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April 5, 2022

**DECISION MEMORANDUM**

**TO: Council members**

**FROM: Staff**

**SUBJECT: Decision on Anadromous Fish Habitat and Hatchery project review**

**PROPOSED ACTION:** Council decision on the Anadromous Fish Habitat and Hatchery Project Review Final Recommendations: Project Implementation and Policy Issues as recommended by the Fish and Wildlife Committee

**SIGNIFICANCE:** Section 4(h)(10)(A) of the Northwest Power Act directs the Bonneville Power Administration to use its fund and authorities to protect, mitigate and enhance fish and wildlife in a manner consistent with the Council's Fish and Wildlife Program. Pursuant to Section 4(h)(10)(D), the Independent Scientific Review Panel (ISRP) reviews projects proposed to be funded and makes recommendations to the Council. After consideration of the ISRP's recommendations and any public comments received, the Council is responsible for making final recommendations to Bonneville of projects to be funded through Bonneville's fish and wildlife budget to implement the Council's Fish and Wildlife Program.

## **BUDGETARY/ECONOMIC IMPACTS**

The annual funding for this set of projects is approximately \$140,154,037, based on Bonneville's 2021 Start of Year (SOY) budget. Please see the Project Recommendation Summary Spreadsheet (Part 3, attached) for details regarding budgets as it relates to the requested and SOY budgets.

### **Recommendations in three parts:**

Part 1: Background, Review Summary, and Council Considerations and Expectations

Part 2: Policy Issues and Recommendations

Part 3: Project Recommendation Summary Spreadsheet

## **Part 1: Background, Review Summary, and Council Considerations and Expectations**

### **Background**

The Northwest Power Act directs the Council to review projects proposed to be funded by Bonneville to implement the Council's Fish and Wildlife Program (Program). The Council undertakes this review with the assistance of the Independent Scientific Review Panel (ISRP). The Anadromous Fish Habitat and Hatchery (AFHH) Project Review is the fourth and last set of reviews of Program funded projects that has been conducted over the past five years. There are 124 projects that are part of this review. These projects include hatchery operation and maintenance (O&M), fish screen O&M, habitat implementation and the monitoring and evaluation activities associated with these project types.

As with the other reviews in this cycle, the AFHH projects are ongoing projects that implement measures in the Council's program. The project-specific and programmatic recommendations included here represent the Council's views as to what it means to implement these measures consistent with the Program through at least the next review cycle.

The Council would like to recognize the excellent work underway in the projects in this review. Mitigation efforts to meet the obligations under the Northwest Power Act include these anadromous fish habitat and hatchery projects. The Council observed the impressive range of accomplishments reported by projects in this review. The projects represent a complex array of habitat restoration activities and the latest in fish production techniques, integrated with monitoring and evaluation efforts.

These projects report a total confirmed cost share of approximately \$463 million leveraged over time. The Council would like to thank everyone for their efforts in this review including the project sponsors and the region's fisheries managers, the Bonneville Power Administration, and the Independent Scientific Review Panel.

## Review Summary

As with the previous review in this review cycle, specifically the Resident Fish and Sturgeon Project Review, the impact of Covid-19 delayed the launch of the AFHH review and additional time was added to several of the steps in the review process to assist the project sponsors and the ISRP. The AFHH Project Review began in February 2021, with the release of the information packet to sponsors. The information packet included background, schedule, and instructions for the review. Review materials were then due from sponsors on May 3, 2021. Following submission of review materials, presentations were sequenced over several weeks in June and July 2021. The ISRP and Council staff did not hold field visits to the project sites for this review.

The ISRP reviewed project [proposals](#), annual reports, project publications and past ISRP reviews, and completed its preliminary report ([ISRP document 2021-08](#)) on September 24, 2021. The ISRP requested responses for 37 project proposals, and responses were due on November 22, 2021. Public comment on the ISRP reports began September 24, 2021, at the completion of the preliminary ISRP report. The ISRP's Final Report ([ISRP document 2022 - 01](#)) was completed on February 10, 2022. The ISRP's recommendations are based on a determination that the projects are based on sound scientific principles; benefit fish and wildlife; and have defined objectives and outcomes with provisions for monitoring and evaluation of results. Public comment closed March 10, 2022, and the Council received [comments](#) on the ISRP's reports from Kittitas County Department of Public Works, Kittitas Reclamation District, WA Department of Fish and Wildlife, Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, Oregon Department of Fish and Wildlife, Public Power Council, Upper Columbia Salmon Recovery Board, and Trout Unlimited. In addition, correspondence between the Council and project Sponsors occurred as part of this review.

## Council Considerations and Expectations

The Council fully considered the recommendations of the ISRP in developing its final recommendations. Additionally, the comments received on the ISRP's Final Report were taken into consideration as the Council developed its final recommendations. Collectively, the work recommended is to implement the Program.

The Council believes it is essential that all applicable implementation and project managers in Bonneville's Fish and Wildlife Division review the ISRP programmatic comments and final project-specific comments in addition to the Council's final recommendations. The Bonneville managers should work with the project sponsors to address the Council's recommendations and, to the extent appropriate, incorporate ISRP comments as reflected in Part 3.

Consistent with the Northwest Power Act, in making its recommendations, the Council considered the "impact of ocean conditions on fish and wildlife populations" to the extent

appropriate for this particular review and determined “whether the projects employ cost-effective measures to achieve program objectives,” as detailed below.

*Ocean conditions:*

The Northwest Power Act requires that the Council, in making its final recommendations, consider “the impact of ocean conditions on fish and wildlife populations.” While Congress provided no other guidance as to the meaning of this consideration, the Council’s Program recognizes the ocean environment as an integral component of the Columbia River ecosystem and acknowledges the importance of understanding the conditions anadromous fish face in the ocean to help the region identify factors most critical to survival, growth, and viability. Measures in the Program support monitoring the ocean conditions and in-river restoration actions to determine those actions of greatest benefit, to separate the effects of ocean-related mortality from that caused in the freshwater part of the life cycle, and to assess salmonid survival and evaluate restoration potential given variable ocean conditions. In the 2020 Addendum, the Council also called upon Bonneville to restore and sustain the funding and implementation of ocean research at the level recommended by the Council and supported by the ISRP to ensure actions that generate information about the ocean are preserved as a core part of the Program. The Program also supports the Ocean and Plume Research and Management Forum to continue regional coordination on ocean research and encourage coordination between ocean researchers and agencies and tribes to explore opportunities to improve in river management activities based on information about ocean conditions. Therefore, taken together, the Council acting under the Program can consider ocean conditions in general and recommend funding for projects that support these measures. While we do not yet have sufficient enough information to directly match habitat and hatchery actions to ocean conditions and identify those of the greatest benefit, the Council’s recommendation to continue implementation of the projects in this review is based on a reasoned premise linking these projects to ultimate improvements in restoring and maintaining stable healthy populations of anadromous species affected by the hydrosystem, taking into account variable ocean conditions. Further, a focus of this review and a policy issue identified below, is the development of a systematic, coordinated habitat RM&E strategy that will support the evaluation of project outcomes and inform future decision-making, which may provide additional information that is helpful to better understand the effects of ocean conditions and opportunities to assess in-river restoration actions.

*Cost-effectiveness:*

In making its final recommendations, the Act also requires that the Council determine whether the projects employ cost-effective measures to achieve Program objectives. As with the ocean condition consideration, Congress did not provide any further explanation or guidance as to the meaning of this provision. However, the provision itself does not require the use of a single measure of biological effectiveness as a basis for comparison, nor the use of strictly quantitative analysis. Further, the wording of the provision calls for a cost-effectiveness analysis only within projects, not necessarily a cost effectiveness analysis among and between projects. Based on the Council’s work over the years to understand and develop an approach to determine whether any

particular project employs the most cost-effective of possible alternative methods to meet its objectives, the Council has found that cost-effectiveness review drives toward procedures for review, selection, and management that emphasize efficiency and accountability in meeting project objectives. To improve the likelihood that projects recommended for funding are those that employ cost-effective measures to the greatest degree, the Council has identified several strategies, which include: a review by the ISRP; clarifying, specifying, and quantifying program objectives as much as possible; improving the quality and comparability of project cost information; developing other elements of project review that also provide accountability benefits; and assessing the effectiveness and evaluating the outcomes of existing projects over time. Further, in the 2020 Addendum, the Council focused on how the program is implemented and how we assess and report on program performance, noting that near term program requirements are mostly about refining how the program is implemented; defining near-term and evolving priorities for implementation; evaluating program performance; and using what we learn about performance to improve implementation in a cost-effective manner. Specifically, the Council reiterated its commitment to ensuring that projects deliver cost-effective benefits to fish and wildlife and assessing program performance to this end. The Council acted consistent with these Program provisions and its prior strategies in making its recommendations in this review. In particular, as detailed below, the Council considered and relied on the ISRP review, highlighted certain project conditions aligning the project outcomes with the measures identified in the Program, and recommended development of a habitat RM&E strategy to better understand and report on the effectiveness of projects over time. Additionally, as an overarching policy item, the Council recommends staff assess its project review processes and consider changes, which could be an opportunity to identify and emphasize efficiencies and effectiveness.

*Duration of recommendations:*

The Council's recommendations are applicable to projects beginning in Fiscal Year (FY) 2023 and remain applicable through the next review. Any exceptions to the Council-recommended multi-year funding for projects are described in the project-specific recommendations on the attached Project Recommendation Summary Spreadsheet (Part 3).

*Funding:*

The general guidance for this review is to use Fiscal Year 2021 project budget as the sideboards for the work proposed. This aligns with Bonneville's 2018 – 2023 Strategic Plan, issued in January 2018, which states Bonneville's intent to manage Fish and Wildlife Program costs at or below the rate of inflation, inclusive of any new obligations. It is important to note that the mitigation occurring under the Fish and Wildlife Program is facing considerable pressure from being managed to meet the Bonneville strategic plan objectives. Individual projects held at or often below the rate of inflation struggle to meet their objectives, while the total available budget for Fish and Wildlife Program implementation is commonly underspent. Since 2004, the unspent funds have averaged nearly \$8.8 million per year, yet those funds are not available to implement the Program

in subsequent years. The annual non-accord savings are absorbed into Bonneville's general fund and are not accessible for fish and wildlife project implementation.

### *Agreements and Accord Project Funding*

The Council recognizes the financial arrangement of the agreements and accords that exist in the Columbia River Basin. The Council understands that Accord parties can shift funding within their accords between projects and between years to meet seasonal needs, expenses, priorities, etc. As with all Program projects, Bonneville has a SOY budget for each accord and agreement-funded project for fiscal year 2021 and beyond, and the working budget may shift from Bonneville's SOY.

The Council also stated in the Program that it expects that cost management efforts are shared 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 cost-management techniques threaten the substantive work and ability to meet project objectives.

## **Part 2: Policy Issues and Recommendations**

Part 2 identifies a subset of cross-cutting policy issues associated with this group of projects and the Program. These recommendations may be based on the ISRP programmatic comments identified in its final report or may address an issue that has been raised in the past and remains relevant for this review to address broader policy and issues that underlie or affect project recommendations and the Program.

The Council's policy issues and recommendations outlined below are to be afforded the same weight as the project-specific recommendations detailed in Parts 3.

### **I.) Core Program strategy recommendations**

#### **a.) Habitat RM&E Strategy**

It is critical for the Program that appropriate monitoring and evaluation is conducted to assess whether the habitat actions are resulting in the intended environmental and biological improvements. This information is also needed to help guide future habitat project implementation. For over a decade the Council and the ISRP have been calling for a systematic, coordinated approach to habitat research, monitoring and evaluation (RM&E) across the basin and development of an analytical framework for habitat RM&E. Several previous ISRP reviews and numerous Council decision documents have identified this need and called for a framework or strategy. In this review, the ISRP again noted the lack of an "...integrated approach for comprehensive assessment of restoration actions and benefits and risks to fish and wildlife". In their programmatic comments, they recommended that the Fish and Wildlife Program create a hierarchical monitoring and evaluation framework for evaluating the Program's outcomes across local project sites, river reaches, watersheds, subbasins, and the Columbia River Basin.

Over the years, the Council has engaged with the federal agencies and project managers in efforts to develop a habitat RM&E strategy, but to date, that effort has not been successful. Currently there is a reinvigorated process to develop such a strategy, specifically for the anadromous portion of the basin. It is composed of technical experts from federal, state and tribal entities and the Council. The group is meeting regularly, with a target date of August for completing the strategy. The Council believes very strongly that this group must develop a systematic, coordinated strategy that is detailed enough to provide clear guidance on monitoring habitat actions to describe outcomes and inform future decision-making. In the future, a similar strategy is needed to encompass the resident portion of the basin.

While that work continues, in this review, the ISRP identified the need for comprehensive information on the RM&E actions and the sharing of data and information among projects to understand linkages between implementation and monitoring. To address this, as well as the lack of a comprehensive RM&E framework, the ISRP requested that project sponsors summarize the linkages between implementation and monitoring projects. They identified lead and supporting projects in

specific areas and asked them to develop a “table or matrix to identify what is being monitored for each implementation project and where and when the monitoring occurs (M&E matrix)”.

For this review, the Council decided not to require the completion of the M&E matrix for their final decision due to the limited time and resources available to the project sponsors. The Council supports the concept of M&E matrices and believes they can be a useful tool in understanding how monitoring data are being used to evaluate actions and inform future project implementation in specific areas. While understanding the linkages among projects and between implementation and M&E projects is useful and informative, it does not replace the need for a comprehensive RM&E strategy. Rather, the matrix would be more informative if it were fit within the context of a comprehensive, coordinated RM&E strategy.

Having a comprehensive habitat RM&E strategy will be critical to provide the guidance needed for future science reviews. We would like to see the strategy used by the ISRP as a lens to evaluate the sufficiency of RM&E across all habitat projects.

Recommendations:

- Bonneville, fish and wildlife managers and the Council should complete an integrated, comprehensive habitat RM&E strategy that provides clear guidance on monitoring habitat actions to describe outcomes and inform future decision-making.
- The Council should work with project sponsors and Bonneville to further develop the habitat M&E matrices and should consider how to incorporate matrix development and refinement into future project reviews.

## **b.) Hatchery and related activities**

Similar to the history as outlined in the habitat RM&E strategy (see Policy Issue 1.a.), the hatchery activities of this review also have a [long history](#) of analysis, reviews and development.

Previous Council recommendations (e.g., 2011 Research, Monitoring and Evaluation and Artificial Production Categorical Review<sup>1</sup>, 2018 Research Review, and the 2019 Mainstem and Program Support Review) called for the federal, state and tribal agencies to design and implement a regionally coordinated approach to monitor and evaluate the effectiveness and impact of artificial production. It was envisioned that a regionally coordinated approach would build on previous efforts and develop reporting metrics to be consistently used by hatchery managers. The development of a regional coordinated approach for evaluating and reporting on hatchery efforts in the Basin continues to

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<sup>1</sup> The Council decision supported Project # 2020-085-00, *Columbia River Hatchery Effects Evaluation Team (CRHEET)*. In late 2011, NOAA and Bonneville deferred this effort in developing a regionally coordinated approach for evaluating and reporting on hatchery efforts in the Basin.



evolve. In an effort to support the needs of the basin on regional coordination related to hatcheries, discussions at the Regional Coordination Forum (RCF) meetings, of February and August 2019, led to support for the formation of a [hatchery workgroup](#).

The workgroup, currently facilitated and supported by Council and staff, works to support a regional collaborative and communicative effort to provide an updated understanding of progress that has occurred over the past 40-plus years with respect to mitigation and conservation objectives of hatcheries. The workgroup aims to assist in guiding regionally coordinated approaches to hatchery needs and information into the future. The workgroup developed a [mission statement](#) and prioritized the need to foster better communication to the public, researchers, managers, and decision-makers, and to tell an updated story of Columbia River Basin fish hatcheries. Following the development of the mission statement, the workgroup determined that the story of Columbia Basin fish hatcheries needs to be reported in an integrated, clear manner that explains the purpose of hatcheries and improvements that have been made to meet mitigation and conservation needs. The group supported the use of web based [Story Maps and handouts](#) to tell the story of fish hatcheries and provide communication tools for the region. As part of this effort, tracking and reporting on hatchery information at the basin-wide scale is a critical component toward achieving regional hatchery coordination objectives (i.e., inventory of hatchery facilities, funding and mitigation programs, production goals and objectives, identifying unmet needs, etc.). Continuing to support these regional efforts will benefit the Council's work to assess Program Performance (Part 1 of the Fish and Wildlife Program 2020 Addendum: Program Goals, Objectives and Strategy Performance Indicators), and to report on progress toward meeting mitigation requirements for the Program while recognizing that these hatchery programs also play an important role in contributing to fishery and conservation objectives in the Basin.

The hatchery production programs and facilities, that are supported through many of the projects in this review, are authorized and required to mitigate impacts to fish due to construction and operation of hydroelectric facilities on the Columbia River and its tributaries. While these hatchery production commitments have been made under the Council's Fish and Wildlife Program, these commitments are also made by federal, state, and tribal governments to implement propagation actions consistent with the Northwest Power Act and Indian treaty rights and other laws, including commitments associated with on-going court cases such as *United States v. Oregon*. These hatchery programs have an extensive review history aimed to improve the projects and programs over time. It is important to also note that the artificial production activities supported by the Fish and Wildlife Program addressed in this review operate consistent with the requirements under the Endangered Species Act and are well managed and coordinated amongst the federal, state and tribal agencies. These points contribute to the favorable ISRP review of the projects in this category, as the ISRP found the projects are well designed with the ability to report data important to the implementation of regional artificial production goals and objectives.

The artificial production activities and facilities in the Fish and Wildlife Program, and reviewed here, are one component of the comprehensive suite of hatchery production programs and facilities in the Basin which are funded by multiple entities to serve multiple mitigation requirements. While several separate hatchery mitigation requirements exist (including the Northwest Power Act), the Basin's hatchery facilities and programs are intertwined. As one example of this connectedness, the Program's Grande Ronde Supplementation program is supported by a non-Program hatchery facility (Lookingglass Hatchery authorized by the Lower Snake River Compensation Plan). Due the interconnected nature of hatchery production in the Basin, regional coordination across all funding programs is critical in addressing mitigation requirements, including the need to support adequate funding for hatchery programs and facilities. The Program's hatchery facilities and artificial production activities require adequate funding to support hatchery production and maintain infrastructure as described in the Asset Management Strategic Plan (also see Policy Issue II.a. and II.b.).

It's important to continue the regional efforts that aim to better communicate the purpose and need for hatcheries, make progress toward a coordinated monitoring and evaluation approach, report on regional hatchery mitigation and conservation efforts, and support adequate funding to address mitigation requirements that contribute to both fishery and conservation objectives in the Basin.

Recommendations:

- Council should continue to convene the informal hatchery workgroup to compile hatchery information to foster better communication and understanding for the public, and also among researchers, managers, and decision-makers; and to report on the value, needs, and successes of hatchery activities in addressing mitigation requirements while contributing to fishery and conservation objectives in the Basin. The workgroup efforts are envisioned to support regional coordination on hatcheries in the Basin, which will benefit objectives for Part 1 of the Fish and Wildlife Program 2020 Addendum: Program Goals, Objectives and Strategy Performance Indicators.
- Bonneville should prioritize the critical need to maintain and modernize hatchery infrastructure and adequately fund hatchery facility and production program needs to align with mitigation requirements and conservation needs to ensure the longevity and integrity of the Program's past investments (See Policy Issue II, a, b, and c) as well as monitoring and evaluation. This recommendation is consistent with the 2014 Program.

## **II.) Implementation recommendations**

### **a.) Asset management**

On October 10, 2018, the Council approved the [Asset Management Strategic Plan](#) (Plan) for implementation to address non-recurring maintenance needs for hatcheries, screens, and lands to ensure the longevity and integrity of the Program's past investments. At the time of the decision, initial funds for implementation were secured from the Budget Oversight Group (BOG) placeholder, starting in FY 2021 at \$250,000, and through cost savings from Program projects that have decreased expenditures (former Cost Savings Workgroup efforts) at \$250,000. This fund of \$500,000 was established as the Asset Management placeholder and incorporated into Bonneville's annual budgeting process. However, the placeholder amount was recognized in the Plan as inadequate, and it was noted that requests would exceed the placeholder amount. Based on these concerns, the Council conditioned its approval of the Plan on the expectation that work be done to *establish an endowment fund* to address all needs associated with the Program's past investments (e.g., Phase I hatchery assessments identified \$15,082,372 for non-recurring maintenance costs through 2028<sup>2</sup>). In addition to non-recurring maintenance needs, the Plan also addressed the importance of adequate annual budgets to cover annual O&M costs and stressed the importance of adequate O&M budgets to avoid emergency needs in the future.

To date, a commitment to a long-term funding stream has not been accomplished, and there remains the need to provide sufficient funding to protect the integrity of the Fish and Wildlife Program investments. Securing a consistent funding stream to support asset management is complicated by the ongoing issue of flat funding (please see Policy Issue II.b.), both of which may jeopardize adequate preventative maintenance. In 2018, Bonneville, as part of their agency-wide Asset Management Key Strategic Initiative, developed strategic asset management plans (SAMPs) for fish and wildlife lands, hatcheries, and fish screens. These SAMPs recognized and utilized the Asset Management Strategic Plan. These SAMPs are currently being updated and integrated as part of Bonneville's ongoing Integrated Program Review (IPR) and Financial Plan. This public review process provides an opportunity to advocate for adequate support for the Fish and Wildlife Program's past investments.

#### Recommendations:

- Bonneville should establish a systematic approach to provide for sufficient funds that support the Asset Management Strategic Plan for non-recurring maintenance needs and adequate annual preventive maintenance support for Program investments associated with fish screens, lands and hatcheries. Doing so will ensure the integrity of the Program's past investments is maintained and

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<sup>2</sup> Over the past five years of implementation the Plan has only provided \$2,309.76 to address non-recurring maintenance needs for the Programs past investments.

that investments are able to continue to deliver their intended benefit to fish and wildlife over time.

## **b.) Flat funding**

### Effects of inflation and flat project budgets

As noted in the 2014 program, and its 2020 addendum, Bonneville and the other federal agencies have been funding and implementing many 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 key to the Council's mitigation program. For the most part, the ongoing effort by Bonneville and others to implement program measures and priorities has been highly successful. Accomplishments are highlighted in the Council's 2014 program and its 2020 addendum and can be observed in reading the accomplishments of the habitat and hatchery projects under this review.

As noted above, in January 2018 Bonneville issues its strategic plan, which includes an objective to hold program costs, including fish and wildlife related costs at or below the rate of inflation through 2028.

The Council shares and generally supports Bonneville's objective to carefully manage its fish and wildlife program costs but in the 2020 Program addendum, the Council recognizes some important considerations related to how the Program is implemented. In particular, the Council notes that it is important to protect productive work even while controlling the growth of program expenses.

Yet some project budgets have been held without an inflation adjustment for more than a decade while the purchasing power of the dollar has declined due the impact of inflation (For example, it takes \$1.20 today to buy what you could get for a dollar in 2011; U.S. Bureau of Economic Analysis). Fish and wildlife managers and project sponsors continue to raise concerns with the Council over the ever-rising disparity between available budgets and the cost of implementation. Some project budgets, including some of those included in this review have been held flat with no inflation adjustments for as much as 15 years. 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 mitigation objectives.

