



Independent Scientific Review Panel

for the Northwest Power and Conservation Council
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Fiscal Year 2020 Work Plan

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ISRP Fiscal Year 2020 Work Plan

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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.

- Review program results

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. In addition, 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 FY 1999 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 2020 Reviews

For FY 2020, ISRP review assignments comprise seven categories:

- 1) Research, Monitoring, and Evaluation (RM&E) plans
- 2) Category reviews
- 3) New Accord proposals and targeted reviews including new proposals or project scope changes submitted through the Council and Bonneville's Budget Oversight Group
- 4) Three-Step reviews for major capital construction projects
- 5) Follow-up reviews
- 6) Reimbursable projects reviews
- 7) Results reviews (Retrospective Reports)

Further details on the reviews are provided below; some of the categories are combined in the descriptions. The ISRP's total FY 2020 budget to complete these and other potential reviews requested by the Council is \$500,000.

1. Research, Monitoring, and Evaluation (RM&E) Reviews

In FY 2020, the ISRP will continue its role, shared with the ISAB, of reviewing regional plans aimed at monitoring and evaluating the status of the Basin's fish and wildlife populations and their habitats as well as the effectiveness of projects at benefiting those populations. The ISRP and ISAB closely coordinate reviews of RM&E plans and products such as the Council's Research Plan, draft Council documents related to Program RM&E activities and guidance, Pacific Northwest Aquatic Monitoring Partnership (PNAMP) products, Action Agency RM&E plans, and RM&E proposals. The Council, BPA, and NOAA staff are currently developing an integrated RM&E Framework that will meet multiple basin needs and include a [tributary habitat RM&E strategy](#). In 2020, the ISRP and/or ISAB may be asked to review a draft tributary habitat RM&E strategy.

2. Category Reviews

To implement the Fish and Wildlife Program, the ISRP and Council regularly review projects intended 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. Review processes are also designed to consider the projects' review histories and the status of the evolving Fish and Wildlife Program (Program). The ISRP helps design the scientific evaluation component of the review process, assesses the scientific soundness of the projects, and identifies programmatic issues that apply across projects and inform Program development.

Reviews are designed to meet multiple purposes including project improvement, project and Program accountability and performance, project prioritization and selection, project risk and

cost assessment, coordination across projects, and information sharing. Commencing in calendar year 2019, the Council has requested its staff to increase its focus on project and Program performance in the Category reviews. Council members and staff are working to identify goals, objectives, and performance indicators within each area of the Program, to be included in late 2019 reviews. The Council has designated lead staff for each program topic area and has charged each staff lead with ensuring the ISRP reviews are informed by the most urgent questions for each area.

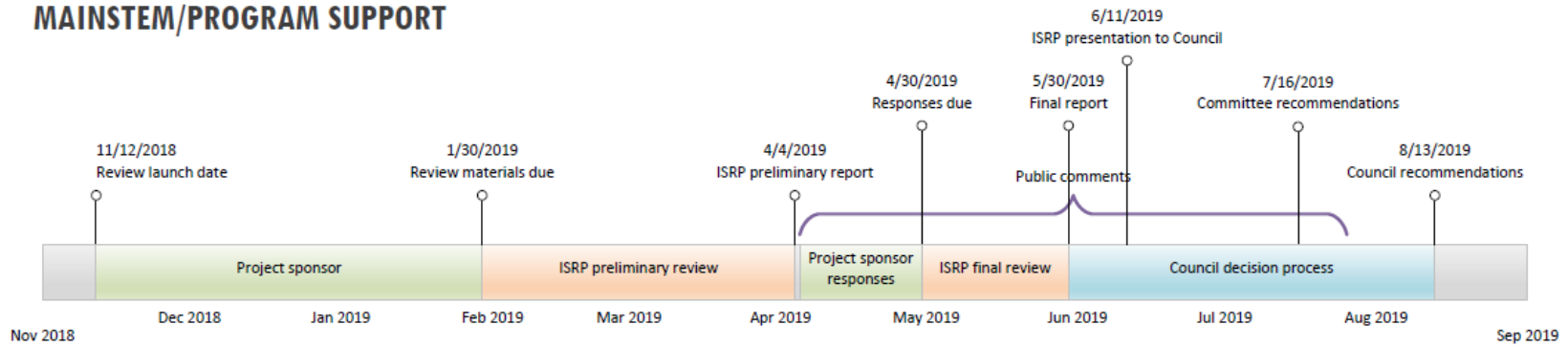
Category Reviews FY 2017 to FY 2021 – In 2017, the ISRP and Council began the second series of Category Reviews in which all projects that are amenable to scientific review are grouped into four major categories and evaluated for their scientific merit. The reviews focus on project results, progress toward meeting project and program objectives, and the future direction of the projects. Project review information is provided through proposals (CBfish.org), project summaries, annual reports, presentations by project proponents, a formal response loop, and, in some reviews, site visits.

