

Northwest Power and Conservation Council 101

**and the
Columbia River Basin
Fish and Wildlife Program Amendment Process**



**Northwest Power and
Conservation Council**

Council Overview

Who we are

- Authorized by Congress through the Northwest Power Act in 1980 to give the region a greater voice in planning for energy and protecting fish and wildlife.
- Governors of Idaho, Montana, Oregon, and Washington each appoint two members to the Council
- The Act requires the interstate Council to develop, *with broad public participation, a regional power plan and a Columbia River Basin fish and wildlife program.*
- U.S. gov agencies that operate or regulate Columbia hydroelectric facilities have legal responsibilities under the Act towards the Council's plans and programs.



Council's Responsibilities under the Northwest Power Act of 1980

- Develop and periodically amend a *program to protect, mitigate and enhance fish and wildlife* affected by hydroelectric facilities in the Columbia River Basin, while assuring the Pacific Northwest an adequate, efficient, economical & reliable power supply
- Develop a *conservation and generation power plan* to add low-cost electrical energy resources and continue to assure the Pacific Northwest an adequate, efficient, economical & reliable power supply
- Inform and involve the *public*



Who we are



Why we are: The story of WPPSS

- Overestimated load forecasting led to proposal to build 5 nuclear power plants
- Massive cost overruns resulted in only 1 plant ever being built
- Financial disaster led to one of largest bond failures in US history + Bonneville debt service payments that remain today
- Congress decided an independent agency should forecast load and recommend resources + fish and wildlife mitigation for hydropower



Columbia Generating Station, the only operating nuclear plant in the Northwest. Credit: bpa.gov

What we do: Power planning

- Develop, via an extensive public process, a Power Plan to ensure an **adequate, efficient, economical, and reliable power supply** for the Pacific Northwest
- Components include load forecasting and analysis of available generating resources and conservation measures

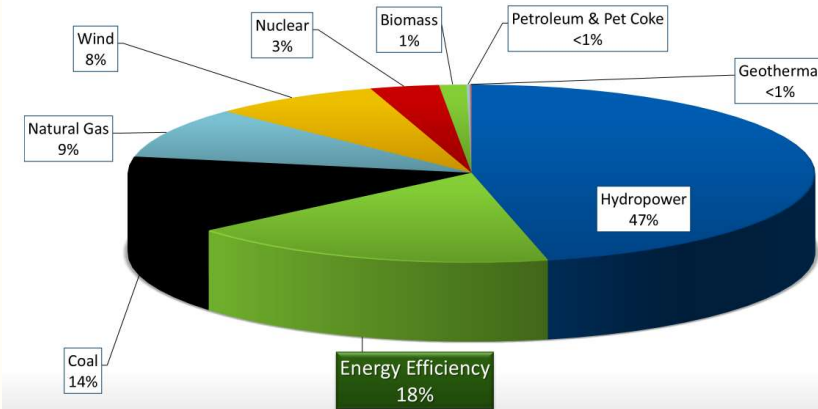


Power lines near Kalispell, MT

What we do: Power planning (cont'd)

- The Council's plan guides BPA's acquisition of cost-effective conservation and generating resources to add to the region's existing power supply. Plan also serves as an independent reference for the region's utilities, regulatory commissions and policymakers.
- Review and revise the Power Plan every five years
- Current plan is the 2021 Northwest Power Plan. Will begin the review of the Power Plan next year.

Energy Efficiency Has Been the Region's Second Largest Resource Since 2012



What we do: Columbia River Basin Fish & Wildlife Program

- Develop – also via an extensive public process – a program to **protect, mitigate and enhance** fish and wildlife affected by hydropower system in the Columbia River Basin
 - All hydropower, not only federal
 - All fish and wildlife impacted by hydropower; salmon and steelhead have special significance
- Updated every 5 years, based primarily on recommendations from state and federal fish and wildlife agencies, tribes, and others
- Program includes on-site (flow, passage) and off-site (habitat restoration, artificial production) measures
- Fish and Wildlife Program amendment process is completed first and becomes an element of the Power Plan.