Project sponsors describe supply chain issues and the increasing costs of materials as common challenges as project costs have escalated. Project sponsors are generally resourceful and do what they can to offset budget constraints by finding other funding sources to do the same work or finding other ways to stretch their funds. Despite the persistence and creativity of project sponsors, some have reached a tipping point where the on-the-ground mitigation work must be cut back.

For example, some operation and maintenance focused projects are subject to this flat-funding scenario. As materials and labor costs increase, projects that focus on protecting past Program investments can do less protection work. Maintenance is deferred or eliminated which may result in higher long-term costs. The Council has noted often, including in this document above, the need for preventive maintenance for past investments in mitigation like hatcheries, fish screens and land acquisition projects. This led to the development of the Council's Asset Management Strategic Plan described above. In this Plan as well as in the Program, the Council has repeatedly stated that it's critically important to protect past investments and protect the integrity of these mitigation actions through time.

The Council also stated in the Program that it expects that cost management efforts are shared 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 cost-management techniques threaten the substantive work and ability to meet project objectives.

In order to address the concerns surrounding the implementation of the Fish and Wildlife Program, in 2021, Council and Bonneville staff began to work on the development of a Collaborative Framework for Program implementation. The goal of this framework is to revise, and update established processes for implementing Council recommendations, including project reviews and other annual processes and placeholders/funds such as the Budget Oversight Group, Asset Management and Cost Savings. While there has been discussion over the past year, these efforts have not been able to provide the certainty and commitment needed to meet this goal.

#### Recommendations:

- Consistent with the Fish and Wildlife Program, Bonneville should work with all project sponsors to identify projects (those in this review and all other ongoing projects) that are experiencing issues related to inflation that are faced with reducing the amount of substantive work they can do and develop options for relief. Bonneville to report findings and conclusions for all projects to the Council.
- The Council recommends that Bonneville develop flexibility in its budget management protocols to allow the budget available for fish and wildlife mitigation be fully expended on fish and wildlife mitigation within the biennial rate case and report progress to the Council.

### **c.) Climate change**

In several past reviews, the ISRP has provided feedback to sponsors that climate change considerations should inform restoration work moving forward. They have expressed concerns that lack of consideration of climate change as a confounding factor may substantially reduce the expected benefit of project actions. In this review, the ISRP again noted the need to consider climate change in project planning, design and implementation in its recommendations and comments on a number of individual proposals.

The Council recognizes the importance of considering the implications of climate change in all aspects of the Program including project development and implementation, as detailed in Part II of the 2020 Addendum. To begin to address this issue, the Council included explicit questions in the AFHH review proposal form regarding how climate change could potentially impact the project in the future and what adaptation measures were taken to adjust the project for these potential impacts.

In general, project managers provided thoughtful and comprehensive responses to the climate change questions. Many identified potential site-specific impacts to the local ecosystem and included citations and links to reports. The responses show that most project sponsors have been thinking seriously about climate change impacts in their region. Many projects described how the planned actions would help provide resilience for species and their habitats in the face of climate change. Some projects, but not all, have begun thinking about how to adapt their projects to account for the potential changes in the ecosystem due to climate change. Several identified climate change adaptation plans that are completed or in development, that will help guide future restoration actions. However, as noted by the ISRP, more work is needed to fully integrate climate change into project planning, design and implementation, and to adapt projects and actions to account for expected future conditions.

#### **Recommendations:**

- Project sponsors and Bonneville should review project planning, design and implementation plans to ensure that they fully consider future conditions due to climate change.
- Council should consider providing leadership and organizational capacity, in collaboration with fish and wildlife managers, for further incorporating climate adaptation strategies and climate resilience into project design and implementation. The 2020 Addendum called for the Council to establish a science-policy forum on climate change to better understand the implications of climate change and help inform fish and wildlife decisions. One such opportunity could be to organize a science forum or series of workshops, specifically discussing various examples of project adaptation within the program and/or bringing in technical experts on climate adaptation strategies for both habitat and

hatchery projects. Numerous other potential climate change topics could be developed as well.

**iii.) Administrative recommendations**

**a.) Projects that are not applicable (N/A) for review**

Understanding and identifying how projects connect and relate to the Program are important components of Program implementation and review. In past Council decisions, projects have been determined not to need science review. These projects have a standing review and final recommendation by the Council, but were determined as part of the Council decision process that science review was not applicable (N/A). These projects in the past have consisted of regional coordination, planning and/or congressionally mandated type projects.

As part of the Project Portfolio Management Initiative commenced by Bonneville, Council and Bonneville staff worked collaboratively in 2021 to develop a shared list of active projects and to understand how these projects support the Council’s Program. Bonneville and Council staff used information in cbfish.org to assist in identifying the projects in an active implementation stage and which projects are directly part of the Program. From there, the staff worked together to categorize each project to identify those that have a current Council recommendation and those that are appropriate for science review, those that are considered BPA Program Support (i.e., not included in a Council recommendation), and projects that are either in development or closing out. Out of this exercise, there were 23 projects categorized as “*Council recommended – N/A for ISRP review*”.

Of the 124 projects part of this review, the ISRP identified the following 12 projects as not applicable (N/A) to scientific review.

<b>Project #</b>	<b>Title</b>	<b>Sponsor</b>
1983-436-00	Umatilla Passage Operations and Maintenance	Westland Irrigation District
1988-120-25	Yakima River Management, Research, and Data	Yakama Nation Fisheries
1988-120-35	Klickitat River Management & Data Project (YKFP)	Yakama Nation Fisheries
1992-009-00	EXP YAKIMA PH II O&M	Washington Dept. of Fish and Wildlife
1995-064-25	Policy, Plan, and Technical Support of Washington Department of Fish and Wildlife (WDFW) – Yakima/Klickitat Fisheries Project (YKFP)	Washington Department of Fish and Wildlife
1996-086-00	Clearwater Focus Program	Idaho Governor’s Office of Species Conservation

1997-013-35	Klickitat River Operations and Maintenance (O&M) for Hatcheries and Acclimation Sites- Yakima/Klickitat Fisheries Project (YKFP)	Yakama Nation Fisheries
1997-060-00	NPT DFRM Focus Watershed Restoration Program	Nez Perce Tribe Department of Fisheries Resources Management – Watershed Division
2007-217-00	Walla Walla River Passage Operations and Maintenance (O&M)	Gardena Farms Dist. 13
2007-393-00	Protect & Restore NE OR & SE WA Watershed Habitat	Nez Perce Tribe
2008-906-00	Crystal Springs Hatchery Planning, Operations and Maintenance	Shoshone-Bannock Tribes
2009-002-00	Status and Trend Annual Reporting and Information Management	Yakama Nation Fisheries

Council staff agrees with some of the ISRP general comments regarding the above projects but also recognizes there are some inconsistencies to other related projects in the AFHH review and previous reviews in the current review cycle. Some of these projects have been reviewed before and may need to be considered in future reviews.

Recommendation:

- The Council will consider these projects for review in the future.

#### **b.) Umbrella Projects –**

As part of the Geographic Category Review in 2013 “umbrella habitat projects” were identified and discussed in the review decision document as Programmatic Issue B - Evaluate and Improve Umbrella Projects. Umbrella projects are a unique subset of the habitat projects implemented through the Program because of the coordination role they play in a particular subregion and their offering of a project solicitation and review process that can result in local entities implementing habitat projects with Program funds. At the time of the 2013 decision, the Council determined that it was important to continue assessing the value-added by this approach. Since the sponsoring organizations are entrusted to administer a process involving rate-payer dollars, it is important to reduce conflicts of interest and perceived conflicts, ensure transparency, and increase accessibility to a broad-array of potential project sponsors.

To achieve the above expectations, the Council, working with Bonneville, developed the following principles to be applied by Bonneville to umbrella contract management and in sponsor implementation:

- 1. Umbrella project sponsors will develop and use an implementation strategy to identify, prioritize and select restoration projects based on limiting factors and biological benefits as described in the program and the Willamette and FCRPS*



*Biological Opinions. This strategy should be: science-based, inclusive, impartial, and transparent. Selection, ranking and scoring criteria should be reviewed by the ISRP.*

*2. To avoid any conflict of interest or the appearance thereof, umbrella project sponsors should not implement habitat actions under a solicitation program that they administer. If the administering entity does engage in habitat implementation, that work should be implemented under a separate contract and the proposed work may be subject to review under the Council's scientific review process.*

*3. The implementation strategy should integrate the best available science and on-the-ground circumstances/conditions. In addition, when feasible, the sponsor will incorporate project cost and readiness into the implementation strategy.*

*4. The biological benefits of proposed habitat actions should be reviewed by technical experts.*

*5. If Bonneville funds for technical assistance (e.g., engineering and preliminary design) are available through the umbrella organization, those funds will be equally available to all partners developing and implementing projects.*

These five key principles were also supported by a sixth principle for annual reports at the end of each calendar year (#6)<sup>3</sup>, and a performance review in 2017 (#7). As part of the 2017 performance review, the Council confirmed the above principles and added the following relevant action items to strengthen the intent of these unique habitat projects.

- *The Council recommends that umbrella projects rely on existing literature and access available regional data to inform their technical experts tasked with reviewing the biological benefits of proposed habitat actions as recommended in the Council's 2013 recommendations for Umbrella projects.*
- *The Council is developing guidance for Program RME to inform habitat actions in the tributaries. Council recommends that guidance produced through this effort should be considered for Umbrella Project RME approaches.*
- *Sponsors should continue to consider and incorporate specific criteria to screen projects for implementation based on: available projections about changes in climate, human population growth and demands for natural resources. Likewise, sponsors should factor in effects from or strategies against impacts of contaminants on restoration works.*
- *Umbrella projects should gather information to convey that:*

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<sup>3</sup> Umbrella projects should report on: progress towards their developing and meeting objectives; program costs (administrative and implementation); information related to addressing limiting factors and benefit species; activities related to outreach; and regional data and sources used to inform decisions, including decisions by technical experts related to expected benefits of proposed actions.

- a. *habitat actions are properly implemented (implementation monitoring) and*
  - b. *that the habitat action is addressing the limiting factor as expected by monitoring for the physical change in the targeted limiting factor and, as feasible, document over time a change in the fish life-stage using that habitat (site/action specific effectiveness monitoring).*
  - c. *If the Program has approved/codified this type of habitat action to be effective in addressing the limiting factor then only implementation monitoring is needed.*
- *Project sponsors should consider adding existing monitoring sites to the explorer tool on the Bonneville funded [Monitoringresources.org](https://www.monitoringresources.org), with assistance of PNAMP staff, and provide these site locations and restoration site locations to the Bonneville funded Project Implementation Map on CBfish.org or other publicly accessible geo-database.*
  - *Council encourages Bonneville to consider two-year contracts for the umbrella projects that don't already have a two-year contract cycle in place. The contracting policy does not appear to be consistent between projects and those who don't have a two-year contract in place said that it was difficult to maintain a constant funding stream for restoration work throughout the year.*
  - *As project review and selection criteria change, Council staff should be notified of the potential change and reason for change before it happens.*
  - *As a normal course of business, sponsors are asked to include Council staff on the distribution list for all solicitation announcements and final selection communications.*

The principles and action items outlined above, should continue to be followed for administrative and contractual purposes. The one exception, however, is the calendar year-end report (principle #6). Based on the performance and demonstrations to date, calendar year-end reports are no longer needed.

The Council continues to support the role that umbrella projects fill in the basin to provide streamlined administration; a landscape-based project selection efficiency; and increased collaboration and coordination, technical services, tracking, and transparency. Given their value, it is recommended that umbrella projects present an update to the Council biennially to provide information to the region on their accomplishments and results.

In addition, current staff work associated with the future review process (please see *Policy Issue, IV. Future Review Process for the Fish and Wildlife Program*) may include a “landscape” approach, which is a common theme to the umbrella projects, and umbrella projects might serve as an example for how to conduct future reviews. To accomplish this, the Council may request a workshop with the umbrella projects to discuss the complexities and challenges of a landscape approach to habitat restoration, which includes public engagement, a strategic ecological approach, organizational

support across boundaries, and promotes adaptive management. The workshop would involve each umbrella project, practitioners, monitoring teams, Bonneville, and the Council.

#### Recommendations:

- Implementation of these projects (see table below) should continue with the above principles, except that the Council no longer will require the calendar year-end report (principle #6).
- The Council requests the sponsors of the umbrella projects (see table below) to present to the Council biennially on their accomplishments and results.
- Council may request a workshop with the umbrella projects (see table below) to discuss the complexities and challenges of a landscape approach to habitat restoration.

<b>Project #</b>	<b>Title</b>	<b>Sponsor</b>
1992-026-01	Grande Ronde Model Watershed	Grande Ronde Model Watershed Foundation
2003-011-00	Columbia River Estuary Habitat Restoration	Lower Columbia Estuary Partnership (LCEP)
2007-397-00	John Day Watershed Restoration	Confederated Tribes of the Warm Springs Reservation of Oregon
2009-012-00	Willamette Bi-Op Habitat Restoration Project	Oregon Watershed Enhancement Board
2010-001-00	Upper Columbia Programmatic Habitat	Upper Columbia Salmon Recovery Board
2010-077-00	Tucannon River Programmatic Habitat Project	Snake River Salmon Recovery Board (SRSRB)
2017-005-00 <sup>4</sup>	<i>Pacific Lamprey Conservation Initiative</i>	<i>US Fish and Wildlife Service</i>

#### **IV.) Future Review Process for the Fish and Wildlife Program**

The Council, under direction of the Northwest Power Act and the Council's Fish and Wildlife Program, and working with Bonneville and our various partners, has implemented reviews of direct Bonneville funded projects in several ways. For example, projects have been reviewed in the following ways: all-at-once (various years most recently 2007-2009); by geographic eco-province (2002-2004); by a specific targeted need such as Biological Opinion Action Plan implementation (2001); Biological Opinion High Priority implementation (2001); to implement a Request for Studies (2003+); Innovative project solicitations (2001, 2002, 2007); Biological Opinion Implementation

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<sup>4</sup> In 2017, this project was included with the original umbrella projects. It is implemented with the guidance established in the Council's 2013 recommendation through the established principals for the benefit of Pacific Lamprey. Though not part of this review (part of the Mainstem and Program Support Category review in 2019) the recommendation outlined above would apply to the project.

(2009-2011); Accord projects (2008+); Biological opinion fast track projects (2010); and by category of project (2010-2022).

The Council's project reviews have yielded many benefits. Rigorous project reviews have resulted in:

- clear documentation of each project's purpose, objectives, and results
- project improvement through independent scientific review and feedback
- sharing of project data and information
- increased transparency and accountability
- identification of project contributions to the program and to the region

### An era of change

After 40 years of implementation, there has been considerable growth and change in project development and implementation. The projects implementing the Council's mitigation program have grown in numbers and complexity. Many factors complicate and change the rules for how Program work is solicited, selected, and implemented, including but not limited to constrained budgets, unequal distribution of long-term funding and implementation agreements such as accords, settlement agreements and Memorandums of Understanding, and an increase of project cost-sharing with multiple funding partners.

Over the course of the recent fish and wildlife program amendment cycles and this current cycle of project review, project sponsors and others have offered ideas and shared concerns regarding the review process. For example, we have heard concerns that projects have been reviewed multiple times and this comprehensive scope of review takes too much time and effort from project staff. We have also heard that it is important to understand how projects of various types fit together in a geographic landscape. We have also heard there is value in having the Council and ISRP visit project sites to view the projects in-person and discuss project attributes directly. The importance of more directly connecting habitat projects to monitoring projects and the challenges with implementing Council and ISRP recommendations with constrained budgets have also been shared with the staff. The Council appreciates all of this feedback.

In the ISRP's recent review report, the ISRP includes suggestions for what review elements have been particularly useful, and for how the process could be modified to address issues the ISRP has noted across reviews. The Council appreciates this feedback as well. The ISRP suggested the Council:

- focus the reviews on discrete sets of projects
- foster synthesis reports that summarize integration related projects
- improve communication and learning between the project proponents, ISRP, Council, and BPA

As the current review cycle approaches completion, the staff believes it is the right time to assess its project review process and consider changes. Updating the review process

could be an opportunity to lessen the demands on project sponsors, Bonneville, and the Council.

### A new path

The first step in planning any future review process is to consider the direction to the Council provided by the Northwest Power Act (NPA). Under the NPA(4)(h)(10)(D): the ISRP and the Council are to review projects proposed to be funded through the Bonneville Power Administration's fish and wildlife budget that implements the Council's Fish and Wildlife program. The statute contemplates an annual review of some sort, and the Council has used the flexibility inherent in the statute to review ongoing projects in a multi-year review cycle, with resulting multi-year recommendations.

The statute directs the ISRP to review the results of prior year expenditures. The ISRP has at times conducted separate retrospective reviews, but generally the review of the result of past implementation has become part of the ISRP's regular review of ongoing projects.

The ISRP's recommendations on projects are to be based on a specified set of criteria: sound scientific principles, benefit to fish and wildlife, have a clearly defined objective and outcome with provisions for monitoring and evaluation of results; and are consistent with the Program.

The Council is to: allow for public review and comment on ISRP's review reports; review the projects, the recommendations of the ISRP, and any public comments; and then make "final recommendations of projects to be funded through BPA's annual fish and wildlife budget."

In making its project recommendations to Bonneville, the Council is to: "fully consider" the ISRP's recommendations; explain in writing its reasons for not accepting any ISRP recommendations; consider the impact of ocean conditions on fish and wildlife populations; and determine whether projects employ cost-effective measures to achieve program objectives.

With these statutory requirements in mind, the staff has developed a set of premises outlined below that we believe set the stage for future reviews

- Most projects have been reviewed many times. Each project's basic premise or basic reason for existence in this program has generally been accepted.
- In general, reviews are about existing/ongoing projects proposed for continued implementation. Existing projects may not always need a "project review", instead an "implementation review" may be warranted.

- If there is new work, or major new elements of existing/ongoing projects that should be implemented, and thus should be reviewed, is a separate subject that falls outside the purpose for which these premises are provided.
- Generally, the work in program projects can be said to be scientifically sound. Therefore, future reviews should focus on critical questions or special topics. The purpose of any specific review would lead us to a review structure for that purpose and will change depending on what projects and topics are being reviewed. Future reviews may focus on:
  - Project outcomes. Are we getting what we expect out of a project?
  - Resources that support adaptive management (new techniques, emerging scientific literature, etc.)
  - Aspects of projects or projects that need additional science review to improve or further develop the project.
  - Critical questions or special topics. For example, there may be ways to group projects and ask questions before the review process to provide information to contribute to the Fish and Wildlife Program performance effort.
- The review structure could include a geographic-based, portfolio or topic-based review as appropriate.
- Review and recommendations will likely be multi-year and different for different types of projects.
- Project review process will not address budgets except in only a high level, with the Council focusing on whether funding is sufficient for activities identified.
- There is an opportunity to improve the efficiency and effectiveness of the process to lessen the administrative demands on project sponsors, Council staff, and Bonneville staff and the ISRP.

Recommendation:

- The Council will continue to develop the concepts presented in this memo and move forward developing a conceptual plan for project review this year with input from Council staff, the fish and wildlife agencies and tribes, project sponsors and Bonneville as described in the 2020 Addendum<sup>5</sup>. The staff seeks support from the Council to continue this path. Staff will review the conceptual plan with Council members as it is developed.

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<sup>5</sup> Fish and Wildlife Program 2020 Addendum: *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.*

## **PART 3: Summary of Project Recommendations**

Part 3 of this document contains the Council's recommendations for the projects' themselves. The following spreadsheet lists the projects reviewed during the Anadromous Fish Habitat and Hatchery category review and is a formal part of this decision document. Column F in the spreadsheet provides the Council's recommendation for each project, including any conditions, comments or guidance associated with the project recommendation. Many of the projects have been affected by one or more of the policy issues outlined in Part II of this document. The specific policy issue(s) recommendation that may affect and guide an individual project is noted in the project recommendation in the spreadsheet.

The ISRP found that, of the 122 projects reviewed, 107 "meet criteria," of which 59 projects have conditional review remarks that recommend further proposal clarification, future adjustments, or reporting. In addition, the ISRP concluded that 12 projects were not amenable to science review and categorized these projects as "not applicable." Three remaining projects are pending completion of the review and recommendation process. The ISRP offered review remarks for all projects, and the Council considers the review remarks (i.e., comments, considerations, suggestions, points, issues, and conditions) in the development of its recommendations as well as any public comments received.

From the Council's standpoint, all projects have been reviewed several times in the past and their basic premise and objectives as related to the Program have generally been accepted and their implementation supported. For the fifty-nine projects that "meet criteria – conditional," the conditions offered by the ISRP provide good additions or information that may help improve the project, and the Council generally supports that improvement where feasible and appropriate. However, in some cases, the Council concluded that while the conditions are offered to help strengthen the project, not all conditions are imperative for project implementation and addressing some conditions may go beyond the scope and intent<sup>6</sup> of the project and associated FY 2021 budget. In addition, the ISRP recommended conditions for some projects that the Council considers broader-scale issues to be addressed at the Program scale (e.g. climate change and monitoring and evaluation). These issues are addressed in Part II of this document.

Based on the Council's review of the conditions, for the projects considered conditional, the Council recommends that Bonneville and the project Sponsor(s) address select conditions (see spreadsheet) in future project documentation, and then consider the other conditions and address if appropriate for the project scope and feasible within the FY2021 budget. The selected conditions are those that the Council anticipates will

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<sup>6</sup> Scope is defined by the specific activities identified in the project, the geographic extent (at multiple scales, specifically watershed, stream, stream reaches), the timeline, and the funding levels. Intent is defined as the focus of the project and the expected purpose and outcomes (i.e. why you are doing the project).



provide the greatest benefit for improving the project, ensuring that the project remains scientifically sound, and aligning the project outcomes with the measures identified in the Council's program. To be clear, all other conditions should still be considered, and the Council recommends that Bonneville and the Sponsor(s) address those conditions in project documentation as well, if feasible within the FY2021 project budget.

With the current flat budget levels, any budgetary and/or FY 2021 project budget or scope and intent changes for a particular project need to be vetted through the established Budget Oversight Group (BOG) and assessed for priority with other requests.

In addition, the shaded cells (Column B) of the following spread sheet reflects title changes to the project's name that were received from the project sponsors as part of the received and reviewed proposal. Council recommends that Bonneville make these proposed name changes, if appropriate, as part of the data base associated with the contracting of these projects. It's important to note that the spreadsheet includes Bonneville's start of year (SOY) budget for fiscal year (FY) 2021 and 2022. These planning budgets are provided for informational purposes only. For this review the project sponsors were requested to use their Fiscal Year 2021 project budget as the sideboards for the work proposed. As noted above, any discrepancies will need to be vetted through established processes.

