

Part Six: How the Program is Implemented

I. Program measures

The Council's fish and wildlife program consists of a number of different types of "measures." The Northwest Power Act (and thus the program, too) uses the term "measures" [see Sections [4\(h\)\(2\)](#), [\(5\)](#), and [\(6\)](#)] in a way that means the actions or things to be done to benefit fish and wildlife affected by the Columbia River hydroelectric facilities.

Basinwide measures

Some of the program measures are broad strategies that apply basinwide or program-wide. Examples include the ecosystem function and hatchery strategies, with broad overarching principles and strategies to guide the development and implementation of more specific measures across the program to boost natural spawning and allow for hatcheries. These broad program-wide or basinwide strategies are found primarily in Part Three, Section IV (strategies).

Specific measures

More specific measures are also found in the program. These are found in various strategies organized by topic and species in Part Three, Section IV (strategies) and in Part Four – Subbasin Plans.

Mainstem

Specific measures for implementation in the mainstem Columbia and Snake rivers are found in the Mainstem Hydrosystem Flow and Passage Operations strategy in Section IV.

The details of most of these measures are found in other documents, including the mainstem actions in five biological opinions, or Columbia Basin Fish Accords that have been incorporated by reference at the appropriate places in the program. Many of these actions are built on the mainstem protection and mitigation foundations developed in the Council's program over the past 30+ years, beginning with the water management and passage measures in the original 1982 Program. The Council recognizes these actions as measures that the Bonneville Power Administration (Bonneville) and the other federal agencies have committed to fund and implement under Sections [4\(h\)\(10\)\(A\)](#) and [4\(h\)\(11\)](#) of the Act, even as these measures also address needs under other federal laws as well, such as the Endangered Species Act (ESA). Note that the Council is *not* adopting these biological opinions into the program in their entirety, and the Council expresses no opinion as to their sufficiency for satisfying the requirements of other laws, such as the ESA. What they are for the program are a catalog of actions that will be implemented as part of the program's specific measures, along with the other specific measures directly described in the program.

Subbasins

Specific measures can be found in the management plan sections of the 59 subbasin plans adopted into the program in 2004-05 and 2010-11. These are specific to the relevant subbasin, estuary or mainstem reach, but are often general, long-term strategies rather than specific near-term actions. Examples include the habitat and production strategies for the Yakima, Umatilla, and Clearwater tributaries in the respective Yakima, Umatilla, and Clearwater subbasin plans; the habitat strategies for the estuary in the Columbia River Estuary subbasin plan; or the habitat and production strategies in the subbasins in the Grand Coulee/Lake Roosevelt area collected into the Intermountain plan. The [subbasin plans](#) are referenced in Part Four of the program.

The Council also received recommendations containing extensive lists of specific action measures for implementation in the next 5-10 years in these tributary subbasins, specific mainstem reaches, and the estuary. These specific measures cover an extensive array of habitat, production, and monitoring, evaluation and research activities. A few examples include specific habitat actions across the program's dozens of tributary subbasins and the estuary, the ongoing production programs in the Hood, Yakima, Klickitat, Umatilla, Walla Walla, and Clearwater subbasins, and the estuary habitat actions [see the 2014 and 2009 measures in [Appendix O](#)].

As with the specific mainstem measures, some of these measures are distinct to the program; others are collected in other plans and programs, including biological opinions, Columbia Basin Fish Accords, and ESA and watershed recovery plans. The Council has recognized that the actions in these other plans and documents are built on the offsite-mitigation planning and implementation foundations developed in the Council's program over the past 30+ years and are consistent with the subbasin plans and broader elements of the program. Thus the Council includes the actions as program measures under Section [4\(h\)](#) of the Northwest Power Act, even as they may also address needs under other laws as well. The Council has not adopted these other plans and documents in their entirety into the program.

These specific action measures are referenced in the Estuary and Subbasin sections in Part Three and Part Four. The measures are associated with specific subbasins (or mainstem reach or the estuary). [Subbasin dashboards](#) list each specific measure and, when possible, link to the relevant limiting factor(s) from the subbasin plan assessments.