Columbia River salmon

What we do: Columbia River Basin Fish & Wildlife Program (cont')

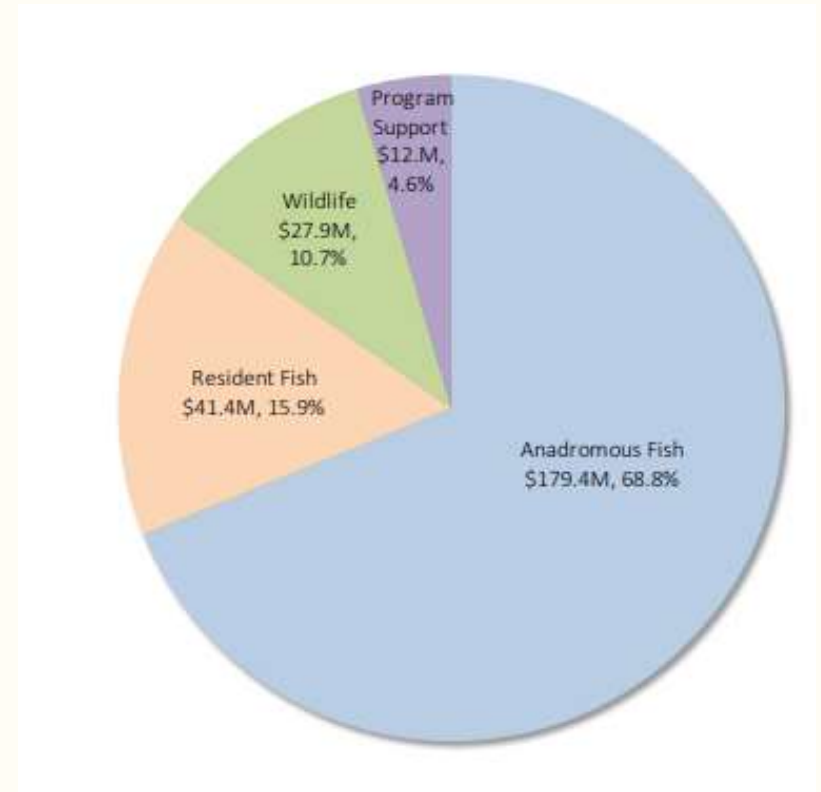
Fish and Wildlife Program implementation

- Bonneville is to “use its fund and authorities ... to protect, mitigate, and enhance fish and wildlife to the extent affected by the development and operation of any hydroelectric project of the Columbia River and its tributaries in a manner consistent with” the Council’s Fish and Wildlife Program. Northwest Power Act, Section 4h10(A)
- BPA and federal action agencies must take into account Council’s program in decision making “to the fullest extent practicable” while treating fish and wildlife equitably with other authorized purposes of the dams [4(h)(11)(A)]



