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September 9, 2020

MEMORANDUM

TO: Fish and Wildlife Committee

FROM: Staff

SUBJECT: Resident fish and sturgeon project review recommendations

PROPOSED ACTION: Staff is seeking the Committee's recommendation on the Resident Fish and Sturgeon Project Review Final Recommendations: Project Implementation and Programmatic Issues

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, 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. The Council and Bonneville work together to develop the information necessary to make the review process successful.

BUDGETARY/ECONOMIC IMPACTS

The annual funding for this set of projects is approximately \$35,466,834, based on Bonneville's 2021 Start of Year (SOY) budgets, with a supported increase of \$3,728,831. Please see the Project Recommendation Summary Spreadsheet (Part 4,

attached) for details regarding the Council's funding recommendations as well as the requested and SOY budgets.

Recommendations in four parts:

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

Part 2: Programmatic Issues and Recommendations

Part 3: Project-Specific Recommendations – further discussion

Part 4: Project Recommendation Summary Spreadsheet (attached)

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 Science Review Panel (ISRP). The Resident Fish and Sturgeon Project Review is the third of four sets of reviews of Program funded projects over four years. There are 44 projects that are part of this review, which is focused largely on activities within the non-anadromous fish portions of the basin known as the "blocked areas." Nine of the projects address sturgeon, and of these nine projects, three projects are implemented in the anadromous zone of the basin.

The resident fish and sturgeon projects included in this review 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. Note, however, as detailed in Part II of the 2020 Addendum to the 2014 Fish and Wildlife Program (adopted by the Council in January 2020) a broad suite of additional actions need to be implemented in the Lake Roosevelt and Spokane River areas above Grand Coulee and Chief Joseph dams to mitigate for the complete loss of anadromous fish and the losses to other fish and wildlife species in this part of the basin, which have been severely under-addressed through the Northwest Power Act. Therefore, the Council anticipates a future review of new or extended projects or actions proposed to be funded to mitigate for these losses consistent with the Program. Any future projects proposed to be funded must be implemented without compromising the current, ongoing projects that continue to provide substantive protection and mitigation under the Program.

Review Summary

The Resident Fish and Sturgeon Project Review began in November 2019, with the release of the information packet to sponsors. The information packet included background, schedule, and instructions for the review. Summary reports were due from sponsors on January 30, 2020. The Council held a two-day meeting on March 3 and 4, 2020 with the ISRP and sponsors for project presentations. 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 the preliminary ISRP report ([ISRP 2020-4](#)) was completed on April 3, 2020. The ISRP requested responses for 43 project proposals with point-by-point responses due on June 23, 2020.¹ Public comment on the ISRP reports began April 3, 2020 at the completion of the preliminary ISRP report. The ISRP's Final Report (ISRP document 2020-8) was completed on August 6, 2020 and public comment closed September 7, 2020. The Council received comments on the ISRP's Final Report from the Kalispel Tribe of Indians, Washington Invasive Species Council and the Public Power Council. All information on the [review process](#) (schedule, criteria, process, and comments) can be found on the Council's website.

Council Considerations and Expectations

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

Throughout this project review process, the Council was also amending its 2014 Fish and Wildlife Program via a two-part addendum. The Council adopted Part I of the 2020 Addendum in August 2020 and Part II in January 2020. The Council kept the project sponsors apprised of the amendment process so that any applicable considerations could be incorporated into this review to the extent possible. Key points for Bonneville identified in Part II of the 2020 Addendum are reflected within these recommendations to preserve the work of the Program required pursuant to the Act.

Finally, 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 possible, incorporate ISRP comments as reflected in Part 4.

Duration of recommendations

¹ On April 3, 2020 the Council adjusted the review process. "The COVID-19 situation has disrupted regular work activities (i.e., office and field activities) and as many are adjusting to the effects of closures and public health directives, an extension to the Resident Fish and Sturgeon Project Review process for approximately 60 days has been provided"

The Council's recommendations are applicable to projects beginning in Fiscal Year (FY) 2021 and remain applicable through the next review, whether it be either a major project review process or a review to address project-specific conditions placed on projects by this recommendation. 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 4).

Funding

The Project Recommendation Summary Spreadsheet includes the sponsor requested budget (FY 2021 Requested) and Bonneville Start of Year budget (FY 2021 SOY). In Part 4, the Council used the "budget discrepancy (10 percent)" column to identify differences of budget of 10% or more between what the sponsor requested and the BPA SOY 2021 budget, which permitted the Council to focus on the work to be implemented in the "Council recommendations" column and not the nuances of Bonneville's planning budgets, contract periods or fiscal year alignments.

The Council understands that Bonneville must carefully manage its fish and wildlife budget, however, Bonneville must still provide adequate funding to maintain the substantive work of the project and past investments (i.e., hatcheries) as reviewed and recommended by the Council. To this end, the Council requests Bonneville provide the Council with start-of-year budgets annually for this portfolio of projects prior to the beginning of each fiscal year. The start-of-year budgets will allow Council staff to track project implementation between reviews.