## Project-Specific Recommendations

	A	B	C	D	E	F	G	H
	Submitted Project Proposal Form			ISRP Review Criteria		Draft Council Recommendation	BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final		2021	2022
1	1983-350-00	Nez Perce Tribal Hatchery Operations and Maintenance (O&M)	Nez Perce Tribe	Conditional	Conditional	Bonneville and Sponsor to consider condition #1 (goals) and #2 (objectives/timeline), and address in project documentation if appropriate. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Nez Perce Tribal Hatchery and reconditioned steelhead kelt programs. See Policy Issue I.b., II.a. and II.b.	\$2,214,227	\$2,214,227
2	1983-350-03	Nez Perce Tribal Hatchery – Monitoring and Evaluation (M&E)	Nez Perce Tribe	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Nez Perce Tribal Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$1,914,094	\$1,914,094
3	1983-435-00	Umatilla Hatchery Satellite Facilities O&M	Confederated Tribes of the Umatilla Indian Reservation (CTUIR)	Response	Conditional	Bonneville and Sponsor to consider condition #1 (objectives) and #2 (link to M&E) in project documentation and address if appropriate. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Umatilla Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$836,249	\$846,702
4	1983-436-00	Umatilla Passage Operations and Maintenance	Westland Irrigation District	NA	Not Applicable	Bonneville and Sponsor to consider review remarks in project documentation if appropriate. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Umatilla Hatchery program. See Policy Issues I.b., II.a. and II.b. and III.a.	\$449,652	\$449,652

	A	B	C	D	E	F	G	H
	Submitted Project Proposal Form			ISRP Review Criteria			BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final	Draft Council Recommendation	2021	2022
5	1984-021-00	John Day Habitat Enhancement	Oregon Department Fish and Wildlife	Response	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #2 (project planning, evaluation and adjustment) in project documentation, and to consider other condition and address if appropriate. See Policy Issue I.a.	\$453,222	\$453,222
6	1984-025-00	Grande Ronde and Umatilla Fish Habitat Improvement Program	Oregon Department of Fish and Wildlife (ODFW)	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$547,012	\$547,012
7	1987-100-01	Umatilla Anadromous Fish Habitat Project	Confederated Tribes or the Umatilla Indian Reservation	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$1,441,253	\$1,459,269
8	1988-022-00	Umatilla and Walla Walla Fish Passage Operations	Confederated Tribes of the Umatilla Indian Reservation	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives), #2 (criteria), #3/6 (effectiveness), #4 (lamprey), #5 (editorial update) in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Umatilla Hatchery and Walla Walla Spring Chinook Hatchery programs. See Policy Issue I.b., II.a. and II.b.	\$630,609	\$638,492
9	1988-053-03	Hood River Production Program	Confederated Tribes of Warm Springs (CTWS)	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. Implement as confirmed in the Council's Step Review decision. Hood River Production Program in transition and this project has been re-defined - consolidating five projects into one. ODFW contracts are phasing out. Need confirmation from CTWS and Bonneville on timeline and transition details. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Hood River Production Program. See Policy Issue I.b., II.a. and II.b.	\$712,604	\$721,511

	A	B	C	D	E	F	G	H
	Submitted Project Proposal Form			ISRP Review Criteria		Draft Council Recommendation	BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final		2021	2022
10	1988-120-25	Yakima River Management, Research, and Data	Yakama Nation Fisheries	NA	Not Applicable	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issues III.a.	\$1,543,041	\$1,558,230
11	1988-120-35	Klickitat River Management & Data Project (YKFP)	Yakama Nation Fisheries	NA	Not Applicable	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issues III.a.	\$552,440	\$581,215
12	1989-024-01	Evaluate Umatilla Juvenile Salmonid Outmigration	Oregon Department of Fish & Wildlife	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Umatilla Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$542,070	\$553,250
13	1989-035-00	Umatilla Hatchery Operations and Maintenance (O&M)	Oregon Department of Fish and Wildlife	Response	Conditional	Bonneville and Sponsor to consider condition #1 (production), #2 (evaluation), #3 (density), and #4 (retention time), and address in project documentation if appropriate. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Umatilla Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$1,219,330	\$1,384,856
14	1990-005-00	Umatilla Hatchery Monitoring and Evaluation	Oregon Department of Fish and Wildlife	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Umatilla Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$629,317	\$640,702

	A	B	C	D	E	F	G	H
	Submitted Project Proposal Form			ISRP Review Criteria			BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final	Draft Council Recommendation	2021	2022
15	1990-005-01	Umatilla Basin Natural Production Monitoring and Evaluation Project (combined with Assess Reintroduction of Steelhead in McKay Creeks beginning in FY2022).	Confederated Tribes of the Umatilla Indian Reservation	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Umatilla Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$1,001,517	\$1,014,036
16	1990-055-00	Idaho Salmon and Steelhead Monitoring and Evaluation Studies	Idaho Department of Fish and Game	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issue I.b.	\$3,205,727	\$3,240,504
17	1991-028-00	Pit Tagging Wild Chinook	NOAA Fisheries	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$490,880	\$490,880
18	1992-009-00	EXP YAKIMA PH II O&M	Washington Dept. of Fish and Wildlife	NA	Not Applicable	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports past Program investments for operation and maintenance of fish screens. See Policy Issue II.a, II.b., and III.a.	\$320,213	\$442,391
19	1992-026-01	Grande Ronde Model Watershed	Grande Ronde Model Watershed Foundation	Response	Conditional	Complete final response, by May 1, 2022, to ISRP review (ISRP document 2018-11) in regards to the Projects 25-year synthesis review. See Policy Issue I.a. and III.b.	\$4,000,000	\$4,000,000
20	1992-026-04	Grande Ronde Salmonid Life Cycle Monitoring Project	Oregon Department of Fish and Wildlife	Response	TBD	Response received on March 9th, 2022. Outyear implementation funding (FY2023) dependent upon Council decision.	\$1,276,577	\$1,276,577

	A	B	C	D	E	F	G	H
	Submitted Project Proposal Form			ISRP Review Criteria		Draft Council Recommendation	BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final		2021	2022
21	1992-062-00	Lower Yakima Valley Riparian Wetlands Restoration	Yakama Nation Wildlife, Range & Vegetation	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #3 (prioritization) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$1,812,341	\$1,834,995
22	1993-060-00	Select Area Fishery Enhancement	Oregon Department of Fish and Wildlife	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #2 (methods) in project documentation and consider condition #3 (synthesis) and address if appropriate. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Select Area Fishery Enhancement program. See Policy Issue I.b. and II.b.	\$1,999,264	\$2,067,238
23	1993-066-00	Oregon Fish Screens Project	Oregon Department of Fish & Wildlife	Response	Conditional	Bonneville and Sponsor to consider condition #1 (coordination) and #2 (adjustment) and address in project documentation if appropriate. This project supports past Program investments for operation and maintenance of fish screens. See Policy Issue II.a. and II.b.	\$2,622,219	\$2,565,219
24	1994-015-00	Idaho Fish Screening Improvement	Idaho Department of Fish and Game	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports past Program investments for operation and maintenance of fish screens. See Policy Issue II.a. and II.b.	\$440,066	\$445,567
25	1994-018-05	Asotin County Enhancement and Restoration Project	Asotin County Conservation District	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$508,391	\$508,391
26	1994-018-06	Tucannon Stream and Riparian Restoration	Columbia Conservation District	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (purpose and limiting factors), #2 (objectives), and #3 (methods) in project documentation. See Policy Issue I.a.	\$386,363	\$386,363

	A	B	C	D	E	F	G	H
	Submitted Project Proposal Form			ISRP Review Criteria		Draft Council Recommendation	BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final		2021	2022
27	1994-042-00	Trout Creek Operations and Maintenance	ODFW	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives), #2 (monitoring summary) in project documentation, and to consider other condition and address if appropriate. See Policy Issue I.a.	\$524,895	\$524,895
28	1994-050-00	Salmon River Habitat Enhancement	Shoshone-Bannock Tribes	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #3 (reaches chosen for restoration) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$277,972	\$284,921
29	1995-063-25	Yakima River Monitoring and Evaluation	Yakama Nation Fisheries	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (spawner-recruit) in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Levi George Spring Chinook Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$5,716,740	\$5,636,028
30	1995-063-35	YKFP Klickitat Subbasin Monitoring and Evaluation	Yakama Nation	Conditional	Conditional	Implement as recommended by the Council decision on April 10, 2019, associated with Project #1988-115-35 for the Klickitat River Spring Chinook Master Plan (closely related and part of Project #1997-013-35). Bonneville and Sponsor to consider conditions (#1 limiting factors, #2 mortality, #3 populations, #4 effects and #5 monitoring) and address in project documentation if appropriate. This project supports monitoring and evaluation for production for hatchery mitigation authorized under the Mitchell Act for the Klickitat River Spring Chinook Master Plan. See Policy Issues I.b., II.a. and II.b.	\$1,598,852	\$1,618,838
31	1995-064-25	Policy, Plan, and Technical Support of Washington Department of Fish and Wildlife (WDFW) – Yakima/Klickitat Fisheries Project (YKFP)	Washington Department of Fish and Wildlife	NA	Not Applicable	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issues I.b. and III.a.	\$195,182	\$197,621

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	Submitted Project Proposal Form			ISRP Review Criteria		Draft Council Recommendation	BPA Start-of-Year Budget	
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32	1996-035-01	Yakama Reservation Watersheds Project (YRWP)	Yakama Nation Fisheries	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$1,527,230	\$1,543,481
33	1996-040-00	Upper Columbia Production Projects	Yakama Nation Fisheries Resource Management	Response	Conditional	Bonneville and Sponsor to address conditions in Part 1 (objectives) and Part 2 (objectives and adaptive management) in project documentation. The Upper Columbia Production Project represents a consolidation of three projects into one. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Mid-Columbia Coho program and the reconditioned steelhead kelt program. The upper Columbia spring Chinook and steelhead acclimation component of this project also supports hatchery mitigation authorized under FERC license(s) of the mid-Columbia public utility districts. See Policy Issue I.b., II.a. and II.b.	\$8,138,588	\$6,862,098
34	1996-042-00	Restore Salmon Creek for Anadromous Fish	Confederated Tribes of the Colville Reservation	Conditional	Conditional	Project to be subsumed by the reviewed Project #2007-224-00. See Project #2007-224-00 for details.	\$441,892	\$290,067
35	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Nez Perce Tribe	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Johnson Creek Artificial Propagation Enhancement program. See Policy Issue I.b. and II.b.	\$1,550,033	\$1,550,033
36	1996-046-01	Walla Walla River Fish Habitat Enhancement	Umatilla Confederated Tribes (CTUIR)	Conditional	Conditional	Bonneville and Sponsor to address condition #4 (basis for how specific projects are selected) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$1,100,778	\$1,114,538



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	Submitted Project Proposal Form			ISRP Review Criteria		Draft Council Recommendation	BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final		2021	2022
37	1996-077-02	Lolo/Selway Watershed Restoration	Nez Perce Tribe DFRM Watershed	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #2 (M&E) in project documentation. See Policy Issue I.a.	\$654,244	\$654,244
38	1996-083-00	CTUIR Grande Ronde Watershed Restoration	Confederated Tribes of the Umatilla Indian Reservation	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (use of monitoring data), #2 (benefits), and #3 (objectives) in project documentation. See Policy Issue I.a.	\$1,125,477	\$1,139,545
39	1996-086-00	Clearwater Focus Program	Idaho Governor's Office of Species Conservation	NA	Not Applicable	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issues III.a.	\$104,248	\$133,250
40	1997-013-25	Yakima River Operations and Maintenance	Yakama Nation Fisheries	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Levi George Spring Chinook Hatchery and reconditioned steelhead kelt program at Prosser Hatchery. See Policy Issue I.b., II.a. and II.b.	\$4,432,336	\$4,187,408
41	1997-013-35	Klickitat River Operations and Maintenance (O&M) for Hatcheries and Acclimation Sites- Yakima/Klickitat Fisheries Project (YKFP)	Yakama Nation Fisheries	NA	Not Applicable	Bonneville and Sponsor to consider review remarks in project documentation. This project supports hatchery mitigation authorized under the Mitchell Act for the Klickitat River Spring Chinook Master Plan (also see Project #1995-063-35). See Policy Issues I.b., II.a. and II.b. and III.a.	\$972,000	\$984,150

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42	1997-015-01	Imnaha River Steelhead Status and Smolt Monitoring	Nez Perce Tribe	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports monitoring and evaluation for existing production for hatchery mitigation authorized under the Water Resource Development Act (Lower Snake River Compensation). See Policy Issue I.b.	\$837,167	\$837,167
43	1997-051-00	Yakima Basin Habitat Project	Tribes and Bands of the Yakama Nation	Response	Conditional	Bonneville and Sponsor to address condition #1 (objectives) in project documentation. See Policy Issue I.a.	\$1,462,011	\$1,390,286
44	1997-056-00	Yakama Southern Territories Habitat Project (STHP)	Yakama Nation Fisheries	Meets	Meets	Implement as reviewed and confirmed per Council decision on October 11, 2021 regarding expedited review.	\$1,240,288	\$1,237,893
45	1997-060-00	NPT DFRM Focus Watershed Restoration Program	Nez Perce Tribe Department of Fisheries Resources Management – Watershed Division	NA	Not Applicable	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issues III.a.	\$146,088	\$146,088
46	1998-007-02	Grande Ronde Supplementation: Lostine River Operation and Maintenance and Monitoring and Evaluation	Nez Perce Tribe	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #2 (adjustments) in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) and the Water Resource Development Act (Lower Snake River Compensation) for the Grande Ronde Supplementation program. See Policy Issue I.b., II.a. and II.b.	\$1,026,435	\$1,026,435

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	Project #	Title	Sponsor	Prelim	Final	Draft Council Recommendation	2021	2022
47	1998-007-03	Grande Ronde Supplementation O&M on Catherine Creek and upper Grande Ronde River	CTUIR	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) and the Water Resource Development Act (Lower Snake River Compensation) for the Grande Ronde Supplementation program. See Policy Issue I.b., II.a. and II.b.	\$662,251	\$670,529
48	1998-016-00	John Day River Salmonid Monitoring to Inform Recovery	ODFW	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$1,014,418	\$1,014,418
49	1998-019-00	Wind River Watershed	U.S. Forest Service	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives), #2 (project monitoring), #3 (RME questions), and #6 (VSP parameters) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$556,695	\$556,695
50	1998-021-00	Hood River Fish Habitat	Confederated Tribes of Warm Springs (CTWS),	Conditional	Conditional	Bonneville and Sponsor to address condition #2 (strategic plan) and #4 (coordination) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$1,009,274	\$1,021,890
51	1998-028-00	Trout Creek Watershed Restoration	Jefferson County Soil & Water Conservation District (SWCD)	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives), #2 (monitoring summary) in project documentation, and to consider other condition and address if appropriate. See Policy Issue I.a.	\$166,473	\$166,473
52	1999-017-00	Protect and Restore Lapwai Creek Watershed	Nez Perce Tribe	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$500,000	\$500,000

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53	2000-015-00	Upper John Day Conservation Lands Program	Confederated Tribes of the Warm Springs Reservation of Oregon	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #3 (long-term expectations) in project documentation. See Policy Issue I.a.	\$754,385	\$778,174
54	2000-031-00	Enhance Habitat in the North Fork John Day River	Confederated Tribes of the Umatilla Indian Reservation	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$898,085	\$909,312
55	2000-038-02	Walla Walla Hatchery O&M	Confederated Tribes of the Umatilla Indian Reservation (CTUIR)	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (M&E responsibilities), #2 (protocols), #3 (assumptions), and #5 (objectives) in project documentation, and consider condition #4 (pathogen monitoring) and address if appropriate. Implement as confirmed in the Council's Step Review decision. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Walla Walla Spring Chinook Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$1,141,594	\$1,155,864
56	2000-039-00	Walla Walla Sub-Basin Salmonid Monitoring and Evaluation Project	CTUIR	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. Implement as confirmed in the Council's Step Review decision. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Walla Walla Spring Chinook Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$925,077	\$936,640
57	2000-039-01	Touchet River VSP Monitoring	Washington Department of Fish & Wildlife	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (releases) and condition #2 (objectives) in project documentation. This project supports hatchery mitigation authorized under the Water Resource Development Act (Lower Snake River Compensation). See Policy Issue I.b.	\$240,634	\$243,642

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58	2001-021-00	Wasco County Riparian Buffers	Wasco County Soil and Water Conservation District	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (past progress and benefits) and #3 (planning and prioritization) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$100,000	\$100,000
59	2002-034-00	Riparian Buffers in Wheeler County	Wheeler Soil & Water Conservation District	Conditional	Conditional	Bonneville and Sponsor to address condition #3 (assessment and prioritization) and #7 (pace of restoration) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$70,000	\$70,000
60	2002-035-00	Riparian Habitat Protection and Enhancement in Gilliam County	Gilliam County Soil and Water Conservation	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objective 1 explanation) and #3 (planning and prioritization) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$70,000	\$70,000
61	2002-053-00	Lower Snake River Steelhead VSP Monitoring	Washington Department of Fish and Wildlife	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$254,423	\$257,603
62	2002-059-00	Yankee Fork Restoration Project	Shoshone Bannock Tribes	Response	TBD	Sponsor is planning to submit a response by May 2022. Outyear implementation (FY2023) dependent upon Council decision.	\$303,750	\$303,750
63	2002-060-00	Nez Perce Harvest Monitoring on Snake and Clearwater Rivers	Nez Perce Tribe	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$279,616	\$279,616
64	2002-061-00	Potlatch River Watershed Restoration – Latah SWCD Project Development	Latah Soil and Water Conservation District	Response	Conditional	Bonneville and Sponsor to address condition #1 (objectives) in project documentation. See Policy Issue I.a.	\$360,000	\$360,000

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65	2002-068-00	Clearwater and Wallowa Parr Distribution and Habitat Assessment	Nez Perce Tribe	Response	Conditional	Bonneville and Sponsor to discuss review conditions and meet with ISRP for determination for validity for a revised proposal.	\$211,875	\$211,875
66	2002-070-00	Restoring Anadromous Fish Habitat in the Lapwai Creek Watershed	Nez Perce Soil and Water Conservation District	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$259,500	\$259,500
67	2002-072-00	Red River & Newsome Creek Watershed Restoration	Nez Perce Tribe	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (metrics for measuring objectives) and #2 (monitoring methods) in project documentation. See Policy Issue I.a.	\$950,000	\$950,000
68	2003-007-00	Columbia River Estuary Ecosystem Monitoring	Lower Columbia Estuary Partnership (LCEP)	Response	Conditional	Bonneville and Sponsor to address conditions in future project proposals.	\$1,114,013	\$1,114,013
69	2003-011-00	Columbia River Estuary Habitat Restoration	Lower Columbia Estuary Partnership (LCEP)	Response	Conditional	Bonneville and Sponsor to address conditions in future project proposals. See Policy Issue III.b.	\$924,277	\$1,000,000
70	2003-022-00	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	Confederated Tribes of the Colville Reservation	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (data sharing) and condition #2 (objectives) in project documentation. Bonneville and Sponsor to confirm Sponsor-proposed name change: Okanogan/Methow Basin Monitoring & Evaluation Program (OBMEP).	\$1,378,488	\$1,411,269

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71	2003-023-00	Chief Joseph Hatchery Program	Colville Confederated Tribes	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (straying) in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Chief Joseph Hatchery program. See Policy Issue I.b., II.a. and II.b.	\$4,057,713	\$3,623,855
72	2003-039-00	Monitor and Evaluate (M&E) Reproductive Success and Survival in Wenatchee River	NOAA/NMFS/NWFSC	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. Project to work towards smart close-out. Bonneville and Sponsor to confirm project timeline. The Council's 2018 Research Progress Review decision recommended this project to close in 2021 and any savings greater than \$50,000 be directed to the Costs Savings pool to support the Program's emerging priorities. The Council requests that Bonneville fund the production of a synthesis report of RRS projects for Council and ISRP review by January 2023. See Policy Issue I.b.	\$392,923	\$392,923
73	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Umatilla Confederated Tribes (CTUIR)	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives), #2 (SAR calculations), and #3 (adjustment process) in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) and the Water Resource Development Act (Lower Snake River Compensation) for the Grande Ronde Supplementation program. See Policy Issue I.b., II.a. and II.b.	\$288,543	\$292,150
74	2007-127-00	East Fork of South Fork Salmon River Passage Restoration	Nez Perce Tribe	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$777,249	\$777,249

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75	2007-217-00	Walla Walla River Passage Operations and Maintenance (O&M)	Gardena Farms Dist. 13	NA	Not Applicable	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issues III.a.	\$132,819	\$132,819
76	2007-224-00	Proposed change: Upper Columbia Habitat Implementation Program From: Okanogan Subbasin Habitat Implementation Program, to reflect proposed geographic scope expansion	Colville Confederated Tribes (CCT)	Conditional	Conditional	Project will subsume Project #1996-042-00, as proposed by CCT and supported by Bonneville, and be implemented as reviewed. Bonneville and Sponsor to address conditions for Project #1996-042-00: #1 (objectives), #2 (evaluation and adjustment), and #3 (outcomes) in project documentation, and consider other condition and address if appropriate. For Project #2007-224-00: Bonneville and Sponsor to consider conditions and address in project documentation if appropriate. As per agreement between CCT and Bonneville, new project number will be assigned. See Policy Issue 1.a.	\$2,304,333	\$2,330,638
77	2007-268-00	Expense Idaho Watershed Habitat Restoration	Custer Soil and Water Conservation District	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$285,000	\$285,000
78	2007-393-00	PROTECT & RESTORE NE OR & SE WA WATERSHED HABITAT	Nez Perce Tribe	NA	Not Applicable	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issues III.a.	\$500,000	\$500,000
79	2007-394-00	Upper Salmon Basin Habitat Restoration	Idaho Governor's Office of Species Conservation	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$455,994	\$461,693



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80	2007-395-00	Protect & Restore Lochsa Watershed	Nez Perce Tribe Department of Fisheries Resources Management: Watershed Division	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) in project documentation. See Policy Issue I.a.	\$913,428	\$913,428
81	2007-396-00	Walla Walla Basinwide Tributary Passage and Flow	Walla Walla Basin Watershed Council	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives), #2 (progress by objective), and #5 (explanation of aquifer recharge activities) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$666,032	\$666,032
82	2007-397-00	John Day Watershed Restoration	Confederated Tribes of the Warm Springs Reservation of Oregon	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issue III.b.	\$2,501,413	\$2,860,895
83	2007-398-00	Yakima Tributary Access & Habitat Program	Washington Resource Conservation and Development	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #3 (project selection and prioritization) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$801,476	\$801,476
84	2007-399-00	Upper Salmon Screening Tributary Passage	Idaho Department of Fish and Game	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$1,012,500	\$1,140,156
85	2007-401-00	Kelt Reconditioning and Reproductive Success Evaluation Research	Columbia River Inter-Tribal Fish Commission	Conditional	Conditional	Bonneville and Sponsor to consider condition #1 (plan) and address in project documentation if appropriate. Continue coordination of reconditioned steelhead kelt activities in the basin (i.e., projects: #1996-040-00, #1983-350-00, #1988-115-25). See Policy Issue I.b.	\$1,679,648	\$1,679,648

