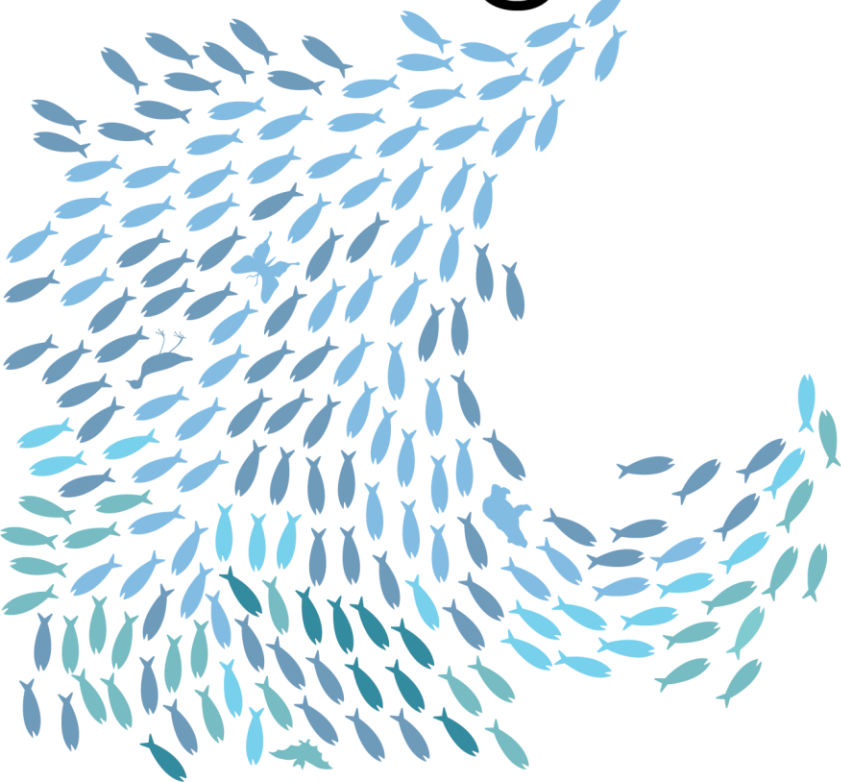


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Columbia River Basin Fish and Wildlife Program 2014



2020 Addendum
Part II

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**2020 Addendum to the
2014 Columbia River Basin Fish and Wildlife Program**

Part II. Program Implementation

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This is Part II of a projected two-part 2020 Addendum to the 2014 Columbia River Basin Fish and Wildlife Program. Part I remains under development and is slated for adoption later in 2020.

In February or March 2020, the Council will add to Part II a separate document that provides written explanations for how the Council addressed program amendment recommendations and responded to comments in development of Part II of the 2020 Program Addendum.

II. Program Implementation

In Part II the Council identifies a set of near-term priorities for implementation and funding.

As noted in the 2014 program, Bonneville and the other federal agencies have been funding and implementing a multitude of protection and mitigation projects and system operations consistent with the measures in the Council's program. Many of these actions have explicit multi-year funding and implementation commitments for the foreseeable future. Even for those that do not, many have been and will continue to be implemented as ongoing, multi-year mitigation and protection activities that are important to the program.

In the 2014 program, the Council also identified a set of recommended work areas as "emerging" priorities for the program and called on Bonneville to integrate these emerging priorities into the implementation of the program. Progress has been mixed so far, but most have had some degree of implementation, and some are substantially integrated. These emerging priorities remain, and implementation should continue.

Based on the Council's and others' experiences with implementation following the 2014 program, and on the recommendations for program amendments, the Council identified key issues about program implementation that need more attention and emphasis. One issue is the need to improve on how *program* performance (as compared to *project* performance) is assessed, reported on, and used to adaptively manage program implementation. That topic is addressed in Part I. What remains are a few implementation needs identified in Part II under the relevant program strategy.

Nothing that follows replaces or supersedes the provisions of the 2014 program, including the program's statements about priorities. Instead, the following is intended to reinforce those priorities with specific directions for implementation that might not occur otherwise.

The fact that the addendum focuses on a relatively small set of issues is an indication that for the most part the ongoing effort by Bonneville and others to implement program measures and priorities has been highly successful. Specific accomplishments from implementation of the 2014 program have been highlighted in the introduction along with the overarching challenge of climate change.