Many of these specific measures are already being implemented. Some are part of ongoing projects that have been implemented for years. Recent implementation commitments have occurred through multi-year commitments made by the federal agencies in the biological opinions and Columbia Basin Fish Accords and through recent project review processes at the end of which the Council has recommended sets of projects (both from the biological opinions and

accords and from outside of those commitments) for multi-year funding and implementation by Bonneville and the other federal agencies. Other measures have not yet been implemented, and stand as a pool of possible measures for implementation in future years.

Even so, the program is not a vehicle to guarantee funding for a particular project, entity, or individual. The fact that a specific measure is included in the program, even as referenced in a biological opinion or accord, does not by itself constitute a funding obligation for the associated project without further definition for implementation and review under Section [4\(h\)\(10\)\(D\)](#) of the Act. Final project funding recommendations for projects in any particular year or multi-year period still depend on the outcome of independent scientific review, a program consistency review, public comment, and a Council recommendation to Bonneville. This process converts the priority measures in the program into detailed project recommendations for implementation that provide specific guidance for Bonneville to ensure that its actions are consistent with the program. The program's implementation provisions describe the conditions under which all such measures will be implemented, including:

- All measures must be developed into detailed project proposals subject to review under Section [4\(h\)\(10\)\(D\)](#) of the Act. All projects at some point receive an independent scientific review of proposed work and, if ongoing, of past performance. Projects and the scientific review report are subject to public review. The Council then develops funding recommendations for Bonneville based on the proposed projects, the program, the scientific review and the public review. The Council will review the project proposals carefully to ensure consistency with the program's basinwide, mainstem, estuary, and subbasin plans and provisions, and to ensure that projects show demonstrable results for the program measures to receive continued support.
- Those responsible for implementing these projects must regularly report the results of implementation. Reporting must be sufficient for the purpose of evaluating the success of the projects, facilitating the science and performance review, and contributing appropriately to the program's broader monitoring and evaluation framework and reporting of program results. Reporting requirements must be included in the Bonneville contracts, and must include reporting in terms of performance metrics required by the Council.
- Implementation of these measures must allow for an ongoing adaptive management approach and for future program amendment processes in which measures are modified or discontinued if not performing or no longer identified as a priority.
- The Council recognizes that Bonneville and the other federal agencies have already made funding commitments to certain measures. Those commitments must not come at the expense of sufficient funding for other program priorities.

Tracking measures

It is important to track progress of measures that implement the program to understand whether they are having the desired outcomes. To help track progress of program implementation:

- Bonneville, the Corps, and the Bureau, in collaboration with federal and state agencies and tribes, shall report annually to the Council and the region on the implementation of program measures.

II. Investment strategy

Strategy

Assure funding to identified program priorities to maximize the biological response resulting from ratepayer and cost-shared investments.

Rationale

The Council's program contains hundreds of measures at the basinwide, mainstem and subbasin levels. Program measures are funded and implemented not just by Bonneville, but also through programs under the authority of the U.S. Army Corps of Engineers (the Corps), the Bureau of Reclamation (the Bureau) and the Federal Energy Regulatory Commission as its licensed non-federal hydroproject operators.

Bonneville has chosen to implement many of its Northwest Power Act requirements through a series of long-term commitments that it believes help address its legal obligations through at least 2018 and beyond in some cases. Bonneville continues to prioritize ESA responsibilities in its investment plan, although it also funds elements of the Council's program that address the other, non-listed fish and wildlife affected by the hydrosystem.

The program represents a substantial investment by the ratepayers of the Northwest and the nation's citizens. For example, over the last three decades Bonneville and the other program implementers have made substantial investments in a wide variety of physical structures and land acquisitions to benefit fish and wildlife. There is a growing need throughout the Columbia River Basin to protect or upgrade these investments as facilities age or become obsolete, structural standards change, and extreme-event damages accumulate.

The Council recognizes that ratepayer funding requires some basic controls and that there is not unlimited funding to address every need for fish and wildlife affected by the development of the federal hydrosystem, all at once. At the same time, the Council received recommendations to continue the ongoing work under the program along with recommendations for new or expanded work. Bonneville's existing budget commitments limit its flexibility for funding new work, constrain expansion of ongoing work, may leave unfunded some of the state and federal fish and wildlife agencies' and tribes' priorities, and provide for only limited capacity for maintenance of past investments.