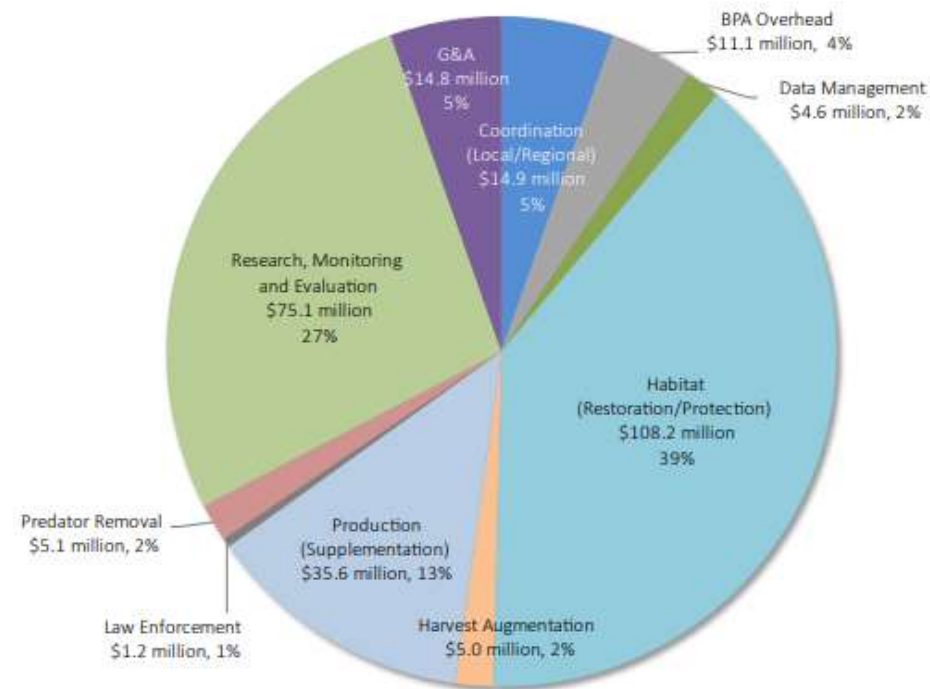
What we do: Columbia River Basin Fish & Wildlife Program (cont')

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- Additionally, BPA has foregone revenue from hydropower operations for fish passage



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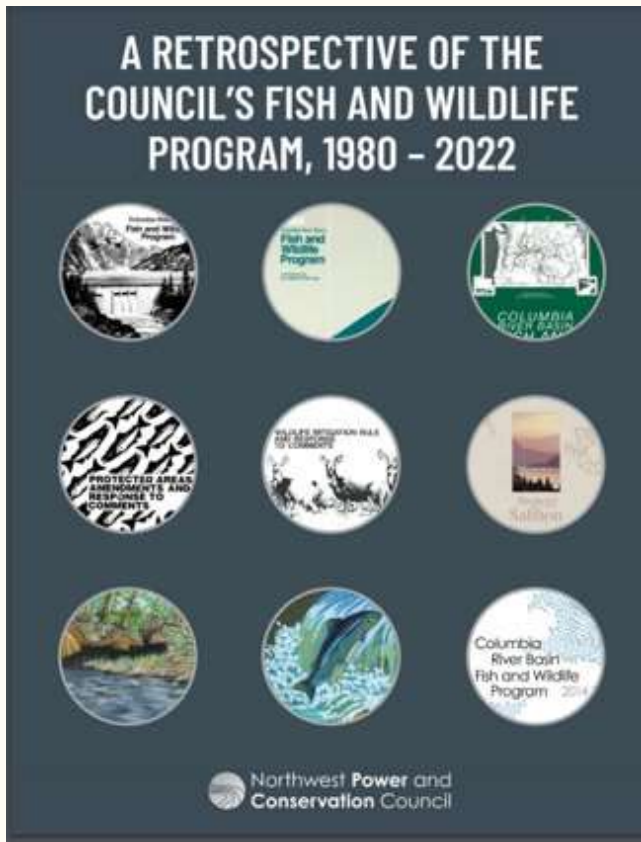


Why is it important?

Impacts of Hydrosystem on Fish and Wildlife

- Blocked 4,600 stream miles, or about 31% of previously accessible habitat for anadromous fish
- Fragmented habitat for anadromous and potamodromous species
- Altered sediment and nutrient transport
- Inundated habitat
- Changed the natural hydrograph dramatically, including impacts to flow, volume, velocity, water temperature and water quality
- Created conditions favorable for predation and invasive species
- Impacted food web

Why is it important?



- Represents a 40-year effort to protect, mitigate, and enhance fish, wildlife, and habitat affected by the hydrosystem in the Columbia Basin.
- It is one of the largest fish and wildlife mitigation efforts in the world.