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86	2007-402-00	Snake River Sockeye Captive Propagation	Idaho Department of Fish and Game	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program) for the Snake River Sockeye program. See Policy Issue I.b., II.a. and II.b.	\$4,438,261	\$4,495,129
87	2008-102-00	Okanogan Habitat Acquisition and Restoration	Bonneville Power Administration and CCT	Conditional	Conditional	Bonneville and Sponsor to confirm that the role of this project is for O&M, and not a habitat implementation project, and confirm project title ( <i>Upper Columbia Land Operations and Maintenance</i> ). Bonneville and Sponsor to consider condition #1 (coordination) and address in project documentation if appropriate.	\$424,293	\$429,597
88	2008-104-00	Land and Water Acquisition	Confederated Tribes of the Colville Reservation (CTCR)	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. Continue to coordinate with project #2002-013-01 (Columbia Basin Water Transactions).	\$1,647,950	\$1,668,549
89	2008-202-00	CTUIR Tucannon Basin Fish Habitat Enhancement Project	Confederated Tribes of Umatilla Indian Reservation (CTUIR)	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #2 (methods) in project documentation. See Policy Issue I.a.	\$472,258	\$478,162
90	2008-206-00	Instream Flow Restoration	Confederated Tribes of the Umatilla Indian Reservation	Response	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #2 (scope) in project documentation. Continue to coordinate with project #2002-013-01 (Columbia Basin Water Transactions).	\$169,341	\$171,457
91	2008-207-00	CTUIR Priority Stream Corridor Conservation and Protection (Umatilla Tribe Protection and Capital Acquisition)	Confederated Tribes of the Umatilla Indian Reservation	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (evaluation and adjustment), #2 (restoration sites), #3 (application of monitoring data), and #4 (outcomes) in project documentation. See Policy Issue I.a.	\$50,625	\$692,258

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92	2008-301-00	Habitat Restoration Planning, Design, and Implementation within the Boundaries of the Confederated Tribes of the Warm Springs Reservation of Oregon, Lower Deschutes River, Oregon Project	Fish Habitat Program, Fisheries Department, Confederated Tribes of the Warm Springs Reservation of Oregon	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #2 (linkages with other projects) in project documentation. See Policy Issue I.a.	\$347,700	\$1,043,937
93	2008-306-00	Deschutes River Fall Chinook Research and Monitoring	Confederated Tribes of Warm Springs	TBD	No proposal received	No Proposal narrative received. Outyear implementation (FY2023) dependent on favorable review.	\$225,755	\$228,577
94	2008-311-00	Natural Production Management and Monitoring	Confederated Tribes of Warm Springs	TBD	No proposal received	No Proposal narrative received. Outyear implementation (FY2023) dependent on favorable review.	\$421,864	\$421,167
95	2008-503-00	Studies on Factors Limiting Abundance of Okanogan and Wenatchee Sockeye Salmon	Columbia River Inter-Tribal Fish Commission (CRITFC)	Conditional	Conditional	Bonneville and Sponsor to address condition #3 (biological objectives) and #4 (migration results) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$249,802	\$203,686
96	2008-603-00	Pahsimeroi River Habitat	Idaho Governor's Office of Species Conservation	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$1,171,952	\$1,186,601

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97	2008-604-00	Potlatch River Watershed Habitat Improvements	Idaho Governor's Office of Species Conservation	Response	Conditional	Bonneville and Sponsor to address final comment 1 (objectives) and 2 (M&E support) in project documentation. See Policy Issue I.a.	\$1,072,441	\$1,085,847
98	2008-608-00	Idaho MOA/Fish Accord Water Transactions	Idaho Governor's Office of Species Conservation	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. Continue to coordinate with project #2002-013-01 (Columbia Basin Water Transactions).	\$303,750	\$307,547
99	2008-904-00	Salmon River Basin Nutrient Enhancement	The Shoshone-Bannock Tribes	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (future work), #2 (project actions), #3 (objectives), and #4 (evaluation and adjustment) in project documentation. See Policy Issue I.a.	\$430,312	\$358,527
100	2008-905-00	Supplementation Projects	Shoshone-Bannock Tribes	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives), #2 (methods), #3 (adjustment process) in project documentation. Condition #4 (captive broodstock) will dependent upon a Step Review prior to implementation (see Project #2008-906-00). See Policy Issue I.b.	\$607,500	\$648,000
101	2008-906-00	Crystal Springs Hatchery Planning, Operations and Maintenance	Shoshone-Bannock Tribes	NA	Not Applicable	In Step review. Bonneville and Sponsor to take review remarks into consideration in anticipated step submittal. This project is intended to support hatchery mitigation authorized under the Northwest Power Act (Council's Fish and Wildlife Program). See Policy Issue I.b.	\$1,114,210	\$1,032,809
102	2008-907-00	Genetic Assessment of Columbia River Stocks	Columbia River Inter-Tribal Fish Commission	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issue I.b.	\$1,242,682	\$1,203,237

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103	2009-002-00	Status and Trend Annual Reporting and Information Management	Yakama Nation Fisheries	NA	Not Applicable	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issues III.a.	\$375,987	\$372,251
104	2009-003-00	Upper Columbia Habitat Restoration	Confederated Tribes and Bands of the Yakama Nation	Response	Conditional	Bonneville and Sponsor to address condition #1 (objectives) in project documentation. See Policy Issue I.a.	\$5,739,308	\$5,811,049
105	2009-004-00	Evaluating salmonid and stream ecosystem response to conservation measures and environmental stressors in the Columbia River basin	Columbia River Inter-Tribal Fish Commission	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$827,890	\$827,890
106	2009-009-00	Basinwide Supplementation Evaluation Project	Columbia River Inter-tribal Fish Commission	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issue I.b.	\$809,688	\$784,688
107	2009-012-00	Willamette Bi-Op Habitat Restoration Project	Oregon Watershed Enhancement Board	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issue III.b.	\$800,000	\$800,000
108	2009-014-00	Biomonitoring of Fish Habitat Enhancement	Umatilla Confederated Tribes (CTUIR)	Response	Does not meet	Sponsor is planning to revise the proposal by December 31, 2022, for review and recommendation.	\$374,269	\$370,969

	A	B	C	D	E	F	G	H
	Submitted Project Proposal Form			ISRP Review Criteria		Draft Council Recommendation	BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final		2021	2022
109	2009-026-00	Umatilla Tribe Ceded Area Juvenile & Adult Fish Passage Improvement	Confederated Tribes of the Umatilla Indian Reservation	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives), #2 (procedures), and #4 (database availability) in project documentation, and to consider other conditions and address if appropriate. See Policy Issue I.a.	\$523,544	\$530,088
110	2010-001-00	Upper Columbia Programmatic Habitat	Upper Columbia Salmon Recovery Board	Response	Conditional	Bonneville and Sponsor to address condition #1 (objectives) in project documentation. See Policy Issues I.a. and III.b.	\$2,000,000	\$2,000,000
111	2010-003-00	Lower South Fork Clearwater/ Slate Creek Watershed Restoration	Nez Perce Tribe	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$758,222	\$758,222
112	2010-004-00	CREST Estuary Habitat Restoration	Columbia River Estuary Study Taskforce (CREST)	Response	Conditional	Bonneville and Sponsor to address condition #2 (link methods to objectives), #3 and #4 (results) in future project proposals.	\$3,266,500	\$4,729,729
113	2010-030-00	Yakima Steelhead VSP Project	Yakama Nation	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$569,408	\$569,408
114	2010-031-00	IDFG Genetic Monitoring of Snake River steelhead and Chinook Salmon	Idaho Department of Fish and Game	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issue I.b.	\$1,094,749	\$1,790,622

	A	B	C	D	E	F	G	H
	Submitted Project Proposal Form			ISRP Review Criteria		Draft Council Recommendation	BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final		2021	2022
115	2010-033-00	Reproductive Success of Hatchery and Natural Origin Steelhead in the Methow	Washington Department of Fish and Wildlife	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation and confirm project timeline. The Council requests that Bonneville fund the production of a synthesis report of RRS projects for Council and ISRP review by January 2023. See Policy Issue I.b.	\$236,448	\$239,404
116	2010-034-00	Upper Columbia Spring Chinook Salmon and Steelhead Juvenile and Adult Abundance, Productivity, and Spatial Structure Monitoring	Washington Department of Fish & Wildlife	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$1,000,114	\$1,000,114
117	2010-050-00	Tucannon River Steelhead Supplementation M&E	Washington Dept of Fish and Wildlife	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. This project supports monitoring and evaluation for existing production for hatchery mitigation authorized under the Water Resource Development Act (Lower Snake River Compensation). See Policy Issue I.b.	\$305,825	\$309,647
118	2010-057-00	Snake Basin Anadromous Assessments	Nez Perce Tribe	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issue I.b.	\$0	\$1,114,406
119	2010-070-00	Lower Columbia River Estuary Scoping and Implementation	Washington Department of Fish and Wildlife (WDFW)	Response	Conditional	Bonneville and Sponsor to address condition #1 (objectives) and #2 (ecological benefits) in future project proposals.	\$455,625	\$461,320
120	2010-072-00	Lemhi River Restoration	Idaho Office of Species Conservation (OSC)	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$1,308,516	\$1,324,872

	A	B	C	D	E	F	G	H
	Submitted Project Proposal Form			ISRP Review Criteria		Draft Council Recommendation	BPA Start-of-Year Budget	
	Project #	Title	Sponsor	Prelim	Final		2021	2022
121	2010-073-00	Columbia Land Trust Estuarine Restoration	Columbia Land Trust	Meets	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation.	\$6,564,271	\$6,848,092
122	2010-077-00	Tucannon River Programmatic Habitat Project	Snake River Salmon Recovery Board (SRSRB)	Response	Meets	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issue III.b.	\$2,218,570	\$1,368,570
123	2010-086-00	Protect and Restore Crooked and American River Watersheds	Nez Perce Tribe Department of Fisheries Resources Management Watershed Division	Conditional	Conditional	Bonneville and Sponsor to address condition #1 (objectives) in project documentation. See Policy Issue I.a.	\$754,374	\$754,374
124	2012-015-00	Cowlitz Indian Tribe Habitat Restoration and Conservation Program	Cowlitz Indian Tribe	Response	Conditional	Bonneville and Sponsor to address condition #1 (restoration actions) and #2 (benefits) in future project documentation.	\$45,000	\$45,000



# Anadromous Fish Habitat and Hatchery Project Review (AFHH)

April 2022

# Presentation outline

- Introduction to category review
- AFHH project general highlights
  - Habitat
  - Hatchery
- Independent science review
- Summary of public comments received
- Council decision document

# 2017-2022 Category Review of the Fish and Wildlife Program

245 projects in 4 categories

<b>Reviews this series</b>	
✓	Wildlife (29)
✓	Mainstem and Program Support (48)
✓	Resident Fish and Sturgeon (44)
	Anadromous Fish Habitat & Hatchery (124)

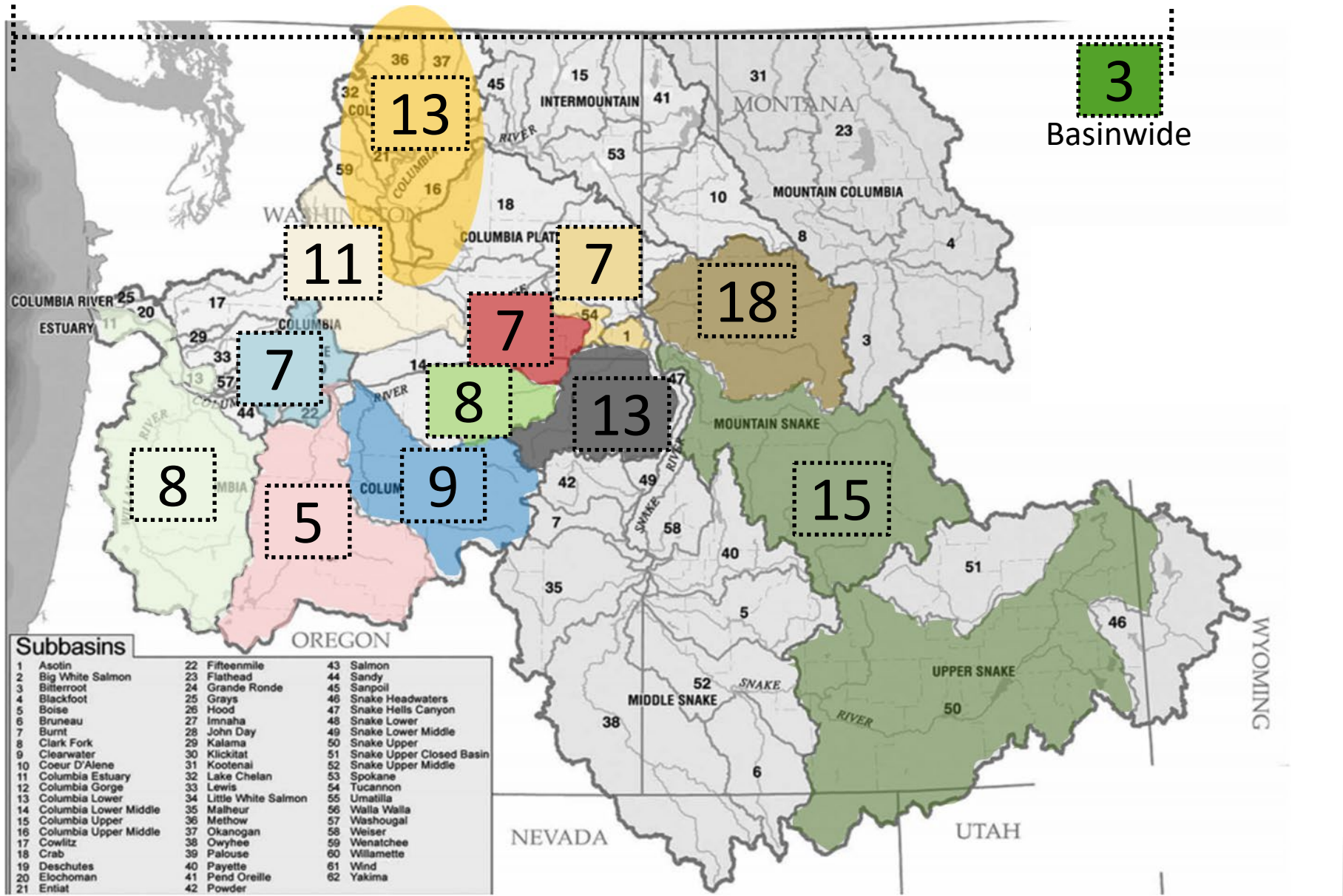
# Review Schedule

<b>Anadromous Fish Habitat and Hatchery Review Steps</b>	<b>Date</b>	
Review Process Start Date	February 2, 2021	✓
Review Materials Due	May 3, 2021	✓
Project Sponsor Presentations	June and July 2021	✓
ISRP Preliminary Report	September 23, 2021	✓
Public Comment begins	September 24, 2021	✓
Responses Due	November 22, 2021	✓
ISRP Final Report	February 10, 2022	✓
ISRP Presentation to Council	February 2022	✓
Public Comment ends	March 10, 2022	✓
Committee Recommendations	March 2022	✓
<b>Council Recommendations</b>	<b>April 2022</b>	

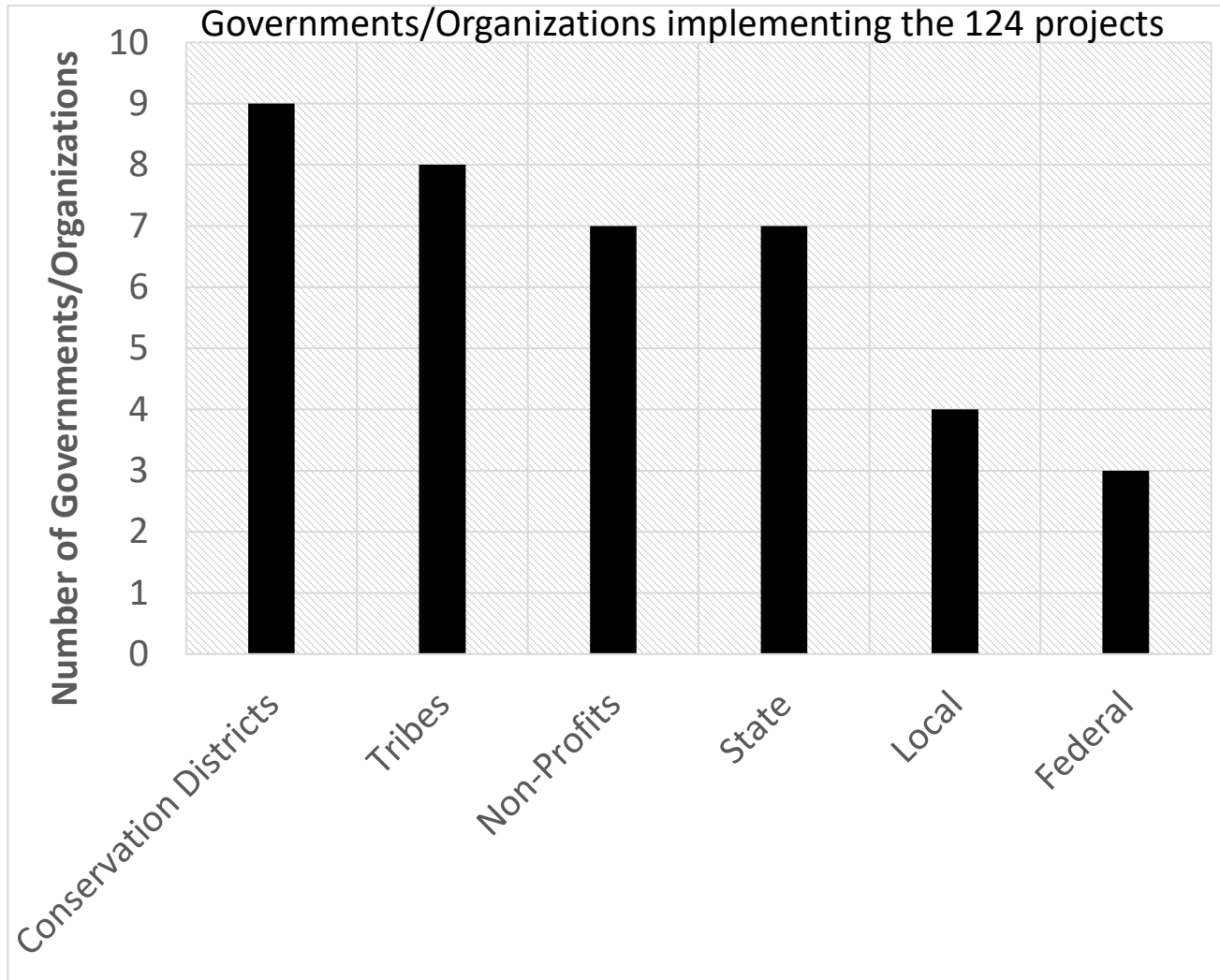
# Presentation outline

- Introduction to category review
- AFHH project general highlights
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  - Hatchery
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# Anadromous Fish Habitat and Hatchery Project Review – 124 projects



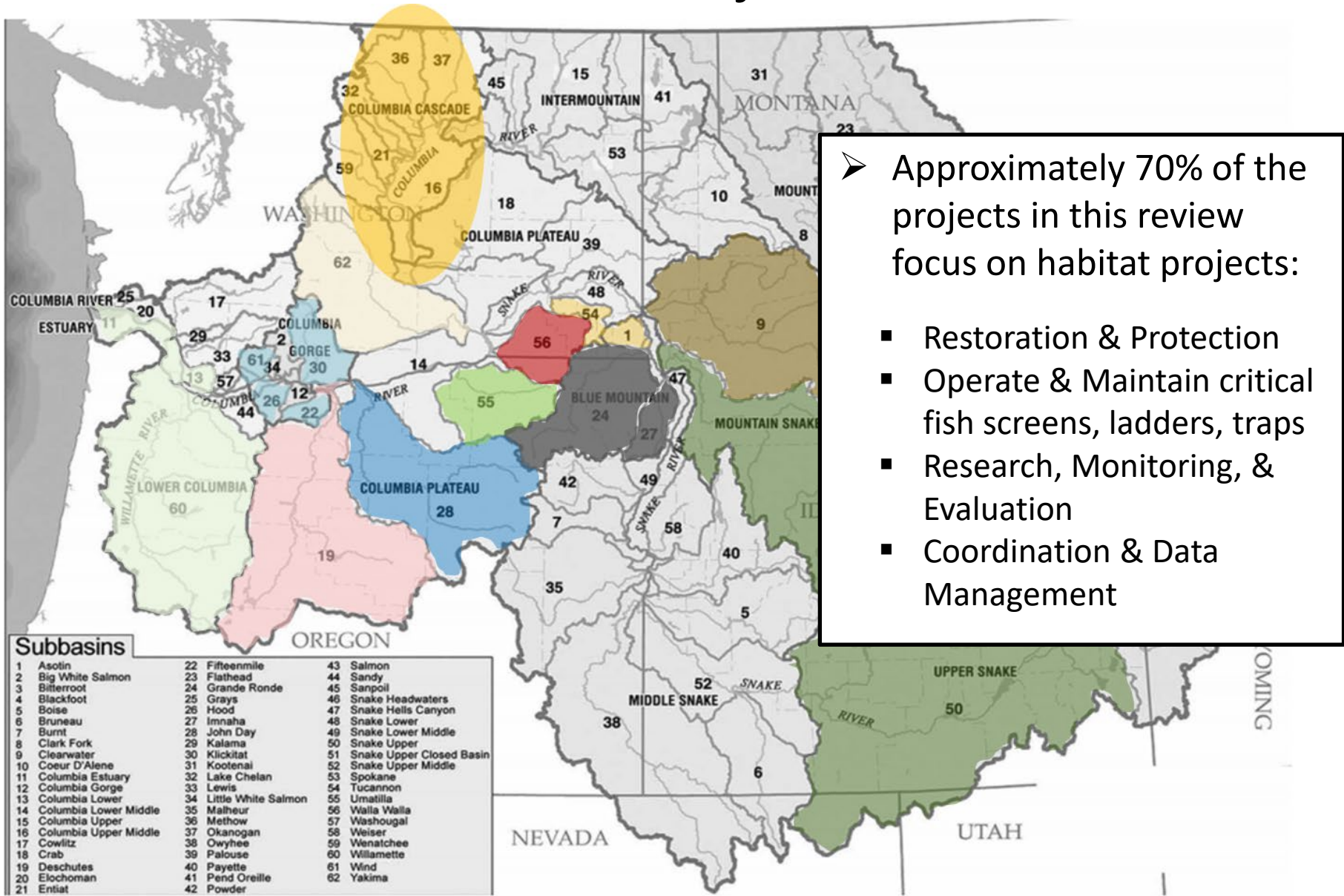
# Anadromous Fish Habitat and Hatchery Project Review – 124 projects



- 38 organizations and governments implementing these projects
- Extensive collaboration and coordination within and among projects
- Approximately \$134 million contracted (FY20) with a total confirmed cost share of approximately \$463 million leveraged over time by these projects