To assure thoughtful use of Bonneville funding to maximize benefits to fish and wildlife, the Council has identified the following principles and priorities to guide the funding and implementation of program priorities by Bonneville, the Corps, the Bureau, project sponsors, and their partners.

Principles

- Bonneville will fulfill its commitment to meet all of its fish and wildlife obligations.

- Program funding levels should take into account the level of impact caused by the federally operated hydropower system and the off-site protection and mitigation provisions of the Northwest Power Act enabling program investments in related spawning grounds and habitat.
- Wildlife mitigation should emphasize addressing areas of the basin with the highest proportion of unmitigated losses.
- The Council will continue to evaluate the distribution of funding to provide fair and adequate treatment across the program. Meanwhile, the Council maintains the current funding allocation for anadromous fish (70 percent), resident fish (15 percent), and wildlife (15 percent).
- Hydropower facility site-specific invasive species prevention actions and toxics reduction activities are ongoing maintenance issues. Funding for these efforts should be derived primarily from the Corps and the Bureau operations and maintenance budgets rather than from Bonneville's fish and wildlife budget to implement the program.
- The Council believes that final determination of a yearly direct program budget should occur no later than one year before the relevant projects are to be funded. Generally these projects' budgets are difficult to forecast more than three years in advance of initiation; so the budget is expected to be a rolling three-year spending plan, developed by Bonneville, that will have a current spending estimate replaced by a new three-year estimate every year.
- Priority work funded through the Columbia River Fish Mitigation Program (CRFM) should not go unfunded because of competing priorities between districts of the Corps (e.g., between the Columbia/Snake hydropower projects and the Willamette Basin projects). The Council urges the action agencies to meet their Willamette and FCRPS Biological Opinion implementation and mitigation obligations.
- Provide for timely ongoing operation and maintenance costs associated with existing investments. Some existing projects are aging and need repair. Long term maintenance for existing projects including fish screens, hatchery structures, wildlife acquisitions, and other long term needs must be supported to meet project and program objectives.
- Bonneville and the action agencies should allocate and assure adequate funding for the application and recovery or detection of PIT tags, coded wire tags, acoustic and radio tags, and genetic tags.
- Bonneville will continue to provide adequate support for terminal fisheries in the estuary and other basin locations.

Emerging program priorities

The Northwest Power Act establishes Bonneville's obligation to protect and mitigate for fish and wildlife impacts from the development and operation of the hydropower system. The Council recognizes its obligation, in turn, to construct a program that guides Bonneville's protection and mitigation efforts. Work necessary to satisfy Bonneville's mitigation obligation must be sized appropriately during Bonneville's rate cases and as it projects its capital and expenditure budgets, so as to provide equitable treatment to high-priority fish and

wildlife projects, regardless of whether or not they are identified in a biological opinion or in an accord, while also accommodating yearly budget limitations.

Many of the program's current measures represent ongoing activities that already have multi-year funding and implementation commitments from Bonneville and the other federal agencies for the foreseeable future. These ongoing activities and existing program areas represent a set of priorities from earlier programs and largely continue into the new program.

At the same time, the Council received recommendations for many new measures for inclusion into the 2014 Program. All measures are subject to the same legal obligation on the part of the federal agencies with responsibilities toward the Council's program under the Northwest Power Act. Some of the new measures recommended for inclusion in the 2014 Program expand existing work in new or additional directions; others represent new directions for the program.