Program and Regional Timeline

Pre- Power Act mitigation and events through 1970s

- Passing of environmental laws like NEPA, Clean Water Act, Endangered Species Act, Marine Mammal Protection Act
- Early developments in passage including fish ladders for adult salmon and steelhead and considerations for juvenile passage (screens, transportation, bypass)
- Hatcheries and fish production
- Mitchell Act (1938)
- Lower Snake River Compensation Plan (1976)

1980s

- Continued decline of wild salmon and steelhead
- Northwest Power Act (1980)
- Prioritize onsite mitigation and improve adult and juvenile fish passage
- Water budgets developed: a way to ensure flow for juvenile fish by designating and releasing a certain amount of water from storage and releasing it during juvenile migration
- Protection of 44,000 miles of river from new hydro development
- Set interim goal of 5 million adult returns
- Regional capacity building, including the development of regional forums
- Created measures foundational to subsequent Fish and Wildlife Programs

1990s

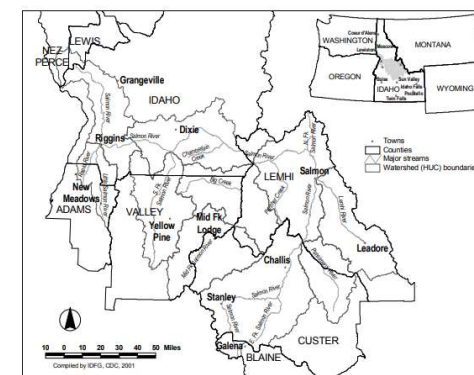
- ESA listings – salmon, steelhead, Kootenai River white sturgeon, bull trout, Oregon chub – resulted in a series of biological opinions (BiOps) that were either reflected in or incorporated measures from the Programs
- Expansion in size and complexity of Programs, including prioritizing certain production and habitat actions for salmon and steelhead
- Increased attention to resident fish and wildlife
- Growing emphasis on habitat restoration and protection
- Independent Scientific Review Panel (ISRP) and Independent Science Advisory Board (ISAB) created

2000s

- New scientific framework implemented, connecting a vision to goals, objectives, strategies, principles, and measures, with an emphasis on ecosystem function and habitat actions
- Recognition of different geographic scales for implementation: basinwide, ecological provinces, and subbasins
- Development and adoption of mainstem plan
- Development and adoption of subbasin plans, with assessments of limiting factors and associated management plans created on a more localized basis
- Call for research on marine mortality vs. freshwater mortality, and for a better understanding of survival rates in the estuary

Salmon Subbasin Management Plan

May 2004



2010s

- Impacts from significant climate events, including extreme marine heat waves
- Increased need to consider the effects of climate change
- New program strategies focused on sturgeon, lamprey, eulachon, burbot
- Increased mitigation effort and funding for blocked areas, including phased approach to evaluating reintroduction above Chief Joseph and Grand Coulee
- Increased emphasis on managing salmon and steelhead predation
- Invasive species measures call for detecting and preventing zebra and quagga mussels
- Operational changes at Libby and Hungry Horse dams
- Creation of the Ocean and Plume Science and Management Forum
- Developed and revised program goals, objectives, and performance indicators