# Habitat Projects

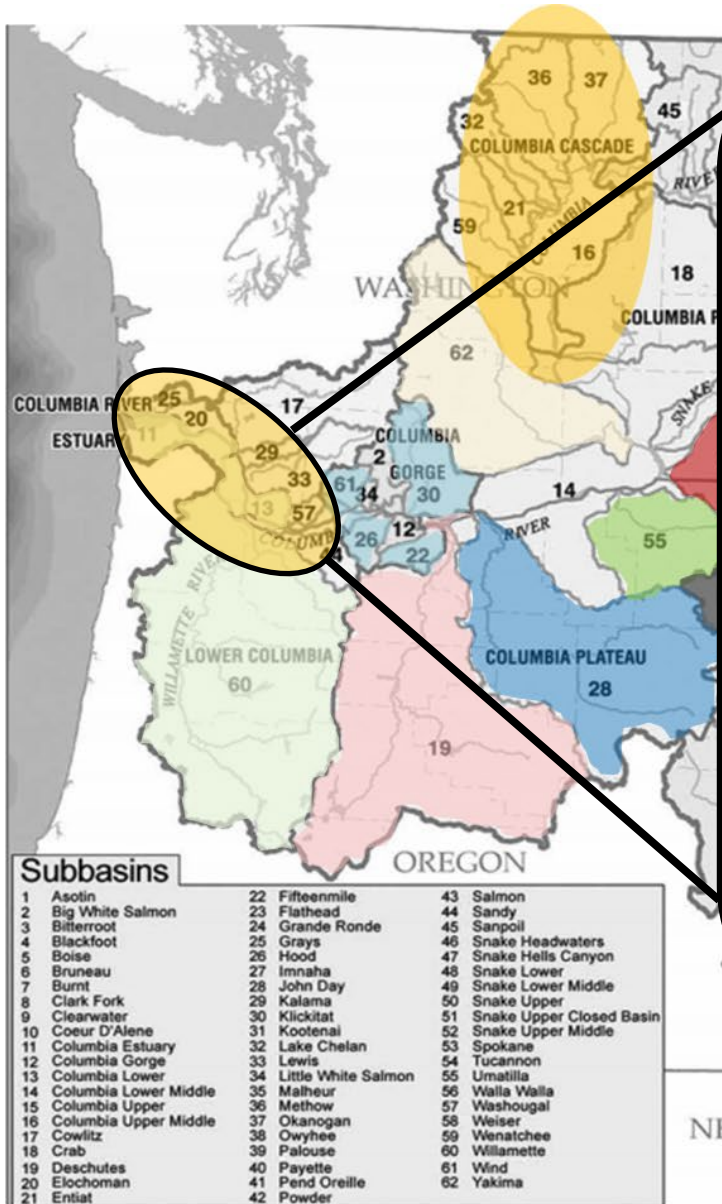


## Subbasins

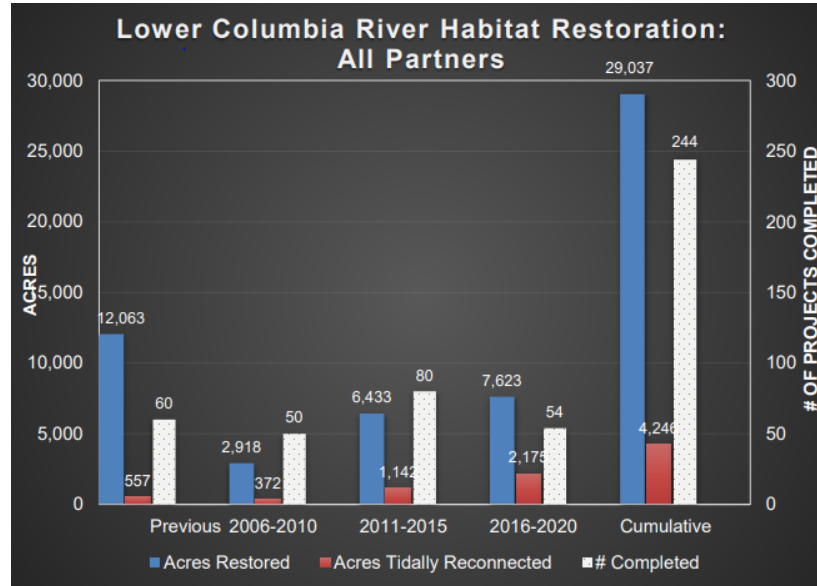
1 Asotin	22 Fifteenmile	43 Salmon
2 Big White Salmon	23 Flathead	44 Sandy
3 Bitterroot	24 Grande Ronde	45 Sanpoll
4 Blackfoot	25 Grays	46 Snake Headwaters
5 Boise	26 Hood	47 Snake Hells Canyon
6 Bruneau	27 Imnaha	48 Snake Lower
7 Burnt	28 John Day	49 Snake Lower Middle
8 Clark Fork	29 Kalama	50 Snake Upper
9 Clearwater	30 Klickitat	51 Snake Upper Closed Basin
10 Coeur D'Alene	31 Kootenai	52 Snake Upper Middle
11 Columbia Estuary	32 Lake Chelan	53 Spokane
12 Columbia Gorge	33 Lewis	54 Tucannon
13 Columbia Lower	34 Little White Salmon	55 Umatilla
14 Columbia Lower Middle	35 Malheur	56 Walla Walla
15 Columbia Upper	36 Methow	57 Washougal
16 Columbia Upper Middle	37 Okanogan	58 Weiser
17 Cowlitz	38 Owyhee	59 Wenatchee
18 Crab	39 Palouse	60 Willamette
19 Deschutes	40 Payette	61 Wind
20 Elochoman	41 Pend Oreille	62 Yakima
21 Entiat	42 Powder	



# Habitat Projects



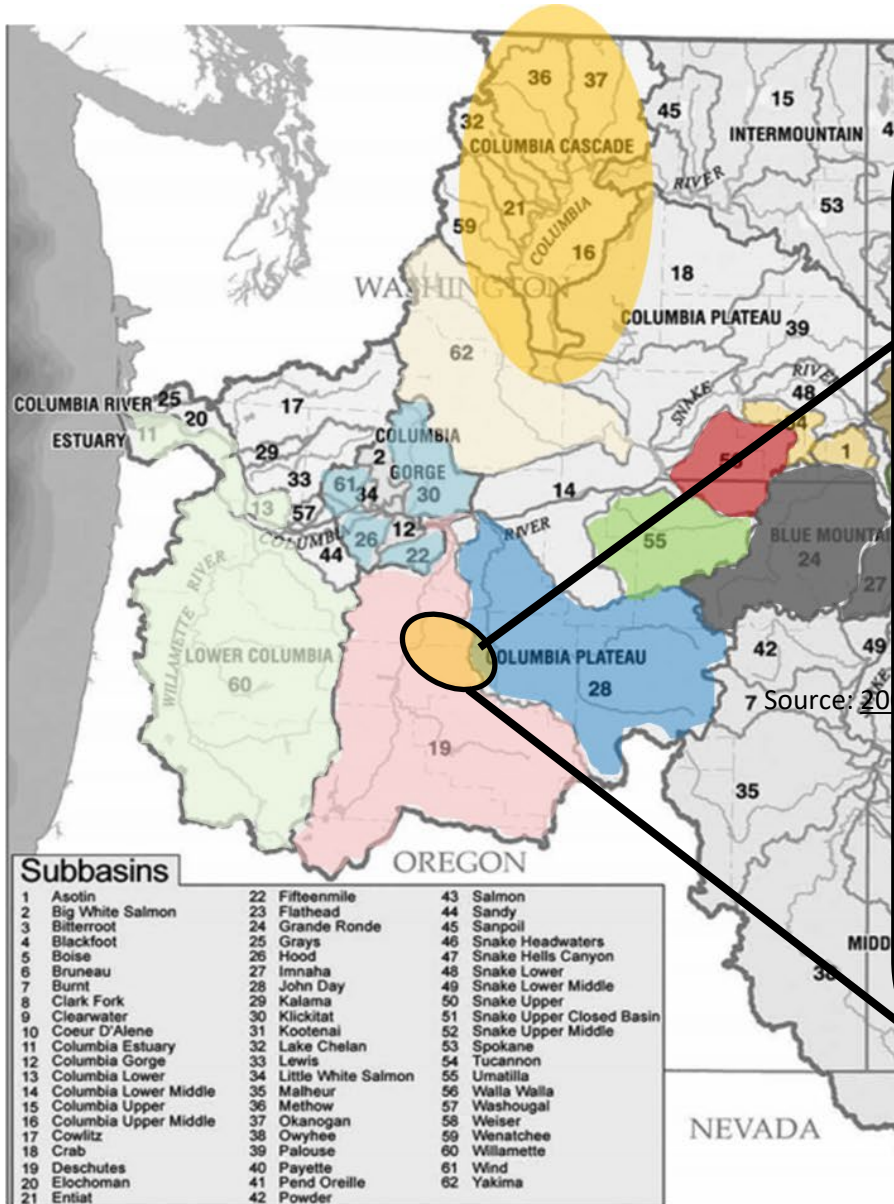
## Lower Columbia River Restoration



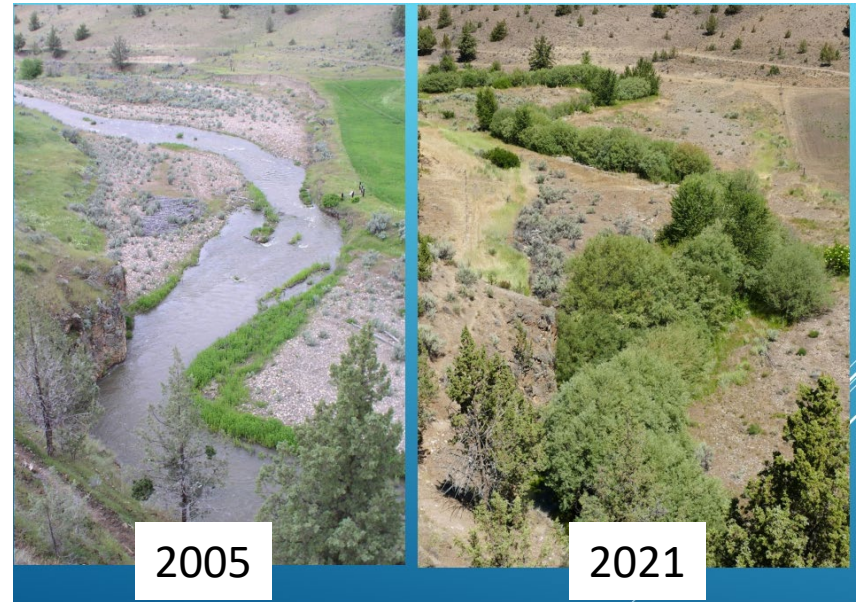
Source: [2003-011-00](#)

- Over 200 projects completed
- Over 29,000 acres of habitat protected, restored, and enhanced
- Over 4,000 acres tidally reconnected

# Habitat Projects



## Trout Creek watershed (Deschutes)

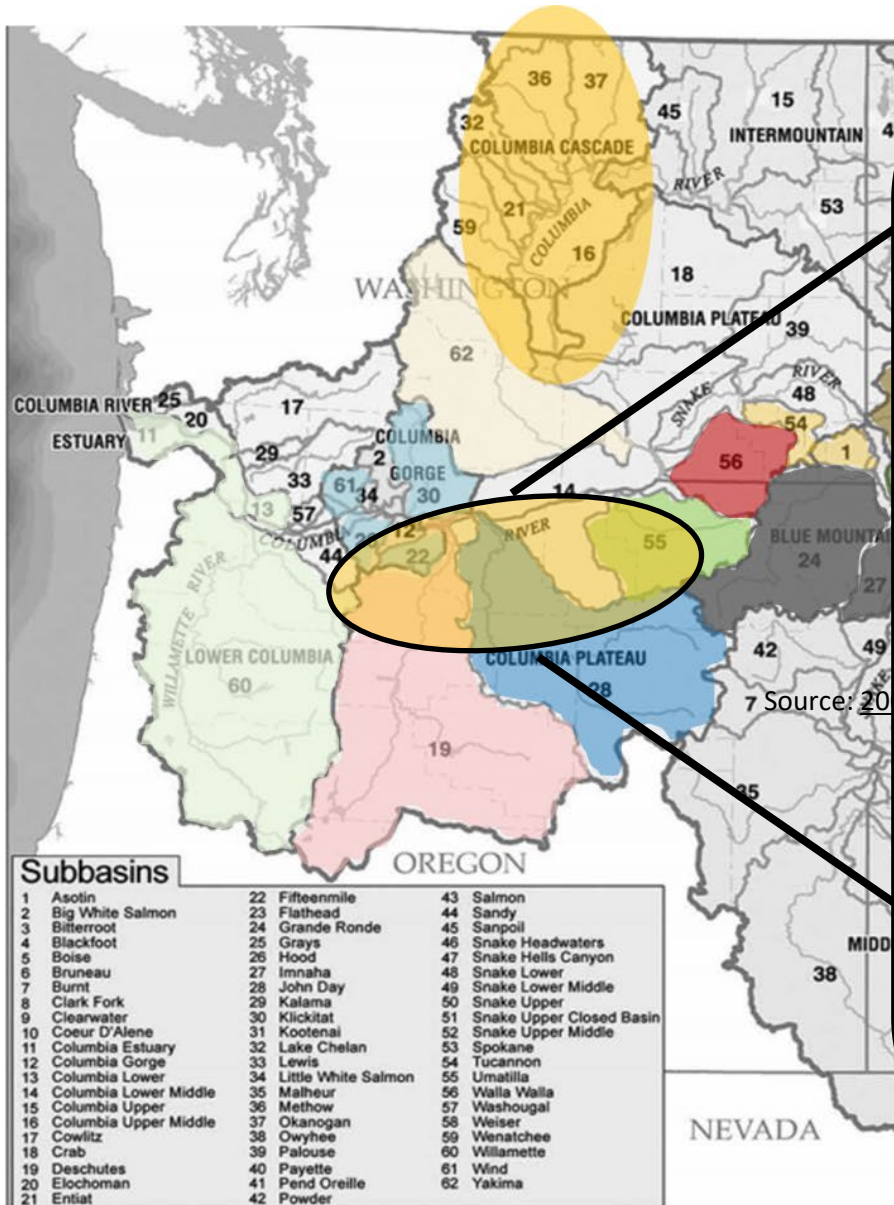


Source: [1994-042-00](#) and [1998-028-00](#)

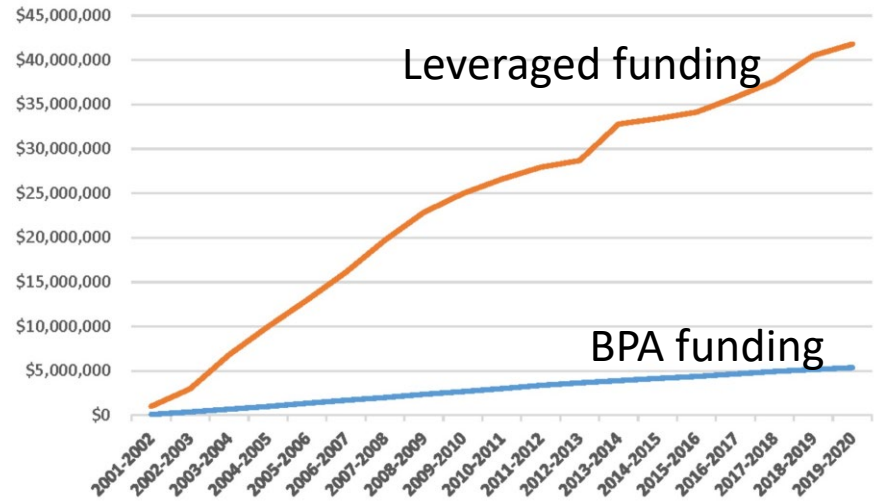
- Restored function to over 13 miles of stream channel & floodplain habitat
- Removal of irrigation/passage barriers, opened an additional 6 miles of habitat to migrating adult steelhead



# Habitat Projects



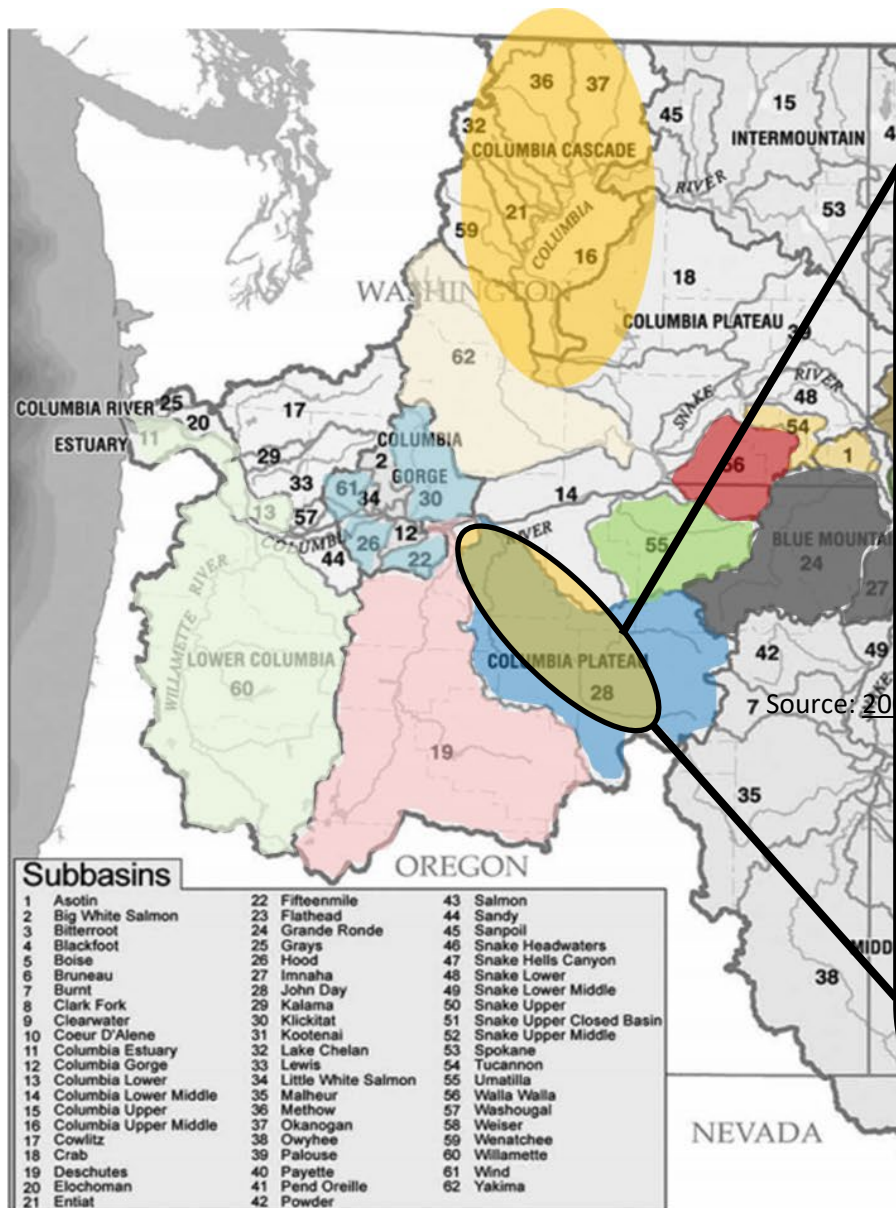
## Mid-Columbia Riparian Buffer Projects



Source: 2001-021-00, 2002-035-00, 2002-034-00

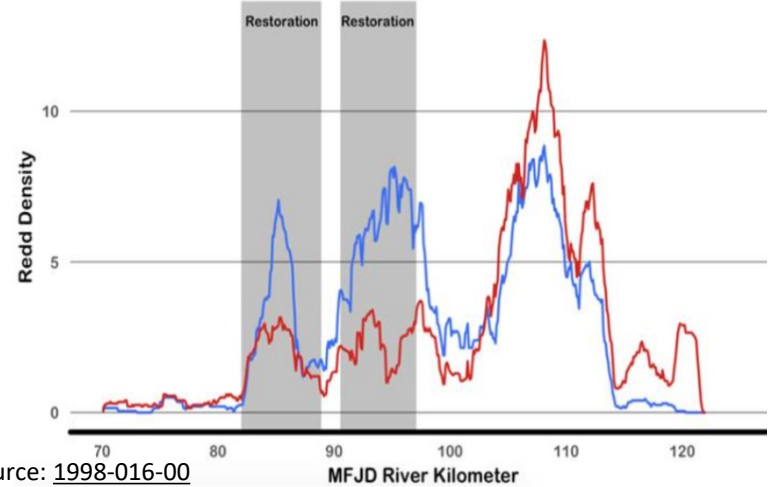
- Plan and implement protection of riparian and floodplain habitat on private lands
- Over 20,000 acres of buffers, nearly 1,000 stream miles protected
- Leverages BPA funds 8:1

# Habitat Projects



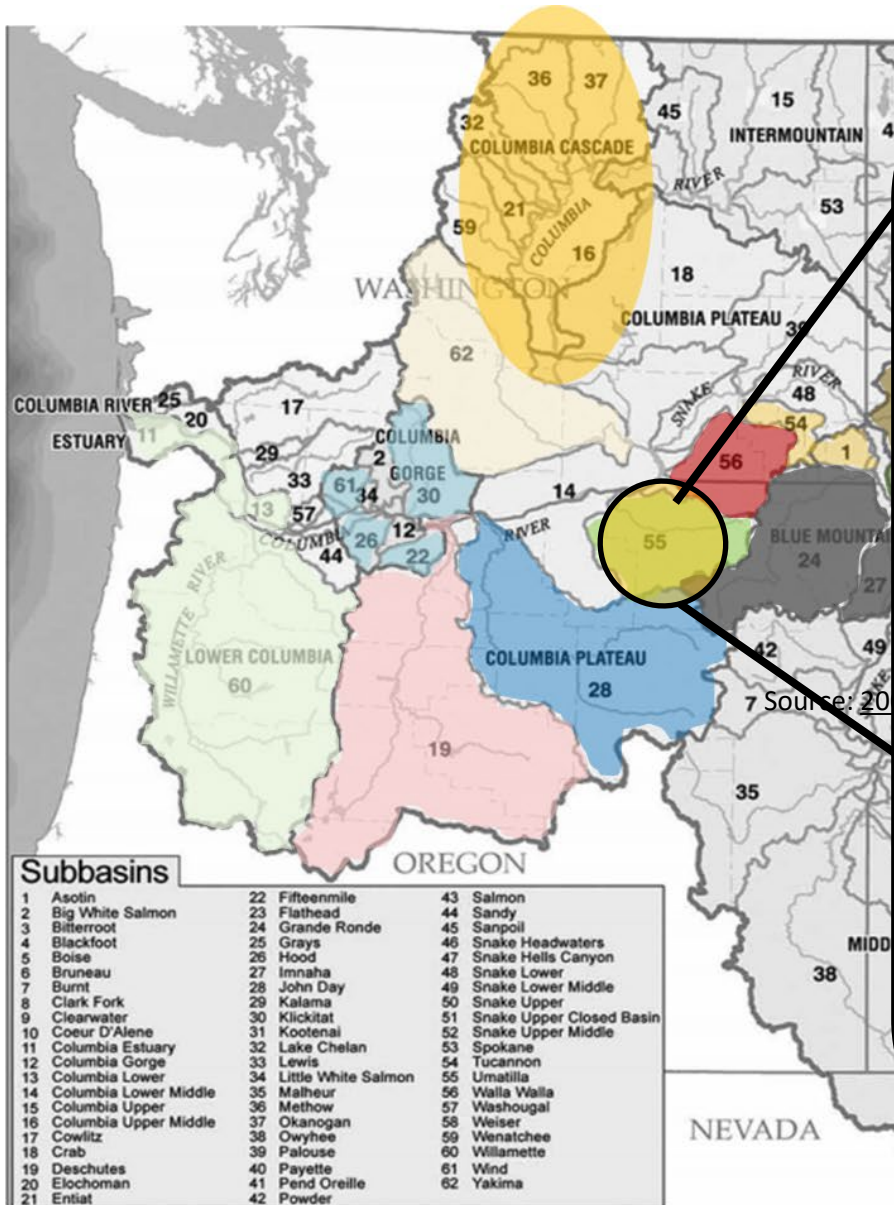
## RM&E – John Day Salmonid Monitoring to Inform Recovery

MFJD Chinook Redd Distribution Pre vs. Post Restoration



- Status and trends (e.g., fish abundance, distribution, survival)
- Incorporate data into regional planning and evaluation
- Closely integrate with management plans and habitat restoration projects

# Habitat Projects



## Umatilla Anadromous Fish Habitat

### ACCOMPLISHMENTS

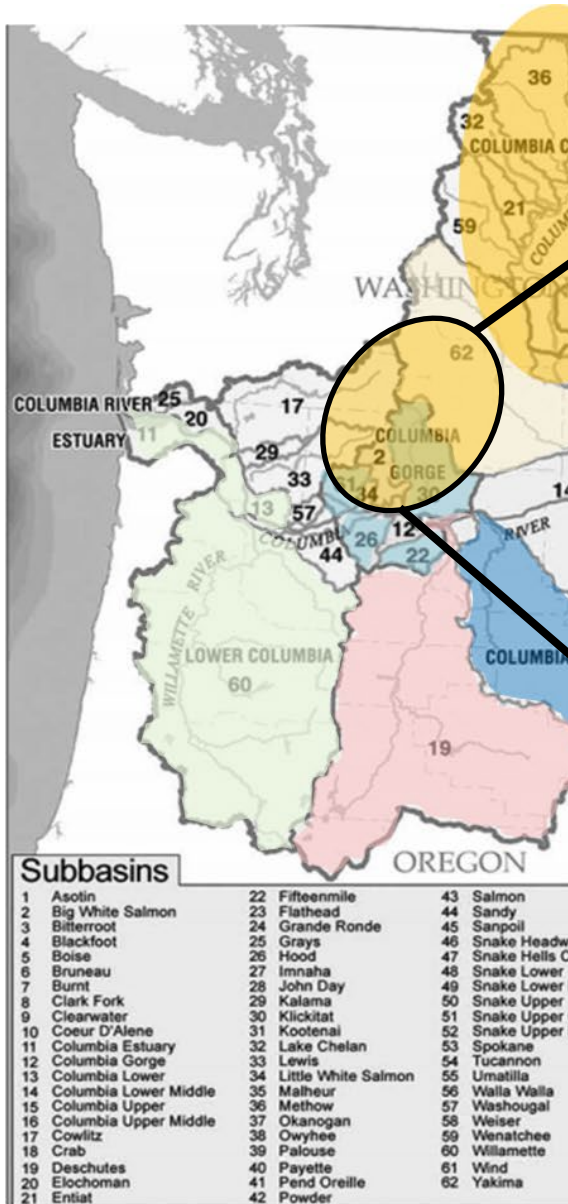
Enhancement Action	Metrics
Improved Streamflow (miles)	1,196
Floodplain Reconnected (acres)	617
Fish Passage (miles)	187
Planting (acres)	690
Instream Structures	932
Installed Logs (pieces)	3,159
Weed Treatment (acres)	4,100
Levee Removal (miles)	3.7

Source: [1987-100-01](#)

- Protect, enhance and restore the ecological processes and floodplain/watershed functions necessary to provide sustainable and healthy habitat for First Foods species.