Climate Change

Implementer: Council and others

Consider the implications of climate change in all aspects of the program – program planning, project development, and project and program implementation and assessments. The Council will establish a standing science-policy forum on climate change to help the Council and others better understand the implications of climate change and better inform regional power and fish and wildlife decisions.

The recommendations highlight, in particular, the overarching challenge involved in implementing a program to improve environmental conditions for fish and wildlife while climate change is redefining those very same environmental characteristics. The Council has included indicators in Part I intended to track how climate change is affecting the environment and affecting the chances for success in program implementation in the face of environmental change.

With regard to program and project implementation, there is no one specific action to focus on to address climate change impacts. The need instead is to work across all aspects of the program to understand the implications of climate change and how to make the most effective decisions for fish and wildlife in that context. Following the program amendment process, the Council will consult with the state and federal fish and wildlife agencies, the region's Indian tribes, Bonneville, Bonneville customers, EPA and others about how best to establish and operate the standing science-policy forum on climate change.

Mitigation in Blocked Areas

Implementer: Bonneville

Implement a broad suite of actions to mitigate for the complete loss of anadromous fish and the losses to other fish and wildlife species in the Lake Roosevelt and Spokane River areas above Grand Coulee and Chief Joseph dams, as well as ongoing operational impacts. Increase significantly the level of mitigation for these losses without compromising the substantive protection and mitigation activities elsewhere in the basin.

This part of the basin has suffered the loss of anadromous fish and other fish and wildlife species directly due to hydropower development at a scale at least comparable to, and in most cases greater than, other areas in the basin. These losses have been severely under-addressed and under-mitigated through the Northwest Power Act, especially when compared with other areas and other entities in the basin.

Bonneville should begin a comprehensive effort over the next five years to intensify, expand, and then sustain the mitigation effort for this part of the basin. In developing this comprehensive effort, Bonneville should work with the Spokane Tribe of Indians and the tribe's list of mitigation [measures](#) recommended to the Council. Bonneville and the Spokane Tribe of Indians should consult with the Confederated Tribes of the Colville Reservation and Washington Department of Fish and Wildlife and coordinate with their ongoing work in the Lake Roosevelt area. The Council expects annual reports from Bonneville and the Spokane Tribe of Indians detailing progress made in this mitigation effort.

Implementer: Bonneville and others

Continue to make progress on the program's phased approach to evaluate the possibility of reintroducing anadromous fish above Grand Coulee and Chief Joseph dams.

Continuing to assess the feasibility of reintroducing anadromous fish is one measure in the suite of mitigation measures recommended by the Spokane Tribe of Indians (see previous measure). Continuing to make progress on this measure received substantial support in the amendment process from many governmental and non-governmental entities.

Trap and transport fisheries in blocked areas. In addition to the area behind Chief Joseph and Grand Coulee dams, there are other areas in the region blocked by both federally and non-federally-owned and operated hydroelectric dams. The Council's 2014 Program includes collaborative efforts to restore ceremonial fisheries in some portions of the Columbia River Basin through trap and transport operations. These efforts have provided unlisted hatchery salmon and steelhead to support these fisheries. The Council supports continuation of these and similar collaborative efforts aimed at enhancing ceremonial fisheries on hatchery-origin salmon and steelhead over the next five years.

Ocean

Implementer: Bonneville

Restore and sustain the funding and implementation of ocean research at the level recommended by the Council and supported by the ISRP.

Understanding how annual variations in ocean conditions affect Columbia River salmon and steelhead has been important to the program since the late 1990s, consistent with the science review amendment to the Northwest Power Act and the completion of the first comprehensive science reviews. In recent years, the annual information delivered by the program's ocean strategy and ocean research effort has become especially

important, with unusual ocean conditions resulting in increased ocean temperatures, changes in food sources, changing predator-prey relationships, and subsequent reductions in survival for many stocks. The connection between the data produced annually through trend monitoring and through addressing critical uncertainties provides the opportunity to further our understanding of the effect of ocean conditions on program performance. A further indication of the importance of this work is the growing interest and participation in the Council's Ocean Forum, in which information and ideas are shared among the ocean researchers and the fisheries management entities.