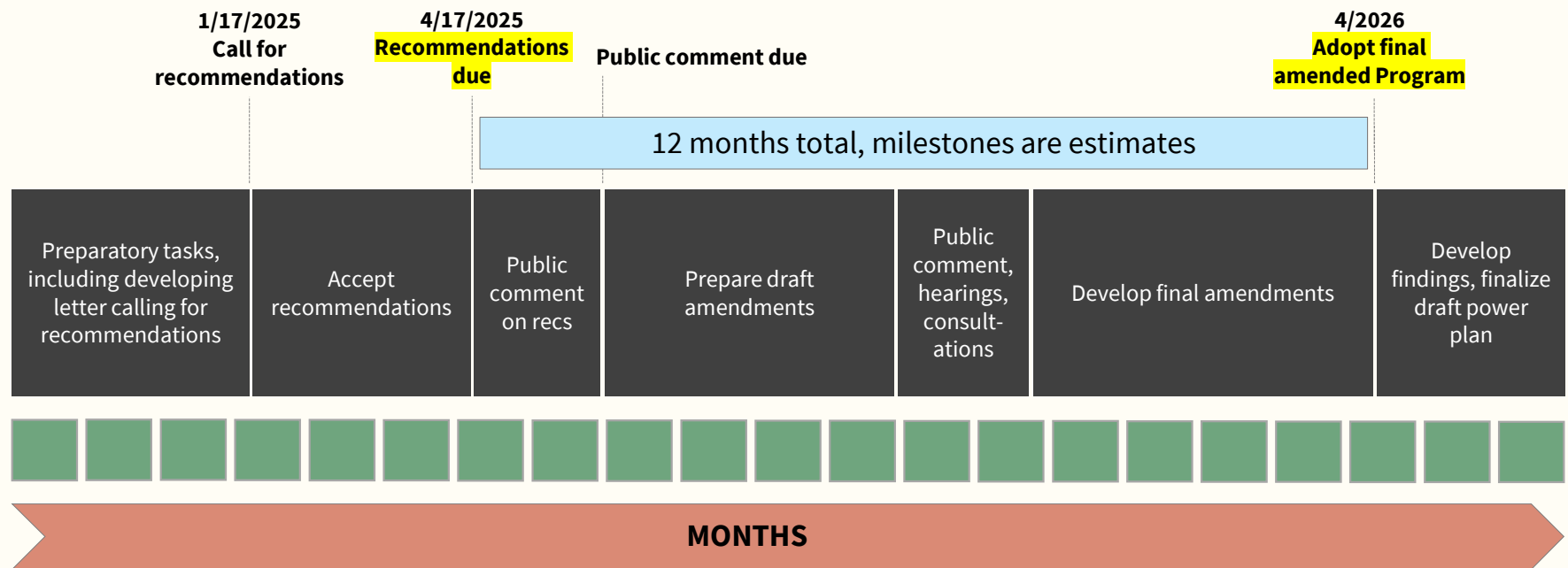


Fish & Wildlife Program Amendment Process

Overview of Fish and Wildlife Program Amendment steps

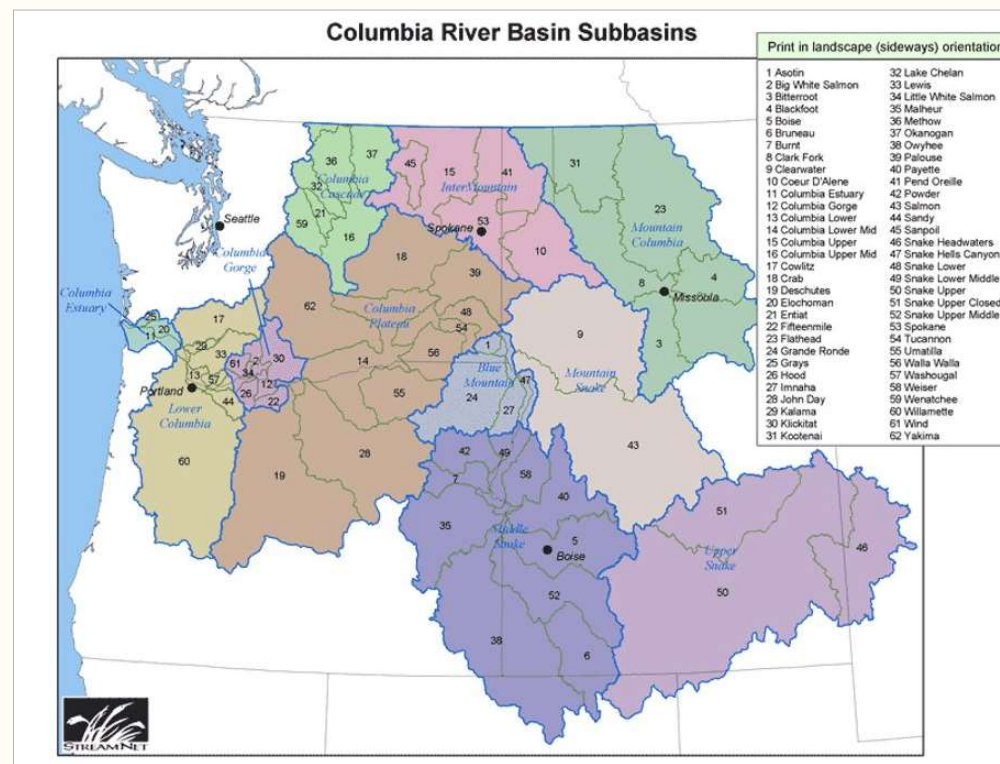
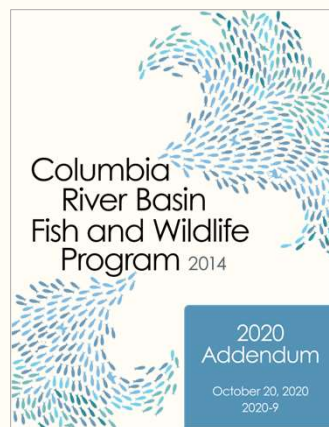
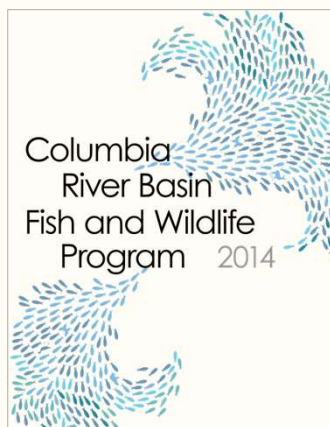


Estimated timeline for Fish and Wildlife Program Amendment Process



Current Program: 2014 + 2020 Addendum

- Measures grouped into 23 strategies and 59 subbasin plan management plans
- Goals and objectives reviewed and revised in 2020 Addendum



Current Program: Program Strategies

- **Ecosystem function**

- Habitat
- Strongholds
- Non-native and invasive species
- Predator management
- Protected areas
- Water quality
- Climate change
- Mainstem flow and passage
- Estuary
- Plume and nearshore ocean
- Wildlife mitigation

- **Artificial production**

- **Other strategies**

- Wild fish
- Use of hatcheries for reintroduction
- Anadromous fish mitigation in blocked areas
- Resident fish mitigation
- Sturgeon
- Lamprey
- Eulachon
- Public engagement

The Council identified seven emerging priority areas in its 2014 Program

1. Support long-term maintenance of program assets
2. 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. (a) expanded management of predators; (b) mapping and determining hotspots for toxic contaminants; and (c) aggressively addressing non-native and invasive species
4. Investigate blocked area mitigation options through reintroduction, passage and habitat improvement, and implement if warranted
5. Additional sturgeon and lamprey measures (passage and research)
6. Update the subbasin plans most in need of updates
7. Improve floodplain habitats

2020 Addendum: Near-term priorities

1. Climate change: Consider the implications of climate change
2. Mitigation in blocked areas: ...above Grand Coulee and Chief Joseph dams, as well as ongoing operational impacts.
3. Ocean: Restore and sustain the funding and implementation of ocean research at the level recommended by the Council
4. Estuary: Repeat research implemented in 2016 and 2017 to assess benefits of estuarine use by interior salmon stocks.
5. Mainstem hydrosystem flow and passage operations: Implement the refinements in operations at Libby and Hungry Horse dams
6. Predator management: Adequately sustain and support ongoing efforts to reduce predation and, as described below
7. Sturgeon: Continue to make progress in developing and implementing the program's comprehensive approach to White Sturgeon