The four major categories are (1) Wildlife – 29 projects, (2) Mainstem and Program Support – 48 projects, (3) Resident Fish/Blocked Areas and Sturgeon – about 52 projects, and (4) Anadromous Fish Habitat/Artificial Production – about 170 projects. The current categories are based largely on the first round of Category and Geographic Reviews (2009 thru 2014), with the following exceptions: regional coordination projects will not undergo science review because they are not amenable to scientific review; data management projects were considered in the Mainstem and Program Support Category rather than the Resident Fish Review, as was done previously; and artificial production projects and associated monitoring for anadromous salmon and steelhead were moved from Mainstem and Program Support projects (2018-2019) to the tributary habitat projects (2020-2021). This allows the ISRP and Council to review the artificial production projects in the context of restoration actions that support habitat for both natural and hatchery origin fish.

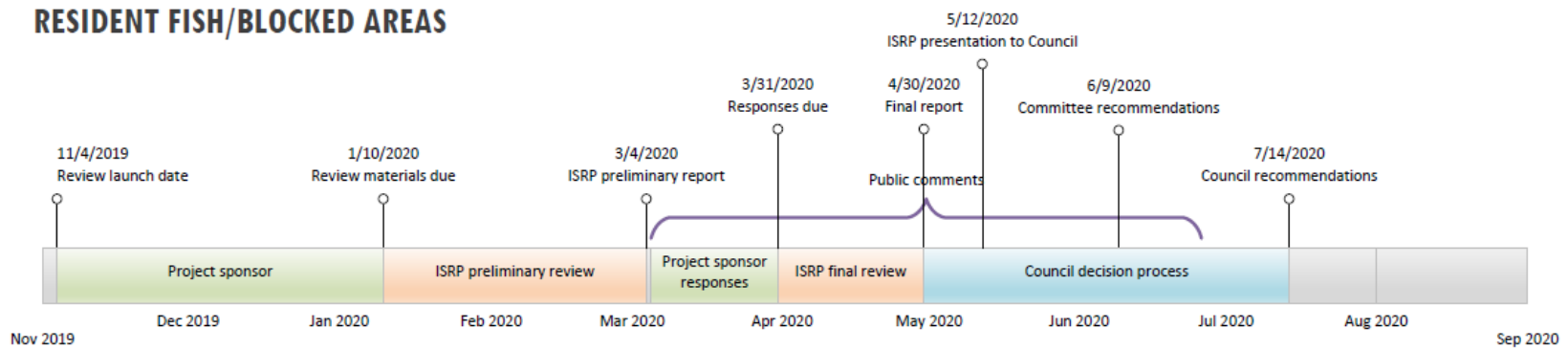
The Wildlife Category Review of 29 projects was completed in 2017 ([ISRP 2017-7](#)). On May 29, 2019, the ISRP completed its review of 48 projects in the Mainstem and Program Support Category ([ISRP 2019-2](#)). In FY 2020, the ISRP will participate in the Resident Fish/Blocked Areas and Sturgeon Category Review of about 52 projects. The review will include presentation meetings, a response loop, and likely a few targeted site visits. See the draft schedule below for review steps and tentative dates for the remaining Category Reviews. Additional time will be added to the review schedules to account for holidays, seasonal field work commitments, and feedback on the review process from the 2019 Mainstem and Program Support Category review.