The Council is providing the following guidance to Bonneville, the other federal agencies, and the region in general as to which of these new measures are emerging priorities for implementation in the next five years. During the course of the next five years, the Council anticipates that Bonneville will take the necessary steps to integrate these priorities into the program and will report annually to the Council on its progress. The Council may adjust the following ordered program priorities:

1. Provide for funding [long-term maintenance](#) of the assets that have been created by prior program investments
2. Implement [adaptive management](#) (including prioritized research on critical uncertainties) throughout the program by assessing the effectiveness of ongoing projects, developing program objectives when appropriate and taking into account the effects of [climate change](#)
3. Preserve program effectiveness by supporting: (1) expanded management of [predators](#); (2) mapping and determining hotspots for [toxic contaminants](#); and (3) aggressively addressing [non-native and invasive species](#)
4. Investigate [blocked area mitigation](#) options through reintroduction, passage and habitat improvement, and implement if warranted
5. Implement additional [sturgeon](#) and [lamprey](#) measures (passage and research)
6. Update the [subbasin plans](#) most in need of updates
7. Continue efforts to [improve floodplain habitats](#)

Bonneville funding for emerging program priorities

Bonneville should fund any new fish and wildlife obligations from identifying savings within the current program and as necessary, from additional expenditures. Savings from the current program should not compromise productive projects that are addressing needs identified in this program. For example, additional funding can be obtained when projects complete their goals,

such as a research project, or when a project is no longer reporting useful results. Funding should also be sought in general overhead budgets including Bonneville's overhead for its Fish and Wildlife Division. To the extent that targeted savings are insufficient to meet Bonneville's financial obligations in this program, Bonneville should consider increasing expenditures. Prior to every rate case Bonneville should report to the Council how it plans to budget for implementation of the fish and wildlife program. [see [cost-effectiveness recommendations](#) from the IEAB].

III. Implementation procedures

At any point in time, this program is implemented through the collective work of hundreds of projects, funded by ratepayers. For the program to be effective and accountable, reporting and tracking processes are necessary to ensure scientific soundness of projects, track program results to guide future decision making, coordinate with other projects and programs, and to prioritize new work as funds become available. The Council will rely on the procedures in this section to coordinate project review and implementation.

The procedures for implementing this program will ensure that planning results in on-the-ground actions and that those actions be reported to guide future decisions. The Council will use the procedures in this section to integrate Bonneville funding for this program with ESA requirements and the collaborating programs of the states, tribes, and federal and local governments. This section incorporates advances made in recent years to improve project selection and management practices for fiscal accountability and improved reporting.

A. Project review process

The 1996 amendments to the Northwest Power Act, which added Section [4\(h\)\(10\)\(D\)](#), directed the Council to oversee, with the assistance of the Independent Scientific Review Panel, a process to review projects proposed for funding by Bonneville, and to appoint additional peer review groups. The panel comprises 11 independent scientists. The ISRP will review proposed projects and make recommendations to the Council as to whether these proposals are based on sound scientific principles, benefit fish and wildlife, have a clearly defined objective and outcome with provisions for monitoring and evaluation of results, and are consistent with the priorities in the program [see the [risk uncertainty matrix](#)]. As part of this review, the ISRP considers the projects' prior-year results, and accomplishments. The Council allows for and encourages public review and comment on the ISRP's recommendations. The Council will then make final recommendations to Bonneville on projects to be funded. In doing so, the Council fully considers the ISRP's recommendations, explains in writing its reasons for not accepting ISRP recommendations, considers the impact of ocean conditions on fish and wildlife populations, and determines whether the projects employ [cost-effective measures](#) to achieve program objectives. Section [4\(h\)\(6\)\(C\)](#) of the Northwest Power Act requires the Council to adopt program measures that "utilize, where equally effective alternative means of achieving the same sound biological objective exist, the alternative with the minimum economic cost."

The project review process is a required and critical component to implementing Bonneville's portion of the Council's fish and wildlife program for anadromous fish, resident fish, and wildlife, including subbasin plans and other planning documents associated with the program. The reports and recommendations from project reviews increase transparency and accountability of project deliverables, durations, reporting requirements, performance metrics, and expectations. Whether the project is new or ongoing, project review results in a stronger project to benefit fish and wildlife and the region in most cases.