The Council also requests Bonneville provide to the Council, in writing, the final contracted amount for each project by the end of the second quarter of the applicable fiscal year, beginning in Fiscal Year 2021. In addition to providing the final contracted amount, the Council requests Bonneville to:

- Note and explain how inflation and cost of living adjustments are to be applied, if any, to preserve the substantive work
- Note and explain how the Council's recommendations were addressed in contracting, including any implementation decisions by Bonneville that differ in a material way from the Council's project funding recommendations
- Note and explain any material changes to implementation (i.e. scope, desired outcomes or budget) of any project.

Bonneville will work with sponsors and the Council to address qualifications and other conditions during contracting as recommended by the Council. Further, Bonneville will work with the Council to track and follow-up on items or project conditions that require the sponsor to deliver products as part of the funding recommendations.

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 2021 and beyond, and the working budget may shift from Bonneville's SOY; however, the Council should still be provided notice of these changes consistent with the funding section above.

Part 2: Programmatic Issues and Recommendations

Part 2 identifies a subset of cross-cutting programmatic recommendations 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. In some cases, the Council recommendations address more than one ISRP programmatic comment. In addition, some of these issues may remain ongoing (e.g., adaptive management and communication).

The Council's programmatic recommendations are to be afforded the same weight as the project-specific recommendations detailed in Parts 3 & 4. The programmatic topics covered below include:

1. **Best Management Practices and Jurisdictional Issues for Native and Non-Native Fish Management**
2. **Project Prioritization, Objectives and Adaptive Management (ongoing)**
3. **Climate Change (ongoing)**
4. **Communication and Project tracking (ongoing)**
5. **Data and Information Management (ongoing)**

1. **Programmatic Issue:** Best Management Practices and Jurisdictional Issues for Native and Non-native Fish Management (ISRP Programmatic comment A)

Issue: The Program supports several projects focused on reducing or eliminating the impacts of non-native fish on focal species. The ISRP provided a number of programmatic comments related to how these projects identify and address technical management issues; how projects ensure communication and coordination among potentially conflicting efforts; and how effectiveness of non-native fish management is being evaluated and refined over time. These include exploring the creation of a task force for specific issues, developing angler reward programs, and enhancing public outreach. The ISRP also provided suggestions for specific scientific and best management practices that could potentially improve the efficacy of the projects through time. It is clear there are critical pieces that will need to be considered as these projects evolve; therefore, the Council recommends the following:

Council Recommendation:

1. Project Sponsors and Bonneville Project Managers should review and incorporate where possible the ISRP programmatic comments that support best science and management practices. Projects should develop plans that support efforts to minimize potential adverse impacts.
2. Project sponsors are encouraged to develop and describe plans for coordination among managers implementing both complimentary and potentially conflicting projects.
3. The Council and Bonneville should provide organizational support as needed for collaboration at a regional scale and/or among similar projects across geographies, as well as for the development of outreach and education programs.

2. Programmatic Issue: Project Prioritization, Objectives and Adaptive Management (ISRP Programmatic comments C&E)

Issue: The Program envisions an adaptive management approach that includes identifying the highest priority projects and actions, quantifying the expected objectives of those actions, evaluating outcomes from projects, and adjusting implementation as needed. In this review, the ISRP noted the need for development of strategic approaches for prioritizing or weighting protection of high-quality habitats versus restoration of degraded habitats. The ISRP also noted that many projects still lack a developed adaptive management plan or approach.

The Council continues to explore ways to support development of project quantitative objectives and implementation of an adaptive management approach. In the 2013 Research, Monitoring and Evaluation and Artificial Production Project Review, 2019 Mainstem and Program Support Project Review, and in this review Council staff have been working with partners to develop and refine [guidance](#) for *objectives development* for sponsors to use in completing the project review proposal form. Staff also streamlined the objectives section of the proposal form. For this review, Council staff and the ISRP held several workshops with project sponsors to help develop quantitative, measurable objectives for specific projects.

Staff will continue to refine the instructions for those proposal sections based on user feedback/experience and ISRP comments. Staff and Bonneville agree that sponsors should have measurable, task-based or biologically based objectives to measure progress in meeting management objectives.

Council Recommendation:

1. Council should continue to refine the proposal form to reflect feedback from project sponsors and the ISRP on project objectives.
2. Council should work with Bonneville to improve connections between the proposal form objectives and the final contract scope of work.
3. Council should work with the ISRP to hold webinars for interested project sponsors on developing objectives and an adaptive management plan.

3. Programmatic Issue: Climate Change (ISRP Programmatic comment D)

Issue: The Program calls for planning and implementation to include explicit consideration of the possible effects of climate change on the focal habitats and fish and wildlife populations. The ISRP expressed concerns that while it has called for explicit consideration of climate change before committing substantial resources to projects, it has seen little evidence that climate change considerations significantly influence the design or long-term funding of projects.