Monitoring and research actions that generate a basic, important level of information about the ocean are thus a core part of the program and need to be preserved. Over the last decade Bonneville has significantly reduced support for the ocean research program, resulting in a more than sixty percent reduction since 2011. The Council supports restoring funding for this element of the program to the level needed to address the following existing and new monitoring and research components, identified as critical by the Independent Scientific Review Panel in recent reviews and as discussed by the Ocean Forum:

- Continue to develop, use, and improve indicators for ocean conditions.
- Investigate and assess the correlations between salmon, their survival, and the ocean environment.
- Continue to develop forecasts of survival.
- Continue to investigate links between freshwater actions and conditions to responses by salmon in the ocean.
- Continue to investigate predator and prey relationships for salmon in the ocean.

Estuary

Implementer: Corps of Engineers

Repeat research implemented in 2016 and 2017 that sampled juvenile out-migrating salmon at several sites in the Lower Columbia River and estuary to assess benefits of estuarine use by interior salmon stocks.

Those initial years of study yielded important information (see [action effectiveness report](#)) regarding the benefits of estuary habitat restoration and habitat use by stock and variations in size and growth rate. This information is critical to connecting how salmon use the lower river and estuary to how salmon use the plume and nearshore ocean and has provided important growth and survival information that was previously unknown.

Mainstem Hydrosystem Flow and Passage Operations

Implementer: Corps of Engineers and Bureau of Reclamation

Implement the refinements in operations at Libby and Hungry Horse dams recommended by Montana Fish Wildlife and Parks (Montana FW&P) and the Kootenai Tribe of Idaho.

In the 2014 program, the Council supported continued investigations into possible refinements of the operations at Libby and Hungry Horse dams to further improve conditions for fish and wildlife. A decade of monitoring and analysis by Montana FW&P the Confederated Salish and Kootenai Tribes and the Kootenai Tribe of Idaho identified specific minor changes in the operations that will increase benefits for resident fish, wildlife, and ecological processes in the reservoirs and rivers downstream from Libby and Hungry Horse. These changes are not expected to adversely affect conditions for fish in the lower river. See [2018 Montana FW&P recommendations](#), [2018 Kootenai Tribe of Idaho recommendations \(Appendix A\)](#), and [2017 report on operations at Libby and Hungry Horse Dams](#).

Based on this information, the Corps of Engineers and Bureau of Reclamation should continue to work with the State of Montana, Confederated Salish and Kootenai Tribes, and Kootenai Tribe of Idaho, along with the State of Idaho, the U.S. Fish and Wildlife Service and NOAA Fisheries, to implement where feasible these refinements in operations to benefit fish and wildlife. These improvements include, but are not limited to, those found in the 2017 report as well as the following from Montana's and Kootenai Tribe's recommendations:

- Adjust summer draft targets more gradually when inflow forecasts are close to the driest 20-percentile threshold to smooth transitions as inflow forecasts vary.
- Use project-specific inflow forecasts to set draft and refill targets, rather than water supply forecasts for the mainstem Columbia River at The Dalles Dam.
- Adjust Storage Reservoir Diagrams to decrease reservoir drawdowns during dry water years.
- At Libby Dam integrate VarQ flood management with the White Sturgeon tiered-flow strategy.
- At Libby replace the variable end-of-December draft target with a fixed draft point (2420) every year.
- Investigate opportunities to use VarQ-like operations at other storage projects to help accommodate water variability among subbasins, improve the region's ability to monitor changing trends in snowpack, and better manage unforeseen rain storms and drought.

Predator Management

Implementers: Bonneville, Corps of Engineers, Bureau of Reclamation, NOAA Fisheries, state fish and wildlife agencies, and Columbia Basin Tribes

Adequately sustain and support ongoing efforts to reduce predation and, as described below, increase or revise those efforts as necessary.

