 1) artificial production, 2) passage through mainstem dams, the river, and reservoirs, and 3) habitat restoration monitoring. The ISRP found that monitoring and evaluation has improved in all three major areas covered by this report. Nonetheless, the ISRP stated that lack of a comprehensive analysis of biological objective achievements for hatchery and habitat efforts impedes the understanding of program effectiveness.

c. ISRP Review of "Retrospective" or "Synthesis" Reports drafted by Project Proponents

The ISRP has reviewed a number of "retrospective" reports that were produced by proponents of long-term, ongoing projects. Some of these reports were requested by the ISRP in a specific

project review; see the *ISAB and ISRP Review of the CSS Ten-Year Retrospective Summary Report* ([ISAB/ISRP 2007-6](#), November 2007). The recently completed review of the Lower Snake River Compensation Plan programs for spring Chinook, steelhead, and fall Chinook was a comprehensive and effective look at program results ([ISRP 2014-6](#)). Other examples include the reviews of ocean, estuary, sturgeon, and lamprey synthesis reports; and ISRP follow-up reviews of the Select Area Fisheries Enhancement Program, the ODFW John Day fencing program, and the Grande Ronde model watershed habitat restoration effectiveness report. In FY 2015, review of progress reports described above for habitat RME (ISEMP/CHaMP/AEM) will in large part be retrospective reviews of past results.

The ISRP recognizes that retrospective reports need to be conducted in the context of other concurrent efforts that track results of the Fish and Wildlife Program. Specifically, the Council develops its own annual report to Congress and the four Basin state governors on the Program's progress toward fish and wildlife mitigation and recovery using high level indicators. The Action Agencies for the Federal Columbia River Power System produce comprehensive evaluation reports describing progress on meeting Biological Opinion requirements. The Bonneville Power Administration has made progress on project tracking through Pisces and Taurus. In the past, the Columbia Basin Fish and Wildlife Authority (CBFWA) issued an annual report of the status of the resource. These efforts and the ISRP's retrospective review share a target of not only reviewing the results that are currently reported but establishing a systematic and meaningful reporting of project results as a central feature of the Fish and Wildlife Program.

In addition to reviews of individual Fish and Wildlife Program project reports, the ISRP intends to discuss with the Council topics for future ISRP retrospective reports.

7. Research, Monitoring, and Evaluation (RME) Reviews

In FY 2015, the ISRP will continue its shared role with the ISAB in reviewing regional plans aimed at monitoring and evaluating the status of fish and wildlife populations in the Basin and the effectiveness of projects at benefiting those populations. The ISRP and ISAB closely coordinate reviews of RME plans and products, such as the Council's Research Plan, High Level Indicator (HLI) development, Pacific Northwest Aquatic Monitoring Partnership (PNAMP) products, Action Agency RME plans, and RME proposals. In FY 2015, the ISRP and ISAB¹ will assist with the further development of the Council's RME program including the research plan, high level indicators, project reporting templates, science-based assessments, Program objectives, data management, and RME guidance and implementation strategies.

¹ Joint ISRP/ISAB members will bill their services related to these reviews to their ISAB contracts.