1. Elements of project review

- Recognize differences in project types; for example: projects with long-term funding commitments; shorter-term implementation projects (e.g. habitat); and core program-support projects that focus on basinwide data and reporting. Each type may be set on different, but integrated, funding and review paths.
- The Council will work with Bonneville and project sponsors to develop appropriate end dates or review schedules for currently funded projects, based on milestones and deliverables.
- Allow the flexibility to incorporate Bonneville's ESA requirements and relevant agreements including those identified in the biological opinions and accords as consistent with the Northwest Power Act, section [4\(h\)\(10\)\(D\)](#)
- Utilize existing subregional organizations and their frameworks and annual science workshops to assist with project reviews

- Streamline review process as appropriate and communicate timelines, processes, and expectations as they are developed. The Council will prioritize reviews based on prior findings and oversight including follow through on projects with qualified or conditional Council recommendations. Work with interested parties in the basin to assist in the development of review processes.
- For the program areas that do not yet carry Bonneville funding commitments, the Council will work with Bonneville and the sponsors to develop targeted solicitations for new work.
- Solicitations for new work should take into account the priorities described in the investment strategy.
- To properly scale monitoring and evaluation efforts, the Council expects project sponsors and the ISRP to use the [risk uncertainty matrix](#).

2. Step review process

As one element of project review, the Council developed a [step review process](#) for review of major investments, including new fish hatchery programs and facilities. Step review allows for review of scientific soundness, possible fish or wildlife benefits, environmental impacts, and design and fiscal considerations at appropriate stages in project development.

Step review includes a thorough review by the ISRP and the Council at three different phases: (1) master or conceptual planning; (2) preliminary design; and (3) final design. Projects may move to the next phase based on a favorable review and a Council recommendation to move to the next phase. The Council intends the step review process to be flexible and cost efficient. Depending on the nature and status of the proposed project, the Council may allow for a review that combines two or more of the steps in a single submission and review, or for a submission and review that addresses just part of a step in the review process.

B. Program coordination

The Council will continue to identify and provide regional leadership and coordination on a variety of fish and wildlife issues by bringing the appropriate expertise together and helping to craft strategic approaches to address these issues. When appropriate, the Council may convene participants and interested parties to discuss and address relevant issues pertaining to program implementation in the absence of an existing and ongoing forum.

The Council has benefited and will continue to benefit from the individual and coordinated efforts of groups, committees and organizations in implementing the program. Continued coordination of various program elements is expected, supported, and in some cases financed by the Bonneville Power Administration. Annually, the Council will convene a forum of regional coordination representatives and other interested parties to discuss the upcoming years' issues of regional significance that may include:

- Council-sponsored/requested topical science and policy forums, workgroups, and special panels to aid in program development and implementation
- Ongoing work to improve program reporting, evaluation, and assessment
- Key program-related regional forums where policies, programs, and actions affecting fish and wildlife are planned and implemented
- Coordination of subbasin or other level program activities

The Council will factor in the implementation priorities and its fish and wildlife program work plan into this annual discussion forum.

Program coordination funding

Entities receiving program coordination funding must participate in the annual forum and a subset of the resulting priority activities identified by the group, as appropriate for the particular entity. All related work should focus on activities that inform the Council on policy, program performance evaluation, and implementation decisions and are beneficial at a basinwide or regional scale.

All entities receiving funding for coordination of program activities must develop a work plan detailing the coordination elements, objectives, deliverables, and budget, as well as submit annual reports on this work, based on the upcoming year's priorities as outlined in the annual forum.

Coordination with other regional programs

The Council will continue to pursue opportunities to implement the program in coordination with other federal, state, tribal, Canadian, and volunteer fish and wildlife restoration programs. The Council will continue to work with national programs that influence our work in the basin.

The Council will coordinate with organizations that track and monitor data on non-native species distribution, climate change, and human population change at the Northwest regional scale. There are also ongoing efforts to monitor trends in Northwest habitat quality, ocean conditions, and fish and wildlife that the Council

will continue to track and participate in on an ongoing basis as it affects our program work. Continued coordination with these larger efforts is important as their products and reports can directly influence our work in the basin and help to guide decision-making.