Ecosystem-based approach. Predator management is requiring more program resources and efforts year by year. Everyone involved in the program, including the Council, Bonneville, the Corps of Engineers, the fish and wildlife agencies and tribes, and others, must work together to continue developing a more effective systemwide, ecosystem-based approach for assessing and addressing the impacts of fish, avian, and pinniped predation on salmon and steelhead and other fish species important to the program. It is imperative to scientifically advance the understanding of predation impacts. It is important to understand which predator management actions have the greatest effect on adult returns and SARs and retarget efforts on those actions for cost-effective predation management. In the interim, the Council has identified three predation management implementation issues that need particular attention:

Northern Pike. The Spokane Tribe of Indians, Confederated Tribes of the Colville Reservation, and Washington Department of Fish and Wildlife have developed a comprehensive Northern pike removal proposal that has been reviewed by the ISRP and recommended for implementation by the Council. Bonneville should fund and implement a Northern Pike removal effort based on that proposal, while also working with the relevant state agencies and tribes on a strategy to solicit and obtain contributions to this effort from other affected entities as this is an issue broader than a federal hydrosystem responsibility.

Pinniped predation. Pinniped predation continues to have a significant impact on Columbia basin salmon and steelhead. Recent federal legislation provides the opportunity for state and tribal managers to more effectively reduce predation by lethally removing sea lions in the Columbia River and tributaries that have returning adult ESA-listed salmon and steelhead. The federal agencies must reinforce and strengthen their cooperative partnerships with the states and tribes in support of this effort, including providing additional resources as needed to support the effort consistent with the intent of the 2018 sea lion legislation (Public Law [115-329](#)).

Avian predation. Predation by double-crested cormorants, Caspian terns, and several other bird species continues to have a significant impact on ESA-listed juvenile salmon and steelhead in the Columbia and Snake rivers. A recent trend has been reduced support for this effort. The action agencies (Bonneville, Corps of Engineers, Bureau of Reclamation) working with state and tribal partners, should continue to provide adequate funding to implement activities, both in the estuary and inland, to reduce avian predation on listed juvenile salmon and steelhead.

Sturgeon

Implementers: Corps of Engineers and Bonneville

Continue to make progress in developing and implementing the program’s comprehensive approach to White Sturgeon in the Columbia River Basin that involves assessing the factors limiting the recruitment and productivity of sturgeon and developing and implementing measures to address those factors.

The Council expects the federal agencies to continue to support the existing array of sturgeon work, including in the lower Columbia, the upper Columbia (part of the expanded mitigation effort in this area called for in the Mitigation in Blocked Areas section), and the Kootenai River. Two elements of the work that need particular attention or they may not occur:

- Evaluate whether alternative flow regimes might increase sturgeon productivity and recruitment in the lower Columbia below McNary Dam and if so, whether and how operations could be altered to provide those flow regimes without compromising protection for salmon, steelhead and lamprey.
- Increase sturgeon population monitoring between McNary and Priest Rapids dams and in the lower Snake River so that stock status is regularly reported for each area and pool.

Program Measures - Implementation Commitments

Fish and wildlife agencies and tribes and other entities recommended that the updated 2020 program recognize and incorporate as part of the fish and wildlife program implementation developments and commitments occurring after 2014. The actions committed to in these developments are part of the program as program measures. These developments include:

- 2018 Columbia Basin Fish Accord Extensions
- 2019 Columbia River System Biological Opinion and associated 2018 “Consultation Package,” including the “2019-2021 Spill Operation Agreement” of December 2018, and further developments in defining the goals and proposed actions for restoration planning in the Columbia Estuary
- Kalispel Tribe Accord implementation developments, including agreements and commitments regarding upstream passage of native resident fish at Albeni Falls Dam; habitat enhancements and operational changes at the same dam to improve water temperature conditions; and Northern Pike removal efforts in the Pend Oreille River

- Actions and performance standards included in the Mid-Columbia Public Utility District’s FERC licenses and associated habitat conservation plans and biological opinions

How the Program Is Implemented

Implementer: Bonneville

Implement the program through projects and manage the fish and wildlife program budget with due consideration to the following points. With these points, the Council intends to protect fish and wildlife even as Bonneville carefully manages its costs.

The Council understands Bonneville’s need to strengthen its financial health and manage costs carefully. In its 2018-2023 Strategic Plan, Bonneville focused on objectives to “[p]rioritize fish and wildlife investments based on biological effectiveness and mitigation for FCRPS impacts” and to, “manage fish and wildlife program costs at or below inflation, inclusive of new obligations and commitments.”

The Council, and all participants in the program, are committed to ensuring that projects deliver cost-effective benefits to fish and wildlife, and places increasing emphasis in this addendum toward assessing program performance to this end. The Council and Bonneville have also been working with project sponsors since 2014 on an asset management strategy to preserve the benefits to fish and wildlife realized by program investments. The Council intends to continue this work and expects Bonneville will continue to be a committed partner in that effort. The next step is to develop and implement a long-term funding strategy to protect those assets.