# Habitat Projects



## Yakama Southern Territories Habitat



Source: [1997-056-00](#)

- Restore watershed processes to aid in the recovery of salmon stocks
- 1 example: Placement of logs and construction of complex wood structures occurred at 40 sites.

## Yakima Tributary Access/Habitat



Source: [2007-398-00](#)

## Yakama Reservation Watersheds

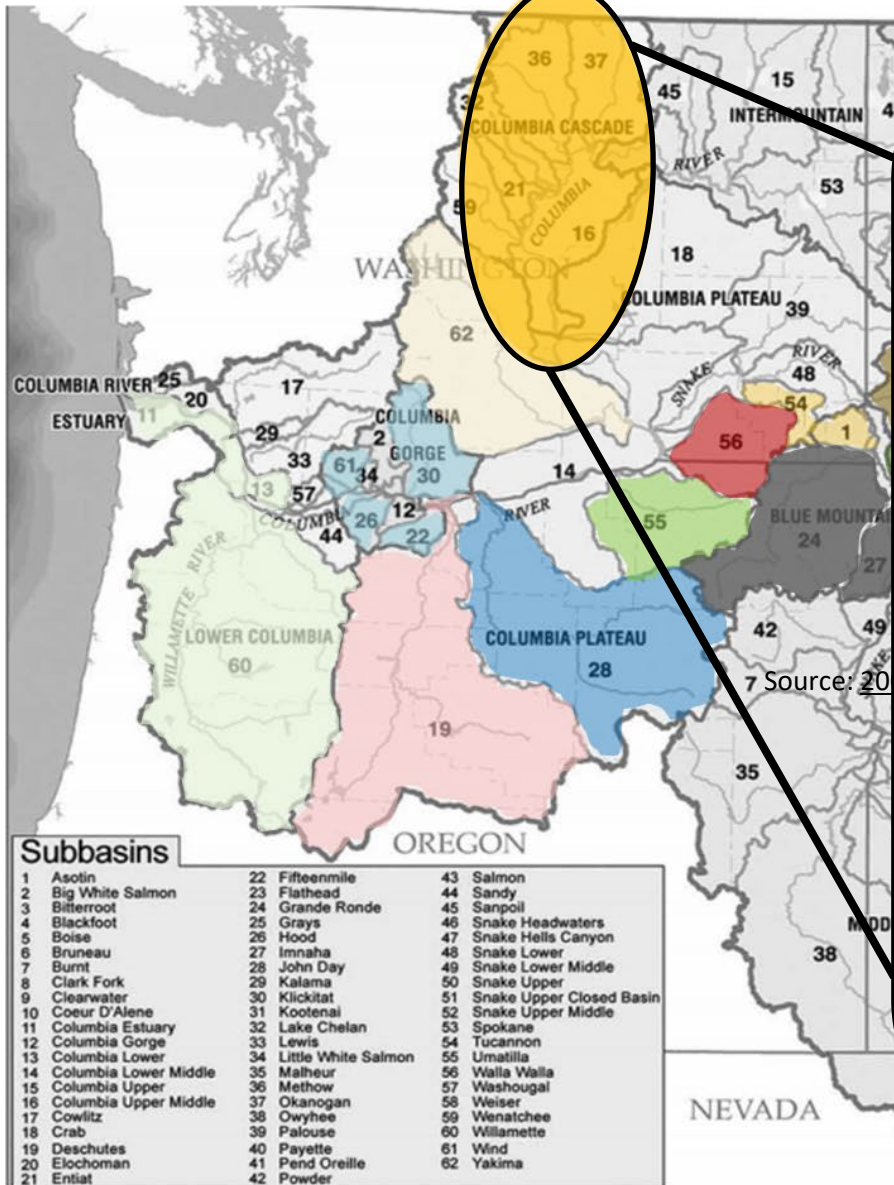


Source: [1996-035-01](#)

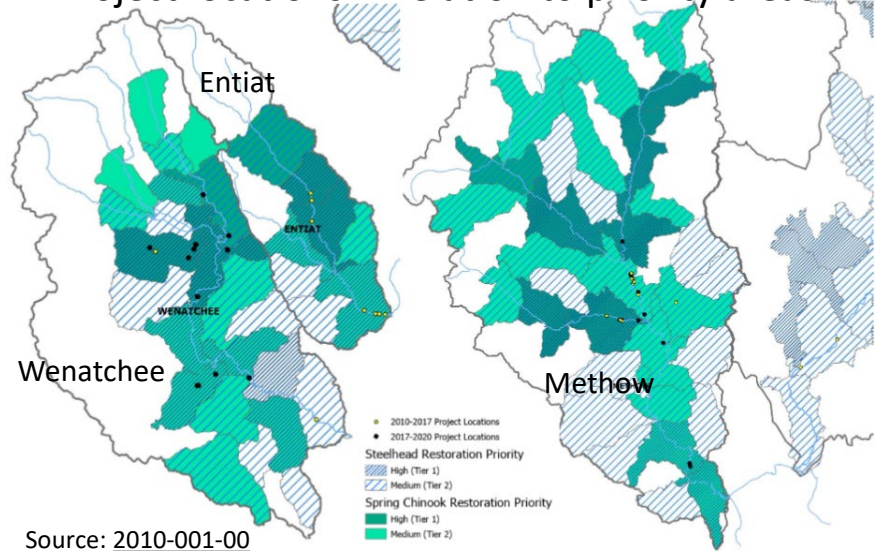
- Example: Removal of passage barriers

- Restored access into 238 miles of previously blocked habitat.
- Secured over 67 cfs of water to benefit instream flow

# Habitat Projects



## Upper Columbia Programmatic Habitat Project locations in relation to priority areas

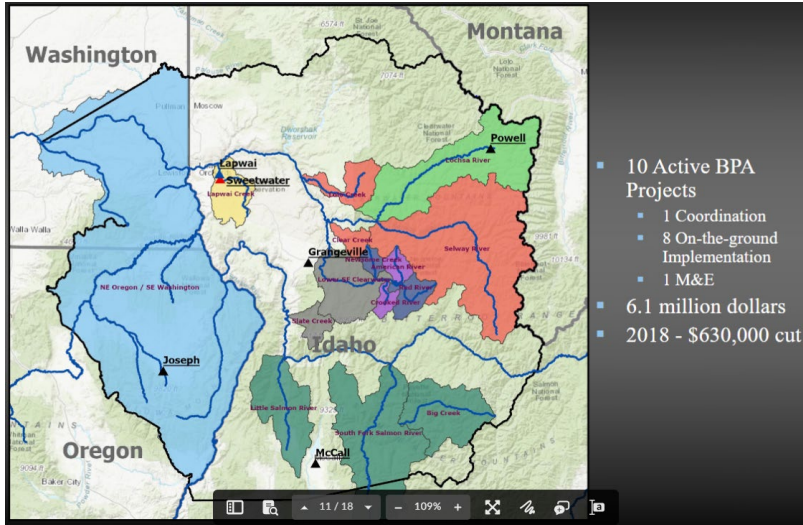


- Umbrella project coordination
- Project solicitation & review process
- Prioritization provides continuous pathway to restoration activities in the highest priority areas



# Habitat Projects

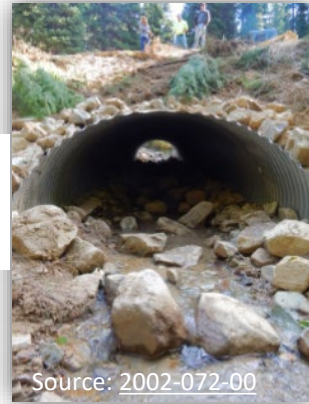
## Coordination projects



Source: [1997-060-00](#)

- Facilitate and coordinate an organized and efficient watershed/aquatic ecosystem restoration program
- Restoration focus area:
  - 13.3 million acres
  - 3 States
  - 6 National Forests

Replace fish barrier culverts to open habitat



12,300+ plants



Plantings to improve riparian health



Channel restoration



# Habitat Projects

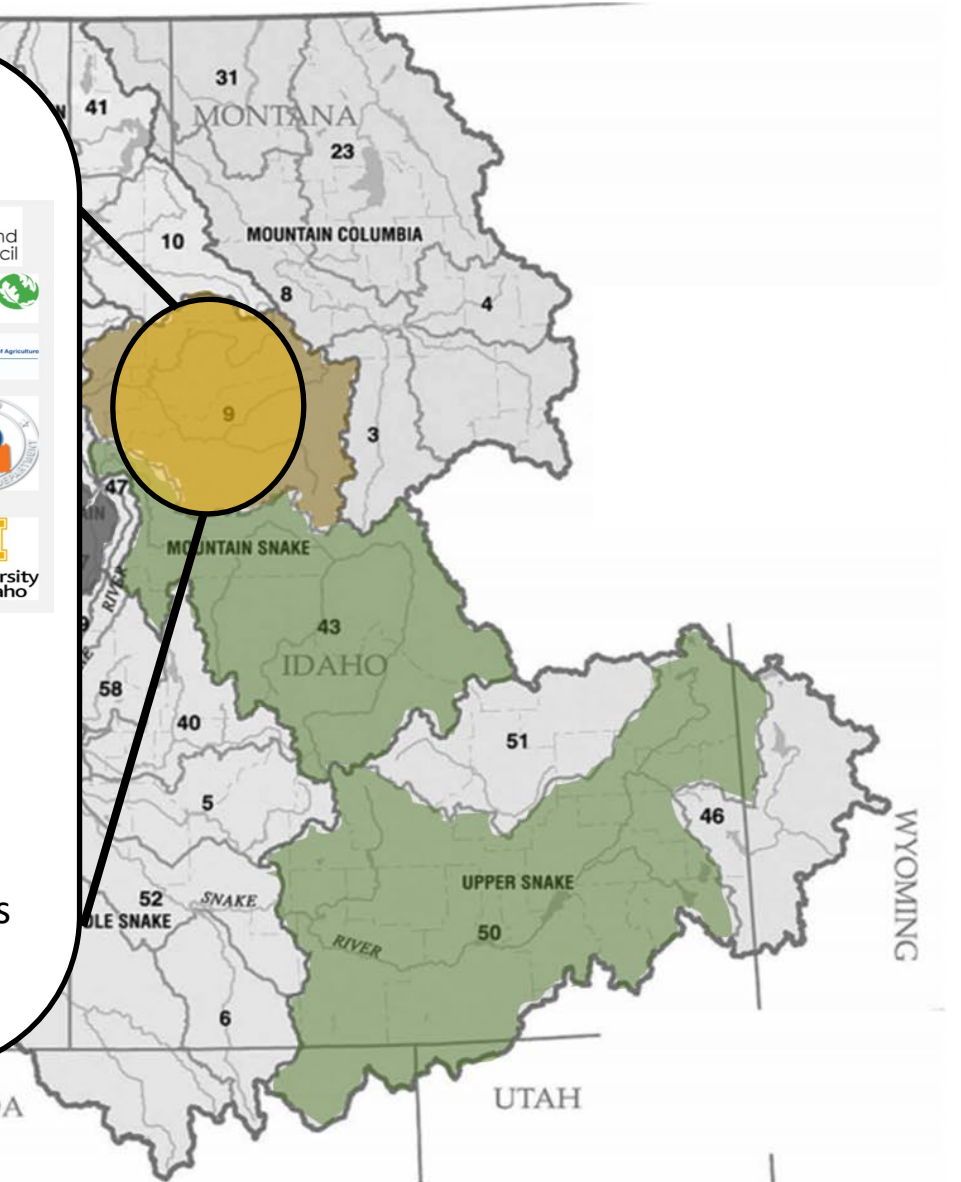
## Coordination projects

### PARTNERS IN RESTORATION



Source: [1996-086-00](#)

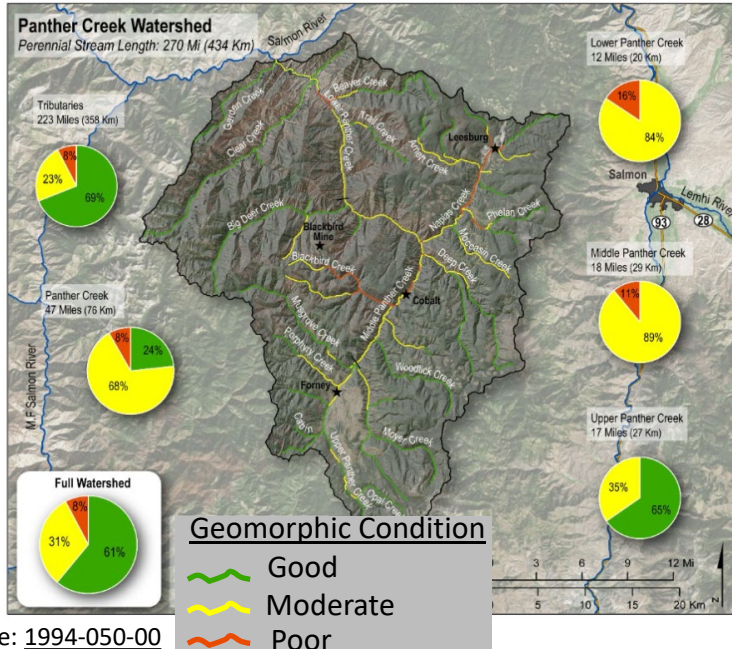
- Watershed scale coordination meetings, workshops
- Extensive coordination and partnerships
- Increase collaboration of watershed groups and the diversity in restoration projects



14	Columbia Upper	36	Methow	57	Washougal
15	Columbia Upper Middle	37	Okanogan	58	Weiser
16	Columbia Upper Middle	38	Owyhee	59	Wenatchee
17	Cowlitz	39	Palouse	60	Willamette
18	Crab	40	Payette	61	Wind
19	Deschutes	41	Pend Oreille	62	Yakima
20	Elochoman	42	Powder		
21	Entiat				

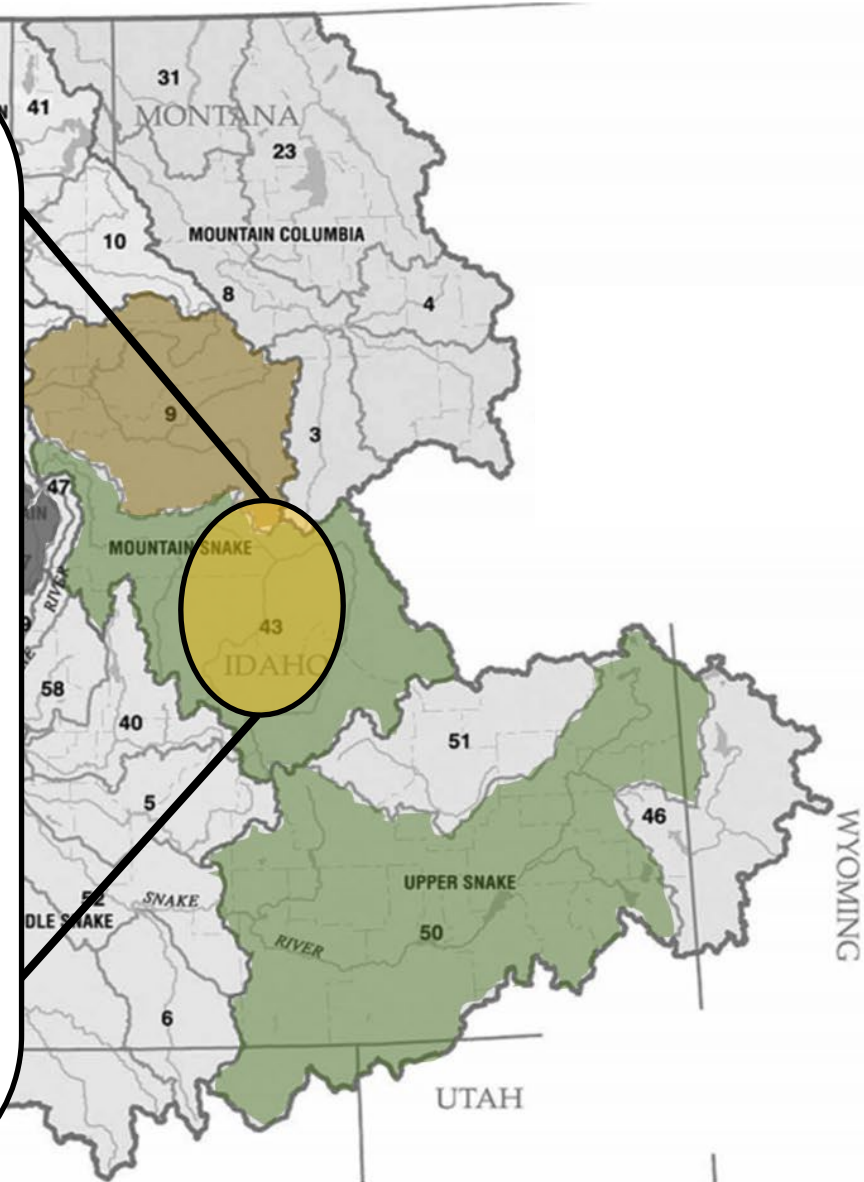
# Habitat Projects

## Salmon River Habitat Enhancement



Source: 1994-050-00

- Developed a watershed-scale approach to habitat restoration based on geomorphic assessments and strategic planning of the highest-priority actions
- Restoration plan for every reach (Panther Creek watershed)

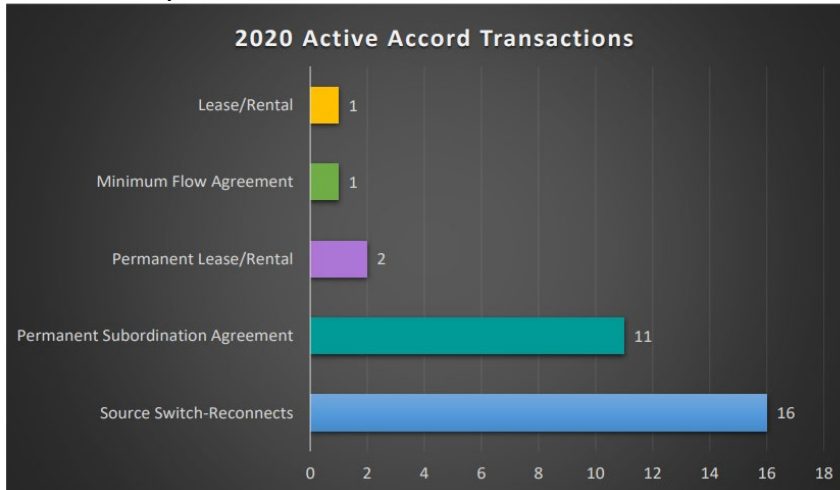




# Habitat Projects

## Idaho Water Transaction Project

### Water Acquisition Tools



Source: [2008-608-00](#)

- Over 30 active transactions
- Over 110 cfs protected
- Over 55 reach miles protected



2000



2018

12		
13		
14		
15		
16	37 Okanogan	58 Weiser
17	38 Owyhee	59 Wenatchee
18	39 Palouse	60 Willamette
19	40 Payette	61 Wind
20	41 Pend Oreille	62 Yakima
21	42 Powder	