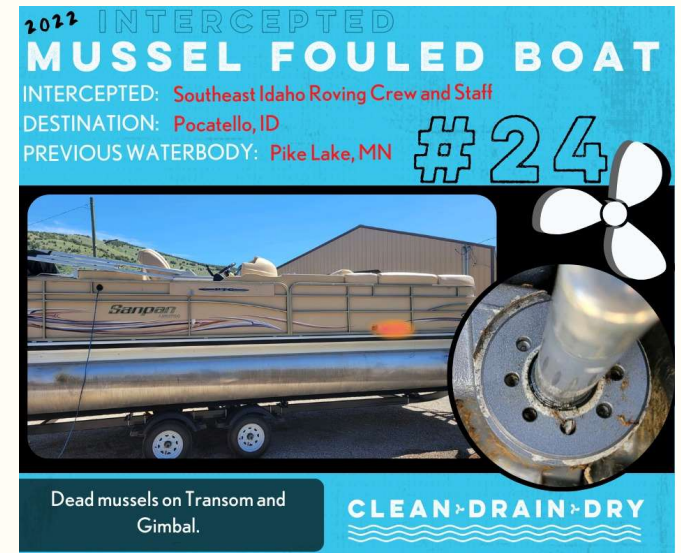
Examples



- Asset Management-
 - 2014 FWL Program identified “Long-term maintenance of the assets that have been created by prior program investments” as highest emerging need.
 - In response, an Asset Management Strategic Plan was developed with BPA to address non-recurring maintenance needs for hatcheries, fish screens, and mitigation lands to ensure the longevity and integrity of past investments.
 - Inventories and facility assessments identified non-recurring investment needs for hatcheries and fish screens.
 - Funding to address need increased from cost savings, to \$500k annually to \$2.7 million
 - FY22 RDC allocated \$25 million for hatcheries
 - FY23 RDC will allocate \$19 million to Fish Screen programs

Examples

- Invasive species
 - 2014 Program added measures to monitor, prevent, control, remove, and eradicate non-native and invasive species with emphasis on zebra and quagga mussels
 - Council worked with USACE to fund additional detection stations
 - Facilitated early detection of quagga mussels and rapid response plan on Snake River in 2023



**STOP AQUATIC
HITCHHIKERS!™**

Be A Good Steward.
Clean. Drain. Dry.

Examples






- Wildlife Settlement Agreements
 - Promoted as an effective tool for defining BPA mitigation obligation and assigning sufficient funding to acquire parcels
 - State of ID recently achieved mitigation goal under their agreement with plan for ongoing stewardship
 - 11,000 acres publicly accessible wildlife habitat
 - Permanently settles obligation for BPA/ rate payers



Program Tracker and Strategy Performance Indicators (SPIs)

Performance indicators by Program goal and objective

View goals, objectives and indicators by Program category below, or jump to specific performance indicators under each category.

GOALS AND OBJECTIVES:					
	<u>ANADROMOUS SALMON AND STEELHEAD</u>	<u>OTHER NATIVE AQUATIC SPECIES</u>	<u>WILDLIFE</u>	<u>ECOLOGY</u>	<u>COMMUNICATION, ASSESSMENT, COORDINATION</u>
PERFORMANCE INDICATORS:	<u>Mainstem hydrosystem flow and passage</u> <u>Fish propagation and hatchery</u> <u>Wild fish</u> <u>Anadromous fish in blocked areas</u> <u>Plume and nearshore ocean</u>	<u>White sturgeon</u> <u>Pacific lamprey</u> <u>Eulachon</u> <u>Resident fish</u> <u>Predator management</u> <u>Mainstem hydrosystem flow and passage</u> <u>Fish propagation and hatchery</u>	<u>Wildlife mitigation</u>	<u>Habitat</u> <u>Water quality</u> <u>Mainstem hydrosystem flow and passage</u> <u>Predator management</u> <u>Non-native and invasive species</u> <u>Estuary</u>	<u>Public engagement</u> <u>Protected areas and hydroelectric development/licensing</u> <u>Resident fish</u>