DRAFT PROJECT REVIEW TIMELINES JULY 7, 2018

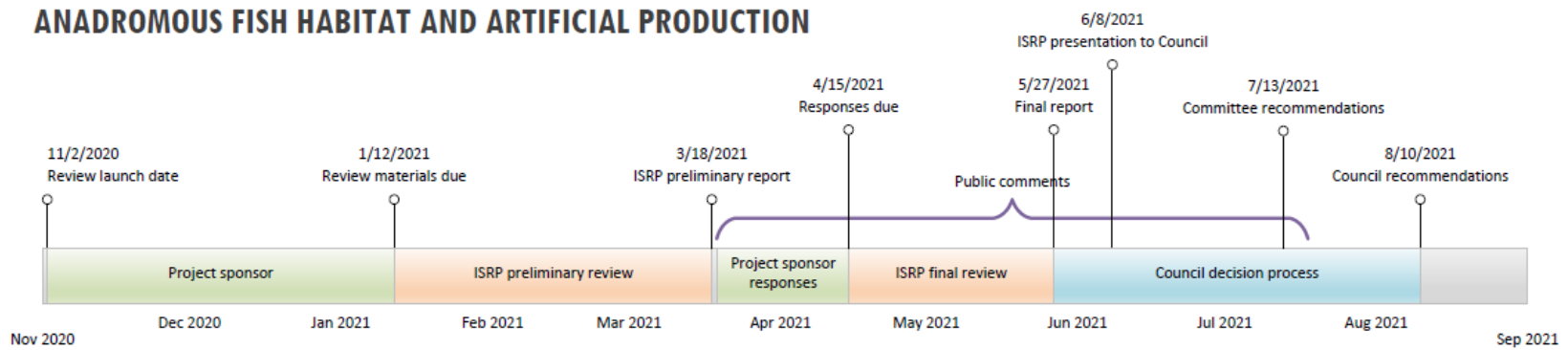
MAINSTEM/PROGRAM SUPPORT



RESIDENT FISH/BLOCKED AREAS



ANADROMOUS FISH HABITAT AND ARTIFICIAL PRODUCTION



3. New Accord and Targeted Project Reviews

New [Accord](#) projects may be submitted for review in 2019 and 2020. In addition, the Council may develop targeted solicitations to address emerging priorities listed in the 2014 Fish and Wildlife Program (see pages [115-116](#)), for instance, to solicit proposals to aid sturgeon recovery or predator management actions and research (e.g., northern pike suppression). New proposals or scope changes may be identified and submitted through the Council and Bonneville's Budget Oversight Group. The ISRP will review all new proposals.

4 & 5. Three-Step and Follow-up Reviews of Fish and Wildlife Program Projects

The ISRP regularly participates in reviews of projects¹ that 1) have unresolved scientific issues identified in previous ISRP reviews that the Council has recommended project proponents formally address or 2) are subject to the Council's Step Review process because they are complex, expensive, and involve planning, design, construction, and implementation phases. The reviews are iterative and depend on timely submittal of materials by the project proponents. For FY 2020, the Council will likely request the ISRP to review many of the projects listed below. Most of the potential review assignments are Step Reviews, but several originated in Category and Geographic Reviews. Many qualifications entail follow-up reports by the project proponents and subsequent ISRP review. Some follow-up reviews may include site visits or meetings between the project proponents and the ISRP. The list below describes a *sample* of the projects with qualifications requiring significant reviews. Many other projects (not listed here) have qualifications calling for future ISRP reviews.

A. Anadromous Salmon and Steelhead: Hatchery Master Plans, Blocked Area Assessment, Habitat Restoration

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 concerns involving acclimation ponds and residualism of juveniles, potential use of hatchery-origin broodstock, and assessment methods. In response to the ISRP's concerns and the Council's subsequent recommendation, a final Step Review document may be submitted in 2019 or 2020.

¹ These projects include some that are categorized as [Fish Accord](#) or [BiOp](#) projects.

Yakima Subbasin Summer and Fall Run Chinook and Coho Salmon, a component of Project 1988-115-25, Yakima Klickitat Fisheries Project, Design & Construction – 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 several qualifications that could be addressed in Step Two ([ISRP 2013-8](#)). Based on this review and input received from the Yakama Confederated Tribes, the Council recommended to proceed with Step 2 activities for the Holmes Ranch component of the coho program, only. The fall Chinook actions remained as reviewed and recommended, and any expansion depends on a future reviews. In 2018, the ISRP reviewed a component of the master plan for the Melvin R. Sampson Coho Facility (i.e., Holmes Ranch) ([ISRP 2018-6](#)). The ISRP requested a response on several issues. The Yakama Confederated Tribes will address these issues as part of the 2021 Anadromous Fish Habitat/Artificial Production Category Review and through future Step review submittals for other components of the master plan including activities associated with fall Chinook and other species for the Yakima River at Prosser and Marion Drain. A Step submittal for those components may be submitted for ISRP review in 2019 or 2020.