NEVADA

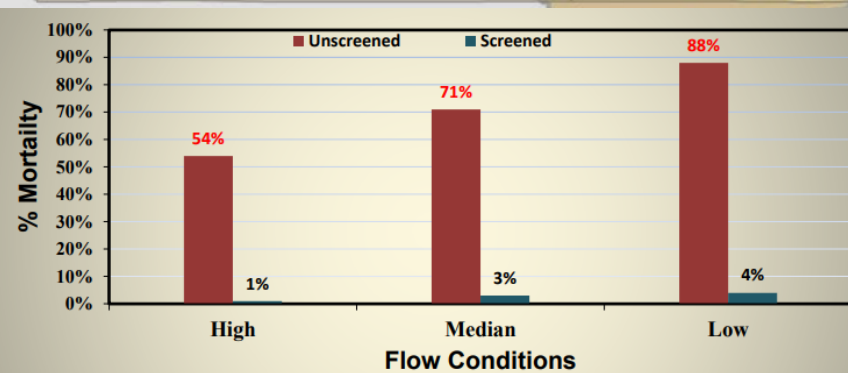
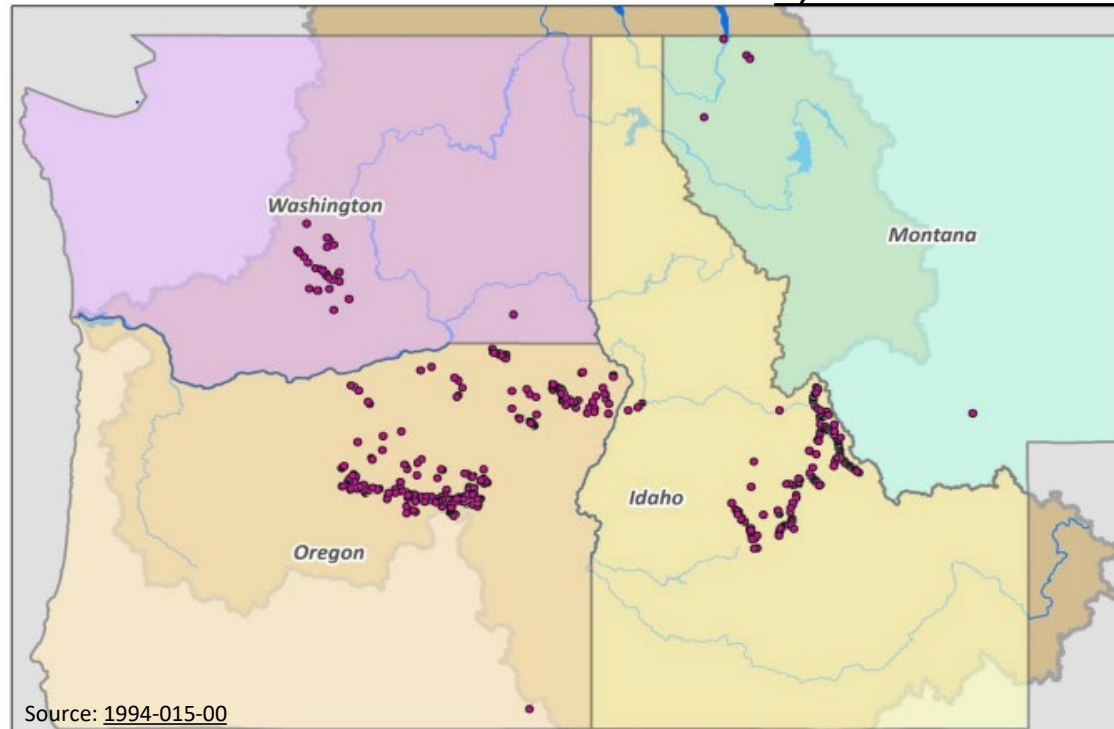
UTAH

# Habitat Projects

## Fish Screens and passage structures

1,041 fish screens

- Install, operate, & maintain fish screens
- Critical to fish survival
- Improve fish passage to tributary habitat
- Guided by Fish Screen Oversight Committee



Source: Walters et. al. 2012; summarized in [1994-015-00](#)



# Habitat Projects

## Fish Screens and passage structures

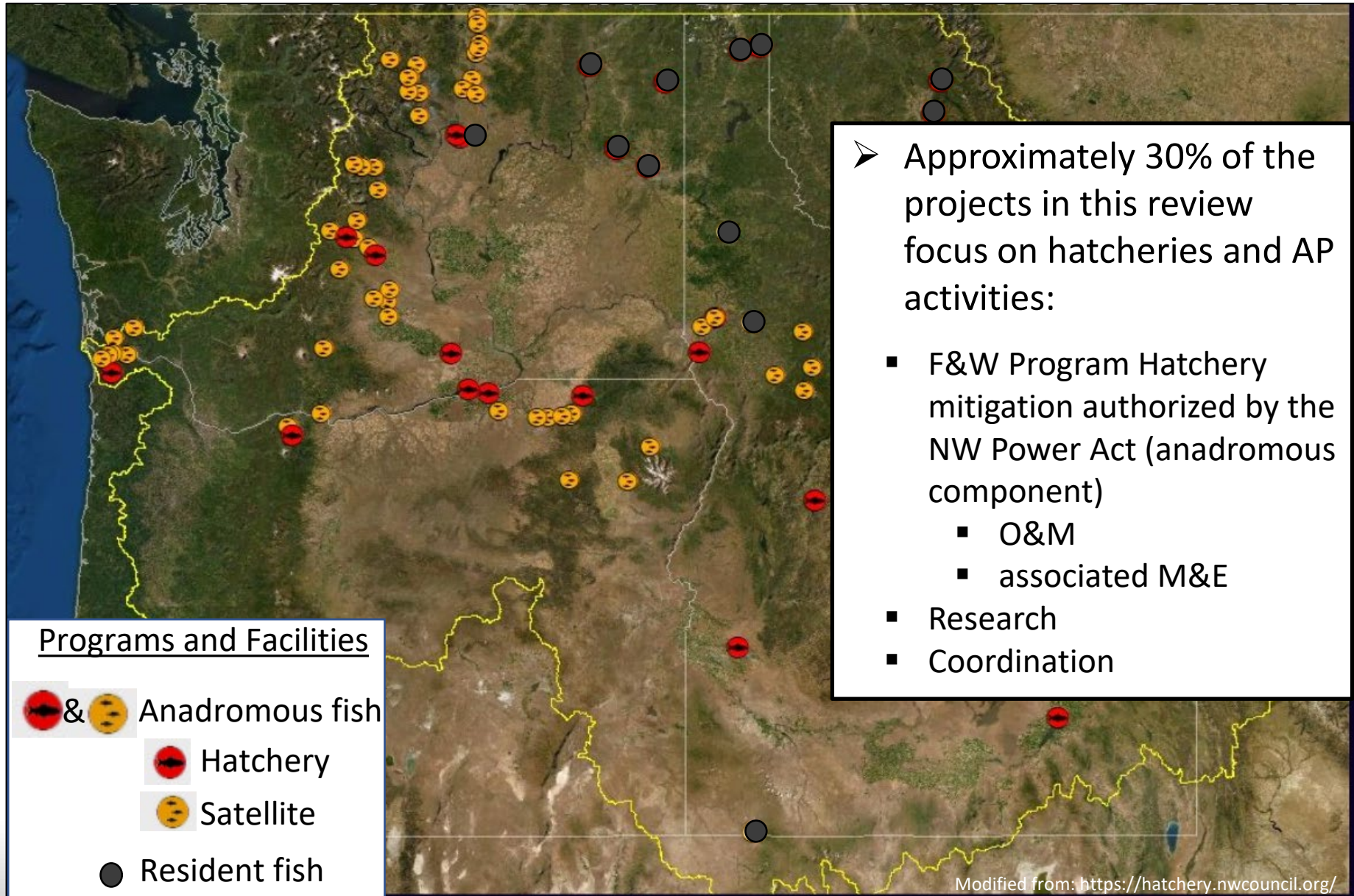
- Install, operate, & maintain fish screens
- Critical to fish survival
- Improve fish passage to tributary habitat
- Guided by Fish Screen Oversight Committee

“Efficient passage means that passage opportunity is continually maintained by vigilant operation and maintenance”



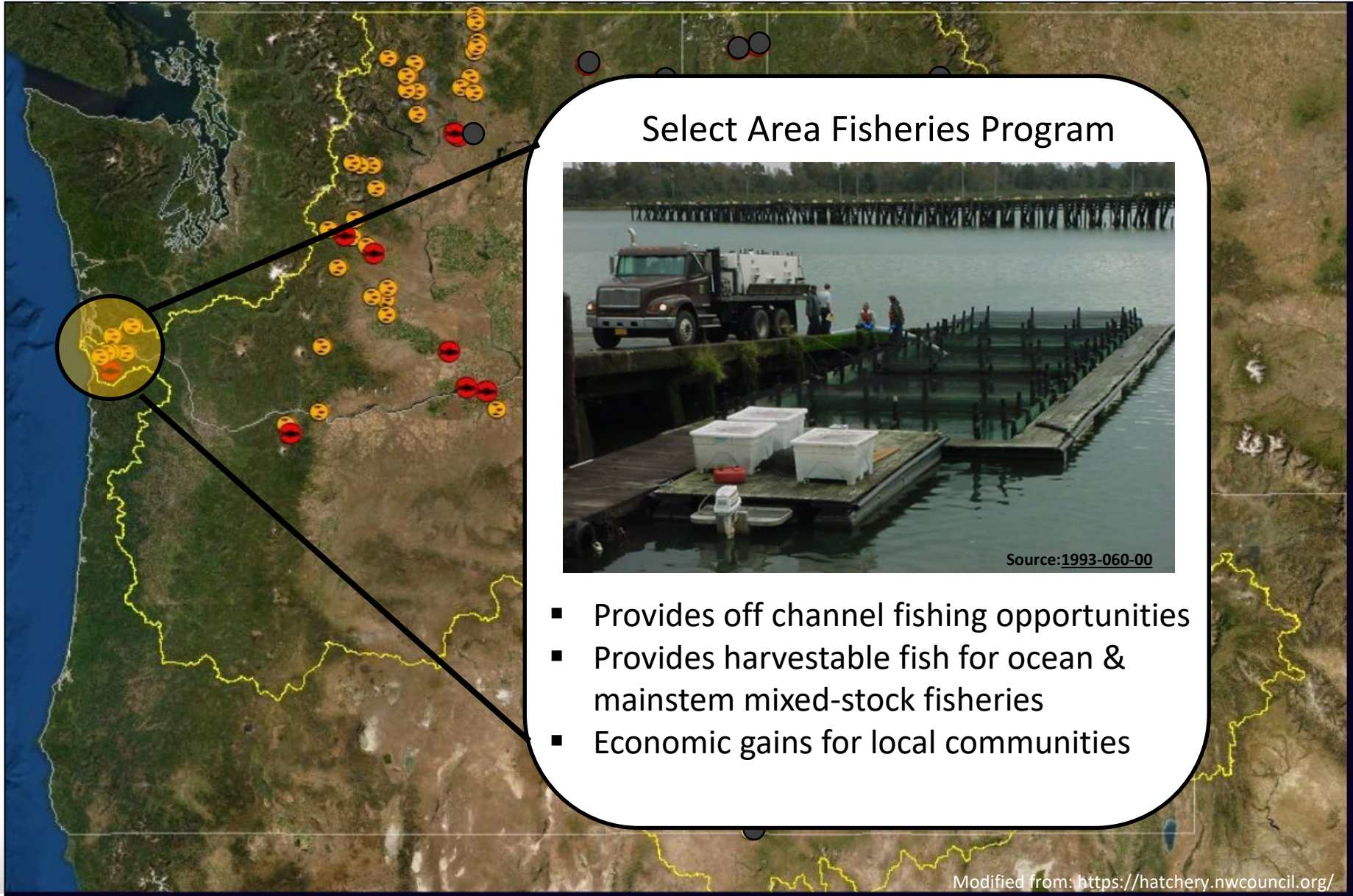


# Hatcheries and artificial production activities





# Hatcheries and artificial production activities



## Select Area Fisheries Program

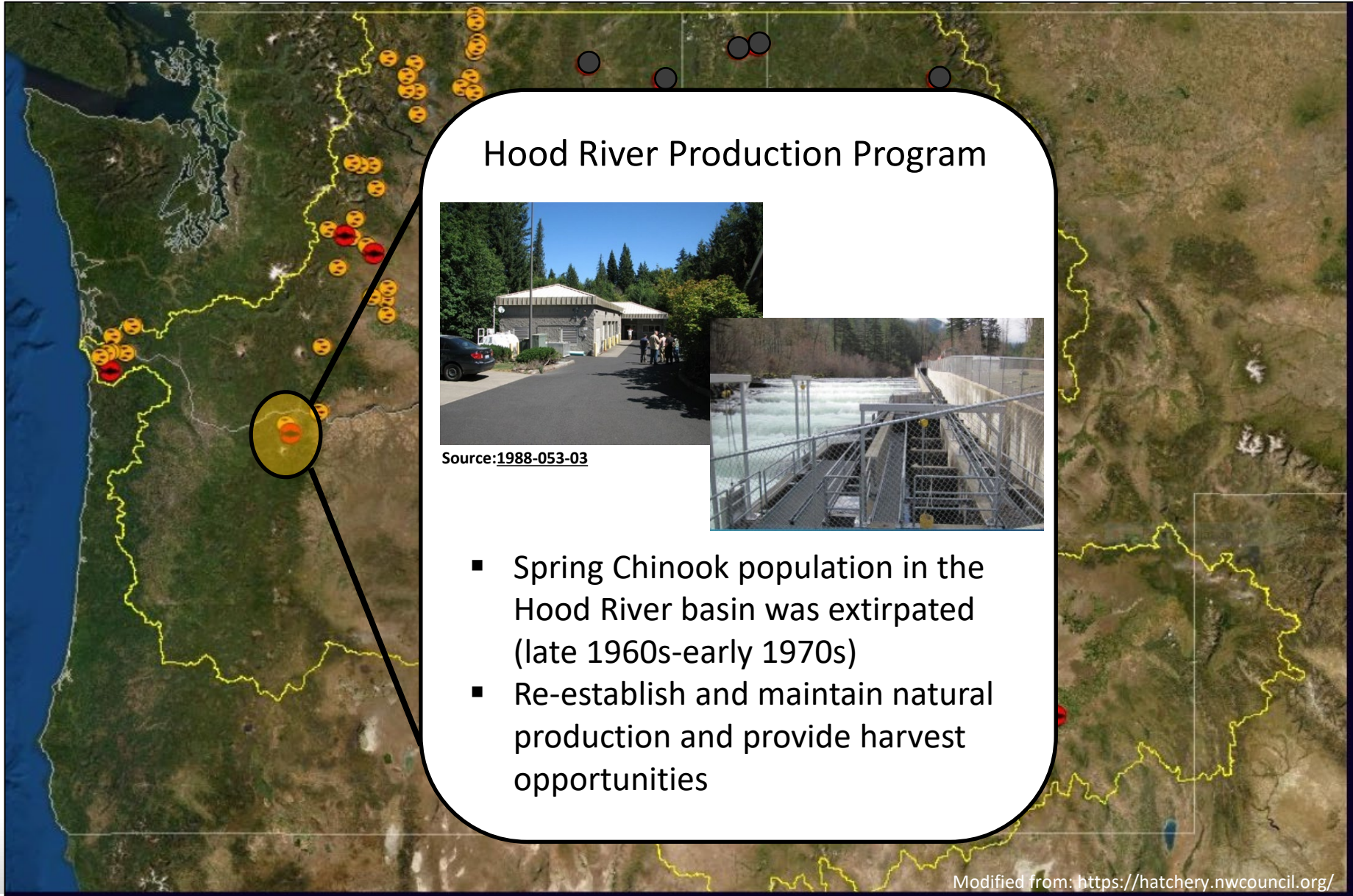


- Provides off channel fishing opportunities
- Provides harvestable fish for ocean & mainstem mixed-stock fisheries
- Economic gains for local communities

Modified from: <https://hatchery.nwcouncil.org/>



# Hatcheries and artificial production activities



## Hood River Production Program



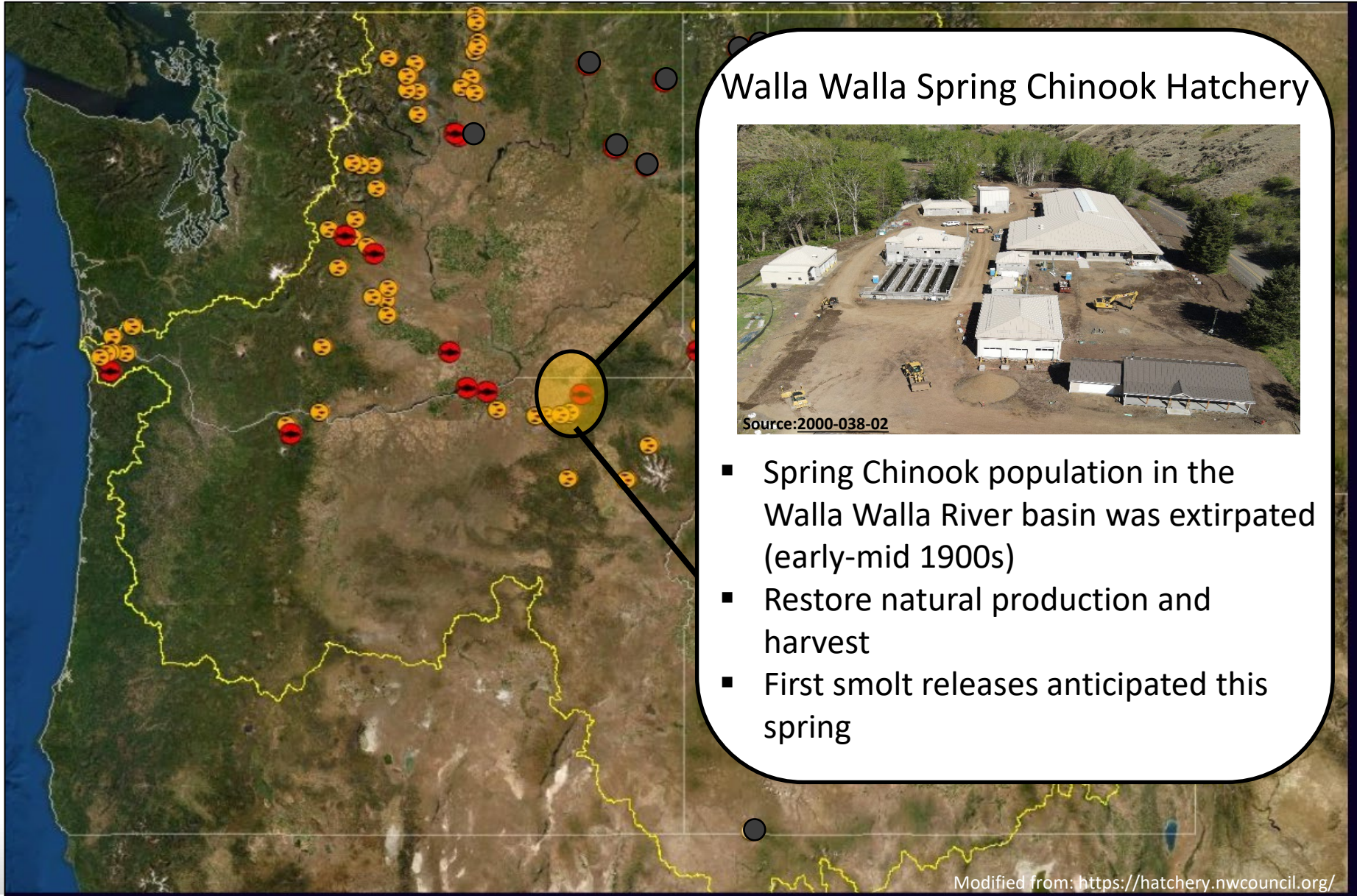
Source: 1988-053-03

- Spring Chinook population in the Hood River basin was extirpated (late 1960s-early 1970s)
- Re-establish and maintain natural production and provide harvest opportunities

Modified from: <https://hatchery.nwcouncil.org/>



# Hatcheries and artificial production activities



## Walla Walla Spring Chinook Hatchery

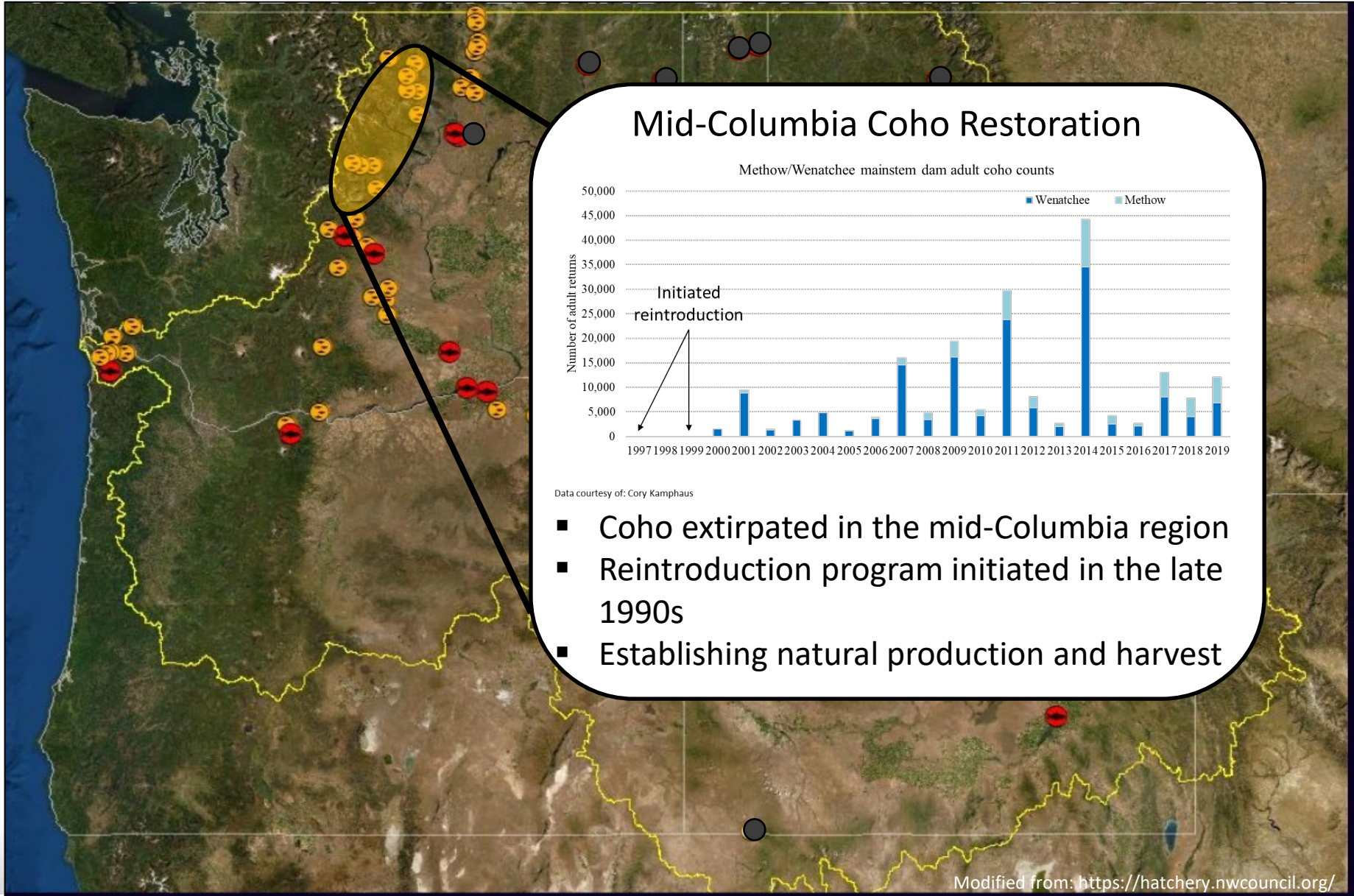


- Spring Chinook population in the Walla Walla River basin was extirpated (early-mid 1900s)
- Restore natural production and harvest
- First smolt releases anticipated this spring