Program Retrospective + Categorical Assessments



Resources and examples for recommendations:

General guidelines:

- Concise
- Targeted
- Consensus between parties can be helpful but is not required
- Groups are welcome to submit same or very similar ideas as individual agencies

Example links:

2014 Program: [Council Staff Draft Summaries of Issues and Recommendations](#)

2020 Addendum: [2018 recommendations and comments on the 2014 F&W Program](#)

[2014/2020 Program Landing page](#):

Right side of page has links to past programs, and the amendment PROCESS (key word) links for 2014/2020. Under "[process](#)" pages you will find recommendation examples, comments on recommendations, etc.

Submitting recommendations and comments

- Website is available for submissions after Council takes formal action to request recommendations (nwcouncil.org/amend)
- Includes all pertinent information, resources and instructions
- Written notification to state and federal fish and wildlife agencies and basin tribes and a few others
- Emailed notification to large mailing list





Columbia River Basin Fish and Wildlife Program

The Council is preparing to accept
recommendations for amendments to its Fish
and Wildlife Program in January 2025.

About the amendment process

The Council amends its Columbia River Basin Fish and Wildlife Program every five years based largely on recommendations from the federal and state fish and wildlife agencies and the region's Indian tribes. Other federal and state agencies, the Bonneville utility customers and other regional utilities, other river users, local governments, and the general public may also submit program amendment recommendations that the Council must consider.

The current version of the Program is the [2014 Program](#) with a [2020 Addendum](#), plus more than 50 separate [subbasin plans](#).

Important dates

- **January 17:** Solicitation for recommendations (read the Council's full letter to the region for more background and topics to consider)
- **April 17:** Close of recommendation period, open comment period
- **May 30:** Close of comment period

More resources

[2014 Program](#)

[2020 Addendum](#)

Retrospective

- [Full version](#)
- [2 pager](#)
- [August 2022 presentation \(slides\)](#)
- [September 2022 presentation \(slides\)](#)

Goals and Objectives

- [December 2024 presentation \(video, slides\)](#)
- [Documentation \(coming\)](#)

[Program Tracker](#)

[ISAB 2024 F&W Program Review](#)

Categorical Assessments:

Hydrosystem

- [September 2024 presentation \(video, slides\)](#)
- [October 2023 presentation \(video, slides\)](#)
- [Documentation \(coming\)](#)

Artificial Production

- [October 2024 presentation \(video, slides\)](#)
- [Documentation \(coming\)](#)
- [Hatcheries and AP resources](#)

Habitat

- [November 2024 presentation \(video, slides\)](#)
- [Documentation \(coming\)](#)

Make a recommendation

Recommendations for Program amendments are being accepted through **April 17**. If specific sections are being commented on, please reference those sections by name, page number or URL. Recommendations will be collected and published here soon after the deadline for submission.

[SUBMIT A RECOMMENDATION](#)

Contacts

Contact [Patty O'Toole](#) with process questions or [Eric Schrepel](#) with any technical/form submission questions.

<https://www.nwcouncil.org/fish-and-wildlife/program-amendments/>



Contact us any time

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Questions?

Examples

- Reintroduction
 - 2000 Program, at the recommendation of Upper Columbia tribes, called for consideration of reintroduction to blocked areas
 - 2014 Program called for formal, phased study of feasibility of reintroduction in the Upper Columbia
 - 2022 ISAB review of the plan (P2IP)
 - 2023 US Gov and UCUT sign 20-year agreement to implement P2IP with \$200m over 20 years from BPA + additional \$100m from other agencies