C. Independent scientific and economic review

Independent scientific review is a critical part of fish and wildlife project implementation, research, and development in the Columbia River Basin. Independent scientific review can help decision-makers separate scientific variables from other considerations (political, economic, cultural, etc.) and help ensure environmental decision-making reflects the best scientific knowledge. Independent scientific review for the fish and wildlife program is implemented by two groups: the [Independent Scientific Review Panel](#) and the [Independent Scientific Advisory Board](#). Review of economic issues is the responsibility of the Independent Economic Analysis Board. All three groups were created by the Council in 1996, and each provides distinct services to the program:

- **The Independent Scientific Review Panel (ISRP)** - The ISRP reviews individual projects in the context of the program and makes recommendations on matters related to those projects. Over the past two decades, the ISRP has reviewed all projects proposed for funding through the fish and wildlife program, amounting to several thousand proposals. These reviews help ensure program accountability and improve project design, documentation, and implementation.
- **The Independent Scientific Advisory Board (ISAB)** - The 11-member ISAB was established by the Council and NOAA Fisheries, and its administration is overseen by the Council, NOAA Fisheries, and the Columbia River Indian tribes. The ISAB provides advice to the region on key scientific issues affecting Columbia River Basin fish and wildlife with the intent to avoid gridlock over scientific uncertainty, circumvent unnecessary additional research, and resolve conflicting advice and opinions on recovery issues and measures. ISAB reviews have covered the traditional aspects of fish and wildlife mitigation and recovery including hatcheries, harvest, hydrosystem, and habitat issues (the 4 Hs). In addition, the ISAB evaluates topics that expand the region's perspectives on recovery including non-native species and climate change impacts; food web relationships; and landscape-scale restoration principles. [ISAB](#) and [ISRP](#) reports are publicly available on the Council's website.
- **The Independent Economic Analysis Board (IEAB)** – The Independent Economic Advisory Board advises the Council on the economics of issues within the Council's statutory responsibilities. The IEAB helps to satisfy the Council's obligation under the Act to establish a scientific and statistical advisory committee.

The responsibilities of all groups are provided below. Both science groups, and the economic group, have guidelines for conflicts of interest, appointment processes, review protocols, and [administrative procedures](#) that ensure their independence and effectiveness.

The ISRP and peer review groups have responsibilities in three areas:

- Review projects proposed for Bonneville funding to implement the Council's program: The 1996 amendment directs the ISRP to review annually 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 reports prior to making funding recommendations to Bonneville, and must explain in writing wherever the Council's recommendations differ from the ISRP's.
- Review program results: The 1996 amendment also directs the ISRP to annually review the results of prior-year expenditures based on 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 and previously reviewed. 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 program, as described in the monitoring and evaluation section of the program. Also as part of the ISRP's annual retrospective report, the panel 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 Fiscal Year 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. These programs include the Corps' Columbia River Fish Mitigation Program and the Lower Snake River Compensation Plan. Further details of the ISRP's project review responsibilities are described above, in the section on project selection.

The ISAB's review responsibilities include:

- Evaluate the fish and wildlife program on its scientific merits in time to inform amendments to the program and before the Council requests recommendations from the region
- Evaluate NOAA Fisheries' recovery plans for Columbia River Basin stocks and aspects of the recovery process when requested
- Provide scientific advice and review of topics identified as critical to fish recovery and conservation in the Columbia River Basin
- 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
- Provide specific scientific advice on topics and questions requested from the region or the ISAB and approved by majority vote of the Council's, NOAA

Fisheries', and the tribes' representatives overseeing the ISAB's administration.

The IEAB's responsibilities include:

- Advising the Council on the appropriate methods of economic analysis for proposed fish protection and mitigation measures and projects as well as other issues within the Council's statutory responsibilities. This advice will include the appropriate role and limits of economic analysis in making policy decisions and, where applicable, the associated economic costs and benefits of those decisions. The Independent Economic Analysis Board will fulfill this role by:
 - Interacting as an advisory committee with the Council regarding methods of economic analysis for alternative fish recovery measures and other issues, including economic costs and benefits, within the Council's statutory responsibilities
 - Assisting the Council to evaluate new analytical tools, and advising on the most appropriate study designs
 - Helping to identify sources of information and data
 - Performing specific tasks assigned by the Council on a cost reimbursement basis
 - Assisting in the review and interpretation of study results