Modified from: <https://hatchery.nwcouncil.org/>



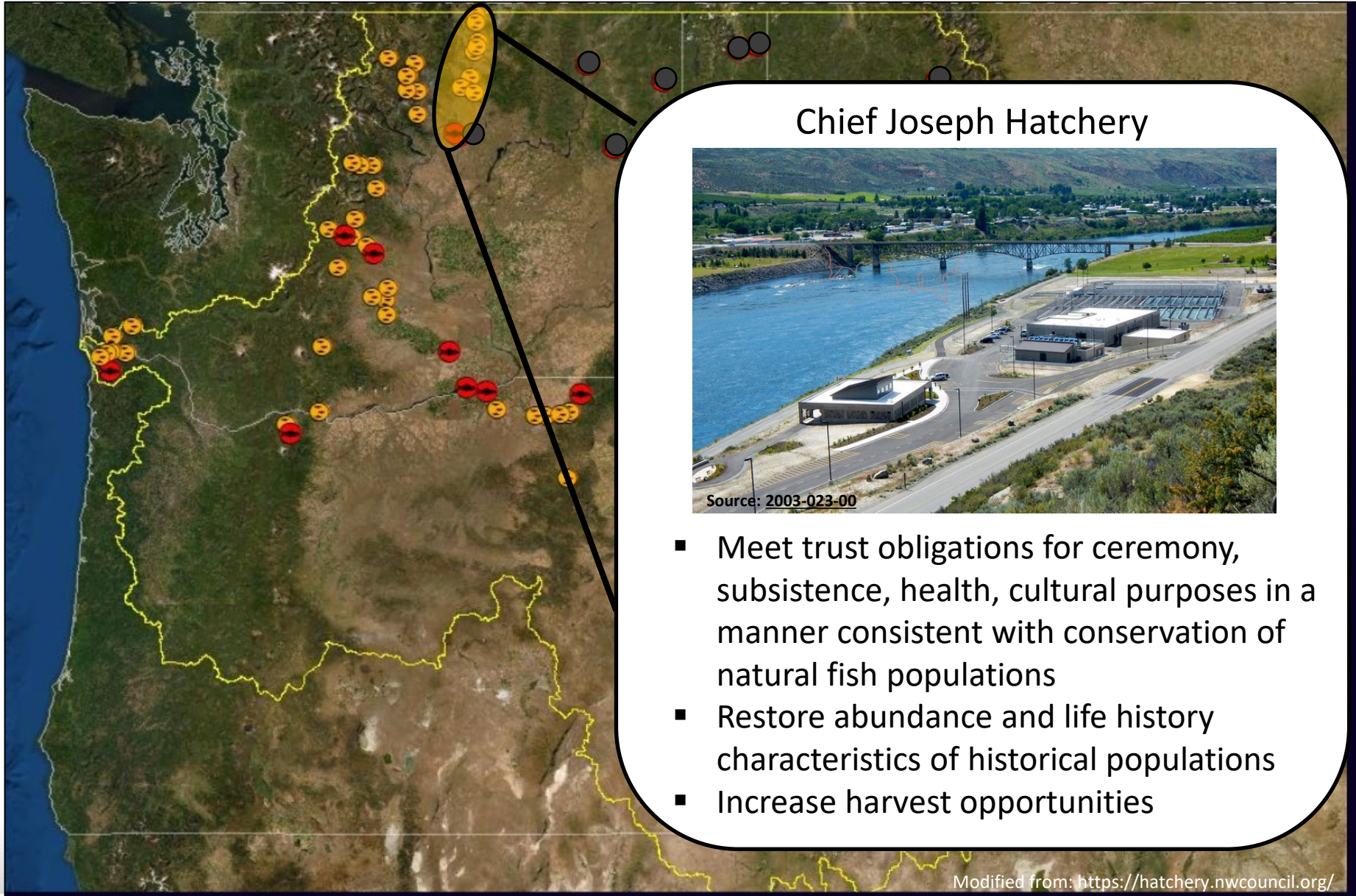
# Hatcheries and artificial production activities



Modified from: <https://hatchery.nwcouncil.org/>



# Hatcheries and artificial production activities



Chief Joseph Hatchery



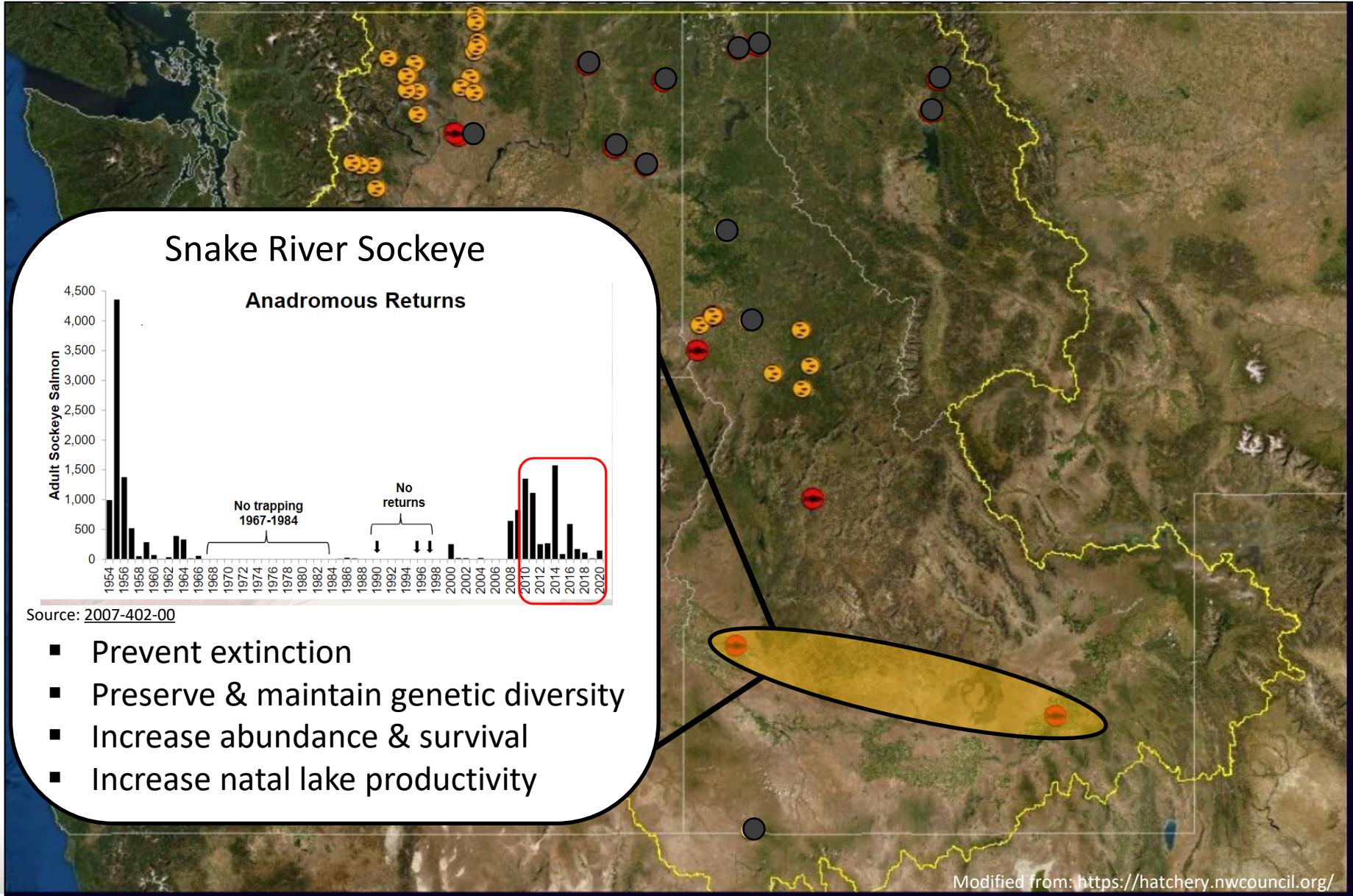
Source: 2003-023-00

- Meet trust obligations for ceremony, subsistence, health, cultural purposes in a manner consistent with conservation of natural fish populations
- Restore abundance and life history characteristics of historical populations
- Increase harvest opportunities

Modified from: <https://hatchery.nwcouncil.org/>



# Hatcheries and artificial production activities



Source: 2007-402-00

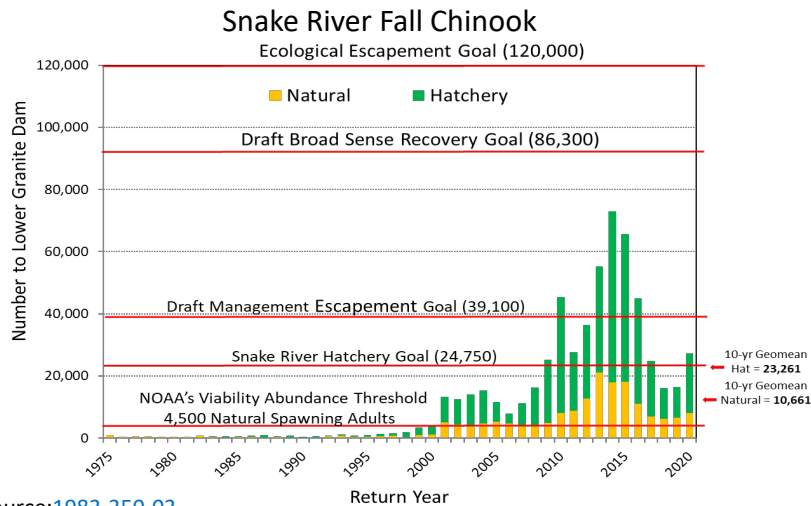
- Prevent extinction
- Preserve & maintain genetic diversity
- Increase abundance & survival
- Increase natal lake productivity

Modified from: <https://hatchery.nwcouncil.org/>



# Hatcheries and artificial production activities

## Nez Perce Tribal Hatchery



Source: [1983-350-03](#)

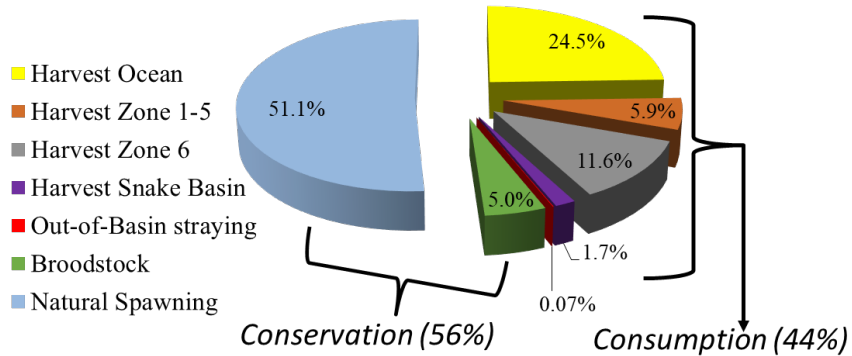
- Develop, increase, and reintroduce natural populations of spring and fall Chinook in the Clearwater R. basin

Modified from: <https://hatchery.nwcouncil.org/>

# Hatcheries and artificial production activities

## Nez Perce Tribal Hatchery

Snake River Fall Chinook  
Hatchery disposition estimates



Source: [1983-350-03](#)  
SRFch, reporting years 2014-2018 (n=92,139 CWT recoveries)

- Develop, increase, and reintroduce natural populations of spring and fall Chinook in the Clearwater R. basin.
- Provide harvest opportunities

## Associated Monitoring & Evaluation

(all hatchery mitigation projects link to associated M&E activities as part of project or captured by another project)

### Examples:

- Release sizes, locations, timing, strategies
- Survival
- Productivity
- Genetic diversity
- Status and trends

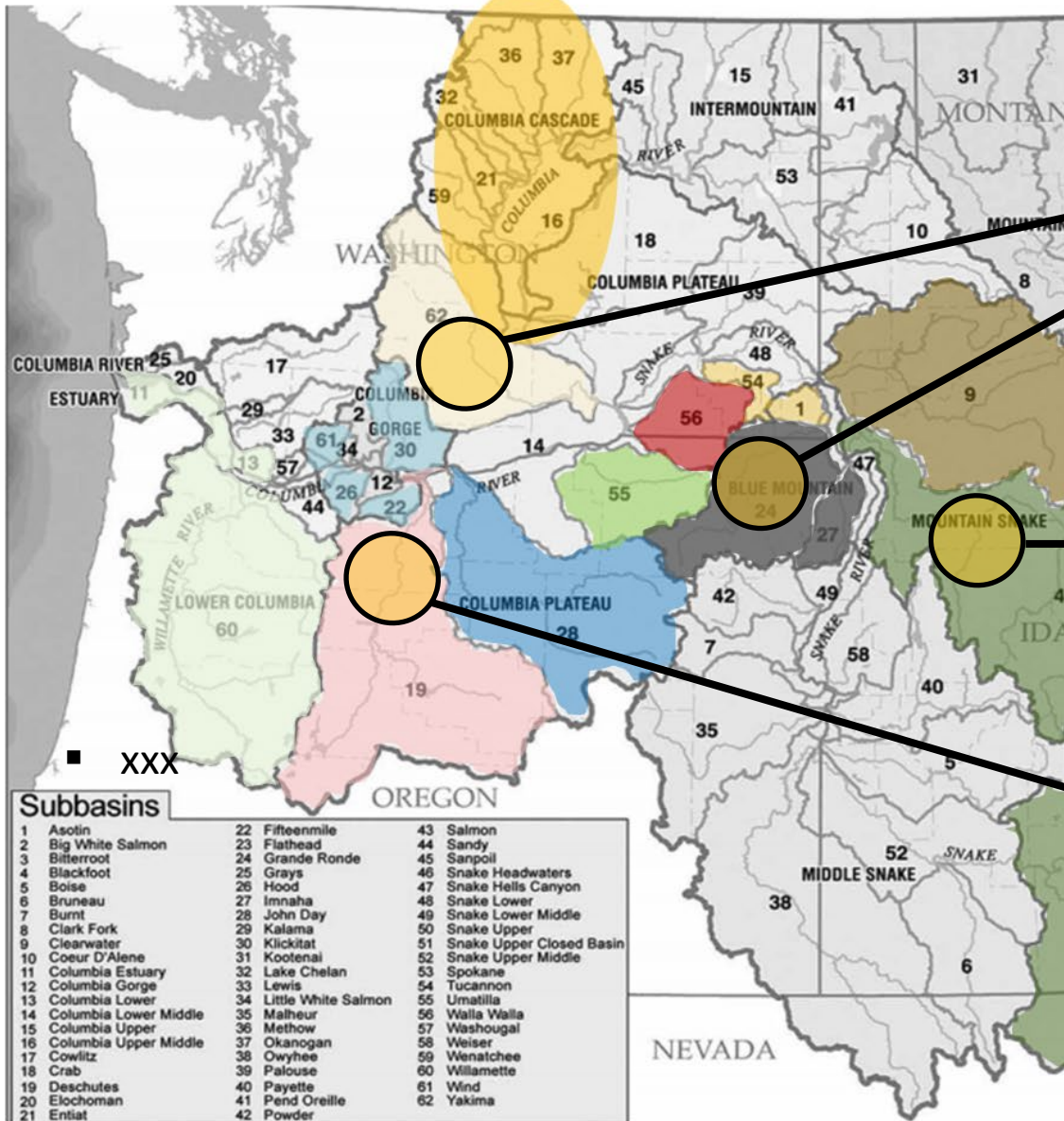
### Results guide adaptive management (examples):

- Changes in release locations or timing
- Maximize survival, minimize impacts

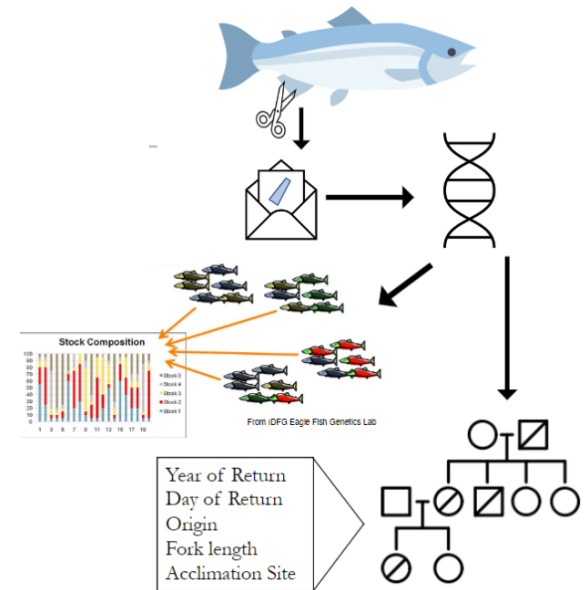
Modified from: <https://hatchery.nwcouncil.org/>



# Hatcheries and artificial production activities



## RM&E – Basinwide Supplementation Evaluation



Source: 2009-009-00

- RM&E support to supplementation and reintroduction programs
- Results inform adaptive management, future recovery actions, management decisions.

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  - Hatchery
- **Independent science review**
- Summary of public comments received
- Council decision document



# ISRP Review Criteria from 1996 Amendment to NW Power Act

Review projects for consistency with the Council's program and whether they:

- are based on sound science principles
- benefit fish and wildlife and
- have a clearly defined objective and outcome
- with provisions for monitoring and evaluation of results



## FINAL REPORT: Review of Anadromous Fish Habitat and Hatchery Projects

INDEPENDENT SCIENTIFIC REVIEW PANEL

ISRP 2022-1 FEBRUARY 10, 2022

[Link to ISRP Final Report](#)

[Link to ISRP presentation to Council, February 2022](#)

# Presentation outline

- Introduction to category review
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- Council decision document

# Comments Received

## General considerations and comments:

- Confederated Tribes and Bands of the Yakama Nation (2)
  - Future Review Process – application of scientific principles must be within the context of tribal F&W activities and Treaty rights
  - Concerns regarding budget limitations, BPA’s Strategic Plan and flat funding and the Council’s project solicitation
  - Response to concerns related to:
    - Carrying capacity, density dependence, and natural productivity
    - Monitoring and evaluation to detect the response of natural-origin salmon to habitat restoration actions
  
- Trout Unlimited
  - Overarching concerns including long-term fitness, habitat assessments and prioritization, and density dependence. Request Council to work with the ISRP to address these concerns.

# Comments Received

## General considerations and comments:

- Washington Department of Fish and Wildlife
  - Regional challenges – population status, climate change, density dependence, flat funding
- Public Power Council
  - General considerations:
    - Clear connection or nexus to mitigating for impacts to federal hydropower system
    - RM&E must be based on best available science and achieve efficiencies
    - Application of Hatcheries Science Review Group recommendations where practicable, hatchery and habitat activities integrate to support recovery, hatchery production be adequately marked
    - Approach reintroduction efforts with substantial caution and transparency
  - Future project reviews: value in organizing reviews into smaller, discrete sets of projects within a specific geographic area, synthesis of results between similar projects; improving guidance from the Council and communication between parties throughout the review process

# Comments Received

## Project specific comments – Support letters:

- Support letters (3) for *Yakima Tributary Access & Habitat Program*, Project #2007-398-00
  - Kittitas County Department of Public Works
  - Kittitas Reclamation District
  - Washington Department of Fish and Wildlife
- Support letters (4) for *John Day Habitat Enhancement*, Project #1984-021-00
  - Grant County Soil and Water Conservation District
  - Malheur National Forest
  - South Fork John Day Watershed Council
  - Table Mountain Cattle Company
- Confederated Tribes of the Umatilla Indian Reservation
  - Support letter for *Umatilla Anadromous Fish Habitat Project*, Project #1987-001-01
  - Appreciated ISRP acknowledgment of Traditional Ecological Knowledge

# Comments Received

## **Project specific comments – Response letters:**

- Upper Columbia Salmon Recovery Board
  - Response letter for *Upper Columbia Programmatic Habitat*, Project #2010-001-00
  
- Oregon Department of Fish and Wildlife, M. Jensen
  - Response letter for *Oregon Fish Screens Project*, Project #1993-066-00
  
- Jefferson County Soil and Water Conservation District and Oregon Department of Fish and Wildlife
  - Response letter for Trout Creek Basin, Projects #1994-042-00 and #1998-028-00

# Presentation outline

- Introduction to category review
- AFHH project general highlights
  - Habitat
  - Hatchery
- Independent science review
- Summary of public comments received
- **Council decision document**

# Council recommendations

The Council bases its *recommendations of projects to be funded through BPA's annual fish and wildlife budget* using the record that includes:

- the ISRP report - which we must fully consider and explain in writing if we differ with the panel's recommendations
- the project proposals
- the Fish and Wildlife Program
- comment from the public or project sponsors on the ISRP report
- information and experience staff has on the funding, implementation, and monitoring of those projects



# Elements of the AFHH Decision Document

Recommendations in three parts:

- Part 1: Background, Review Summary, and Council Considerations and Expectations
- Part 2: Policy Issues and Recommendations
  - identifies a subset of cross-cutting policy and administrative issues associated with this group of projects and the Program.
- Part 3: Summary of Project Recommendations
  - provides the Council's recommendation for each project addressed in this review, including any conditions, comments or guidance associated with the recommendation.

# Part 2: Policy Issues and Recommendations

*Cross-cutting policy and administrative issues associated with this group of projects and the Program*

- I. Core Program strategy recommendations
  - a.) Habitat RM&E Strategy
  - b.) Hatchery and related activities
  
- II. Implementation recommendations
  - a.) Asset management**
  - b.) Flat funding**
  - c.) Climate change
  
- III. Administrative recommendations
  - a.) Projects that are not applicable (N/A) for review
  - b.) Umbrella Projects
  
- IV. ***Future Review Process for the Fish and Wildlife Program***

# Part 2: Policy Issues and Recommendations

## II. Implementation recommendations

### a.) Asset Management

- Bonneville should establish a systematic approach to provide for sufficient funds that support the Asset Management Strategic Plan for non-recurring maintenance needs and adequate annual preventive maintenance support for Program investments associated with fish screens, lands and hatcheries. Doing so will ensure the integrity of the Program's past investments are maintained and able to continue to deliver their intended benefit to fish and wildlife over time.



# Part 2: Policy Issues and Recommendations

## II. Implementation recommendations

### b.) Flat funding

- Consistent with the Fish and Wildlife Program, Bonneville should work with all project sponsors to identify projects (those in this review and all other ongoing projects) that are experiencing issues related to inflation that are faced with reducing the amount of substantive work they can do and develop options for relief. Bonneville to report findings and conclusions for all projects to the Council.
- The Council recommends that Bonneville develop flexibility in its budget management protocols to allow the budget available for fish and wildlife mitigation be fully expended on fish and wildlife mitigation within the biennial rate case and report progress to the Council.

# Part 2: Policy Issues and Recommendations

## IV. Future review process for the Fish and Wildlife Program

- The Council will continue to develop the concepts presented in this memo and move forward developing a conceptual plan for project review this year with input from Council staff, the fish and wildlife agencies and tribes, project sponsors and Bonneville as described in the 2020 Addendum . The staff seeks support from the Council to continue this path. Staff will review the conceptual plan with Council members as it is developed.



# Part 3: Project Recommendations

- Council’s recommendation for each project, including any conditions, comments or guidance associated with the project recommendation.
- Many of the projects have been affected by one or more of the policy issues outlined in Part II, noted in recommendation.

ISRP category	# of Projects	General Council Recommendation
Meets Criteria	48	Bonneville and Sponsor to take review remarks into consideration in project documentation.
Meets Criteria - Conditional	59	Bonneville and Sponsor to address select conditions in project documentation, and consider others and address if appropriate [for project scope and feasible within FY2021 budget]
Response Requested	2	Pending - Outyear implementation (FY2023) dependent upon Council decision.
Does Not Meet	1	Pending – Sponsor planning to revise proposal for review and recommendation.
Not Applicable	12	Bonneville and Sponsor to take the review remarks into consideration in project documentation. See Policy Issue III.a.

# Acknowledgments

- Project Sponsors
- Bonneville managers and contracting officer representatives
- Council State and Central staff
- Independent Science Review Panel

# Questions