Crystal Springs Fish Hatchery and Programs for Snake River Chinook Salmon and Yellowstone Cutthroat Trout, Project 2008-906-00 – 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 met 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 2019 or 2020.

Snake River Basin Steelhead Kelt Reconditioning Facility Master Plan, Project 2007-401-00 – In 2016, the ISRP completed a review of a revised master plan and found it met scientific review criteria with a qualification to address four issues during the next phase in project development ([ISRP 2016-12](#)). The Council recommended the proponents address these issues in the next Step review. A submittal and review are anticipated in 2019 or 2020.

Chum Salmon Restoration in the Tributaries below Bonneville Dam, Project #2008-710-00 – In 2009, the Council recommended the project for implementation (i.e., Objectives 1, 2, 4, and 6) with the condition that the qualifications and responses identified by the ISRP ([ISRP 2009-29](#)) for Objectives 3 and 5 be addressed as part the anticipated Step Review associated with Objective 7. Full implementation of Objectives 3, 5, and 7 is dependent on future reviews by the ISRP and Council. The Council's recommendation was also confirmed in the Artificial Production and RM&E Category Review in 2011. A submittal and review are anticipated in 2019 or 2020.

Review Assessment of Reintroduction of Anadromous Salmon to Blocked Areas – In 2018, the ISRP reviewed the results of the completed project titled *Spokane Tribe Habitat Assessment in Blocked Areas, 2016-003-00* as part of the Research Project Status Review ([ISRP 2018-8](#)). The proponents assessed habitat suitability for reintroduction of anadromous salmonids above Grand Coulee and Chief Joseph dams, using Intrinsic Potential modeling, existing habitat data, and EDT modeling. The ISRP found that the assessment provided useful estimates of available

habitat, but a more detailed discussion of the limits of the assessment methods was needed. The ISRP recommended that the comprehensive set of Phase 1 documents and results, as well as successive phases, be reviewed by the ISRP and/or ISAB to ensure that the assessment of potential for reintroduction is scientifically sound. The results of these studies and the reviews will be considered by the Council and relevant entities to determine whether to proceed to the Program's Phase II for reintroduction, which moves from studying to designing and testing reintroduction strategies. The ISAB will likely be asked to review the Phase 1 documents in 2019, but an ISRP role is possible.

Grande Ronde Model Watershed, Project 1992-026-01 – In 2018, in response to the Council and ISRP recommendation for the Umbrella Project Review ([ISRP 2017-2](#)), the project proponents submitted a synthesis report describing over 25 years of habitat restoration work. The ISRP found that the synthesis report did not meet scientific review criteria and needed an evaluation of the effectiveness of actions individually and collectively, and identification of the lessons learned and how they applied to adaptive management ([ISRP 2018-11](#)). The Council has requested the proponents to address the ISRP's concerns, and the ISRP will be asked to conduct a follow-up review in 2019 or 2020.

B. White Sturgeon

White Sturgeon Hatchery Master Plan: Lower Columbia and Snake River Impoundments, Project 2008-455-00 – In March 2016, the ISRP completed a review of the Step-One master plan submittal ([ISRP 2016-5](#)). A Step-Two submittal is anticipated in 2019 or 2020.

Lake Roosevelt White Sturgeon Conservation Hatchery Project, 2007-372-00 – A Three-Step Review is not imminent but is possible in late 2019 or 2020.

C. Resident Fish

Kootenai River Project Synthesis Report (1988-065-00, 1994-049-00, 2002-002-00, 2002-008-00, 2002-011-00) – This report will address a Council condition and ISRP qualification from the Resident Fish, Data Management, and Regional Coordination Category Review ([ISRP 2012-6](#)). The ISRP recommended a synthesis report be produced summarizing the results of the RM&E efforts associated with these projects. The ISRP specified that the synthesis should be a concise and comprehensive interpretation of aquatic community and system-scale responses that can be used to guide current and future restoration efforts on this system. A submittal and review are anticipated in 2019 or 2020.

Duck Valley Reservation Reservoir Fish Stocking O&M and M&E, Three-Reservoir Management Plan, Project 1995-015-00 – This management plan will address a Council condition and ISRP qualification from the Resident Fish, Data Management, and Regional Coordination Category Review ([ISRP 2012-6](#)). A submittal and review is possible in 2019 or 2020.