The Council and others also share, and generally support, Bonneville’s second objective about carefully managing its fish and wildlife program costs. At the same time, the Council provides the following six points for Bonneville, intended to preserve the work of the program required under the Act:

- **Implement emerging priorities.** The Council continues to expect Bonneville to implement the emerging priorities described in the 2014 program, including as sharpened in Part II of this addendum. The Council also maintains its perspective from the 2014 program that Bonneville will fund any new activities required to implement these priorities from program savings if possible, without compromising productive projects that address other needs and priorities identified in the program, and then with additional expenditures as necessary. The Council is confident that most, if not all, of the additional needs identified in the 2014 program, and reflected in this addendum, may be met within an overall

program-management and cost-management approach that prevents program costs from rising above the rate of inflation. The one likely exception may be the need for additional expenditures to fill the obvious gap in program implementation related to mitigation for losses above Grand Coulee Dam, for the reasons discussed in the mitigation in blocked areas section. Those additional expenditures can be balanced over time by judicious management of their ramp-up and finding further program efficiencies that do not affect substantive work.

- **Protect productive work during budgetary processes.** The Council understands that a great deal of Bonneville's responsibility to implement the program occurs outside of the Council and public's view. However, there are aspects of this effort that require greater Council involvement. Bonneville's internal efforts to manage program costs over the last few years have been aimed at reducing costs by finding program efficiencies without affecting substantive work. Program efficiency and cost containment are laudable objectives, but they can have policy implications that warrant Council participation, particularly when reductions result in projects that are implemented in a manner that no longer reflects the original proposal that underwent science and project review and received a Council funding recommendation based on that review. In the future, the Council, Bonneville and others will work to ensure that reductions in program expenditures are aimed at finding efficiencies without sacrificing productive work. Bonneville shall provide regular public information to the Council on project implementation, so that the Council can understand whether and how implementation differs from the work recommended after project review. In particular, Bonneville shall provide timely notice to the Council when Bonneville implementation decisions result in a material change in the scope, desired outcomes or budget of a project. The Council will review this information and assess whether further Council recommendations are warranted, including further ISRP review. The Council will develop with Bonneville a written agreement for sharing this information, to assist the Council in its project review, program development and program performance efforts.
- **Protect productive work even if using stable project budgets to help control the growth of program expenditures.** Fish and wildlife managers and project sponsors have raised concerns with the Council over cost management techniques that hold certain projects at flat budgets for years, even though some of the costs of implementation rise over that time. This fiscal discipline can remove inefficiencies in spending and is a legitimate tool for Bonneville to apply. However, over time, persisting with flat budgets begins to force project sponsors to make cuts that undermine the ability to perform the substantive work and meet project and program objectives. Bonneville should work with the Council and project sponsors to identify when project budgets need to increase to reflect the effects of inflation and preserve the substantive work.

- **Share the cost management efforts as equitably as possible over the entire program.** Bonneville's efforts to manage or reduce program costs can, at times, be imposed on a small proportion of the total range of projects funded to implement the program. The Council understands the value of the commitments made in the Columbia Basin Fish Accords and to that portion of the program that addresses the needs of ESA-listed fish. On the other hand, all the program's core protection and mitigation activities are of equal priority under the Northwest Power Act and need to be treated in program management equitably, especially if proposed funding cuts begin to threaten the substantive work and ability to meet project objectives. Bonneville must work diligently with the Council and the project sponsors to equitably share cost management efforts throughout the program.
- **Develop an improved public process to find cost savings in the existing budget.** The Council and Bonneville should work together on this effort. The Council expects that at least most of the savings will be reinvested in the program in a manner subject to Council recommendations.
- **Plan future implementation of the Fish and Wildlife Program.** The next few years will see the completion of the Columbia River System Operations EIS and a decision on a preferred alternative, new Biological Opinions, a need either to extend the Accords or in some other way adapt how the program is implemented, and other major developments. In this light, the Council will begin consultation soon with the state and federal fish and wildlife agencies and tribes and Bonneville about alternatives for future implementation of the fish and wildlife program.