Kalispel Tribe Resident Fish Program, Project 199500100 – Proposed changes in the project could trigger a Three-Step Review, but the Council will need to see a proposal to determine the appropriate review process. A review is not imminent but is possible in 2019 or 2020. If not reviewed in a Three-Step process, the project will be reviewed in FY 2020 as part of the Resident Fish/Blocked Area Category Review.

6. Reimbursable Projects Reviews

The Council and the ISRP have approached “reimbursable program” reviews sequentially over the past decade. The ISRP has reviewed the portions of the reimbursable program that are scientifically uncertain, complex or expensive, and amenable to scientific review. These reviews have included evaluations of Lower Snake River Compensation Plan (LSRCP) 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, see below). However, the ISRP has not reviewed many of the projects funded through the Corps’ Fish and Wildlife Operations and Maintenance Budget, primarily because these O&M projects include relatively few scientific elements. Although the Hatchery Science Review Group (HSRG) has reviewed the Bureau of Reclamation’s Leavenworth Hatchery, the ISRP has not. During the ISAB’s Upper Columbia spring Chinook review ([ISAB 2018-1](#)), the ISAB considered the role of Leavenworth Hatchery in mitigation and recovery efforts but did not conduct a specific review of the hatchery. The ISRP and Council staff will discuss whether a review of Leavenworth Hatchery would be timely and useful in 2019 or 2020. In addition, the ISRP, Council, and LSRCP staff will discuss a schedule and approach for reviewing the LSRCP projects. One efficient, complementary approach would be to review the projects in 2020-2021 concurrent and coordinated with the Category Review of the Fish and Wildlife Program’s anadromous fish habitat restoration and artificial production projects.

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 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 RM&E Plan for the Willamette Basin projects and proposals for specific actions under the plan ([ISRP 2011-26](#)). The Willamette work is occurring in response to 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](#)). In 2019 and 2020, if requested, the ISRP will review synthesis reports, draft plans, and proposals for the Willamette Basin program. In addition, the ISRP might be asked to review proposed evaluations of adult fish passage, avian predation, or other subjects for which decisions on design, selection, and implementation

would benefit from ISRP review. The ISRP will discuss potential reviews with Council and Corps staff.

7. Results Reviews

The ISRP fulfills its “results review” 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 project proposal form includes questions that ask for a concise summary of biological results, progress toward meeting project objectives, and the adaptive management implications of those results. The proposal form also describes that the ISRP will use the information submitted for its retrospective review. Since the Resident Fish, Data Management, and Regional Coordination Category Review in 2012, the ISRP has included a specific section in each project comment field for a retrospective analysis. In addition to review comments on each project, the ISRP provides programmatic comments on the general sufficiency of results reporting and incorporation of project accomplishments into future planning.

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 RM&E and Artificial Production 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 had improved in all three major areas covered by the 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 many “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 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, Idaho Supplementation Studies, and lamprey synthesis reports ([ISRP 2018-2](#)) 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.

A major ISRP results review for 2015 and 2016 was the evaluation of RM&E projects’ annual reports for the Critical Uncertainties Review ([ISAB/ISRP 2016-1](#)). In FY 2017 the ISRP evaluated the results of umbrella habitat restoration projects ([ISRP 2017-2](#)) and wildlife projects ([ISRP 2017-7](#)). In FY 2018, the ISRP participated in a status review of research-focused projects ([ISRP 2018-8](#)) and, as noted above, the ISRP recently completed a review of program support and mainstem projects ([ISRP 2019-2](#)). Those reviews focus on project results and progress toward meeting objectives. In addition, the ISRP intends to discuss with the Council topics for future ISRP retrospective reports, for example, the extent to which actions funded and guided by the Program have addressed Program goals and biologically based objectives.

The ISRP evaluates project results 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 based on high level indicators (see [2018 Cost Report](#)). The Council also maintains a Fish Information Site,² which is accessible through the Program’s webpage under [Resource Tools and Maps](#). 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 developed and used Pisces and Taurus databases to track the progress of its funded projects. In 2018, Bonneville merged these databases under the name Gemini; see www.cbfish.org. These efforts and the ISRP’s retrospective review share a target of both reviewing the results that are currently reported and establishing a systematic and meaningful reporting of project results as a central feature of the Fish and Wildlife Program.

² The Fish Information Site continues the compilation of fish and wildlife status data that the now-disbanded Columbia Basin Fish and Wildlife Authority collected and maintained. The transition to the Council occurred from 2012 to 2014.