Addressing climate change is challenging for project sponsors given the resources, data and information available. Climate change is an overarching challenge to the Program as well. However, as detailed in Part II of the 2020 Addendum, the Council recognizes the importance of considering and understanding the implications of climate change in all aspects of the Program in order to make the most effective decisions for fish and wildlife.

Council Recommendation:

1. The Council will revise the proposal form to include questions regarding how climate change will impact projects and how climate change was considered in the design and implementation of the project.
2. The Council will work with project sponsors to provide resources and guidance to support efforts to incorporate climate change considerations into project selection, design and implementation, and to evaluate the potential effects of climate change on the project.

4. Programmatic Issue: Communication and Project tracking (ISRP Programmatic comment G)

Issue: Communication and coordination among project sponsors, Bonneville and the Council is a critical component of the Program. The need for improved communication and coordination was a key issue identified in Part II of the 2020

Addendum, which stated explicitly that “Bonneville shall provide regular public information to the Council on project implementation, so that the Council can understand whether and how implementation differs from the work recommended after project review.” In its review, the ISRP also requested better communication and transparency on how, and to what extent, Bonneville implements the Council’s and ISRP’s project recommendations.

The ISRP also discussed the need for communicating information to practitioners and decisionmakers to guide future decisions. The ISRP noted the need for dissemination of information through publications, education and outreach efforts and other processes. As part of that communication effort, the ISRP recommended that groups of related projects develop synthesis documents that integrate multiple projects, analyze collective data, and create conceptual frameworks for future actions.

Communication, information sharing, and reporting are ongoing issues that the Council continues to address. Council staff and Bonneville staff have been working together over the last several months to re-establish regular communication protocols. These issues were identified as programmatic issues and recommendations in the 2019 Mainstem and Program Support Review and the 2018 Research Progress Review. These reviews highlighted the importance of supporting regional and sub-regional data management, storage and dissemination of information necessary for program implementation and assessment. They also identified the importance of synthesis documents for specific topic areas as a critical component of a program-scale research, monitoring and evaluation strategy.

Council Recommendation:

1. Council and Bonneville should continue to work together to re-establish a systematic approach and process for implementing Council recommendations, including project reviews and implementation.
2. Bonneville should support dissemination of project results through publications, workshops, trainings, and other forms of communication among practitioners.
3. The Council should explore ways to support development of synthesis documents and reports that will help advance the state of the science on specific topic areas.

PART 3: Project-Specific Recommendations – further discussion

Part 3 of this document provides additional details regarding the Council's recommendations for eight projects, each of which included additional funding requests in the proposals. The Council understands Bonneville's need to carefully manage its fish and wildlife program costs, and the Council is committed to ensuring projects deliver cost-effective benefits to fish and wildlife. However, as provided in Part II of the Addendum, persisting with flat budgets cannot compromise the ability of the project sponsors to perform the substantive work and meet project and program objectives. Part 4, specifically the "council recommendation" column, provides the Council's recommendation for each project addressed in this review, including any conditions, comments or guidance associated with the recommendation.

1. Project #1986-050-00, *White Sturgeon Mitigation and Restoration in the Lower Columbia and Snake Rivers*

This long running project has increased our knowledge of the populations of white sturgeon in the Lower Columbia River. It has also demonstrated the impact of the impounded Columbia River flow regime and the effects that isolation, created by the Federal Columbia River Power System, has had on sturgeon.

White sturgeon mitigation efforts have a lengthy history in the Program. The Council's 2014 Program strategy for sturgeon calls, in part, for the region to "[i]mplement actions that result in increased abundance and survival for Columbia River Basin green and white sturgeon... monitoring populations, and research to improve understanding of how the development and operation of the Federal Columbia River Power System affect survival and growth of sturgeon."

The program provides the following rationale: "Columbia River Basin sturgeon distribution, abundance, and productivity are severely limited by habitat changes, particularly those associated with hydropower system construction and operation. Large areas of suitable sturgeon habitat remain throughout most of the historical range upstream from Bonneville Dam but use is currently limited by widespread passage limitations and natural recruitment problems that are the direct or indirect result of the development and operation of the Columbia River hydrosystem."

In addition, due to the above points, the critical uncertainties identified in the 2014 Program for white sturgeon and the status of isolated populations in the lower river, the species was identified as an emerging priority (EP 5):

"Implement additional sturgeon and lamprey measures (passage and research)"

Based on the critical uncertainties identified in the 2014 Program there was an urgent need to gather information to better understand the population dynamics of the species, particularly in lower Snake River. The Council worked with Bonneville to make funds

available during fiscal years 2017 (\$283,000) and 2018 (\$233,000) to initiate efforts for this work.

Though the support outlined above initiated important monitoring activities for white sturgeon, these efforts received only short-term funding. Therefore, Part II of the 2020 Addendum to the 2014 program continues to identify sturgeon as a near-term priority for implementation and funding. Specifically, Part II provided the following:

*Sturgeon Implementers: Corps of Engineers and Bonneville
Continue to make progress in developing and implementing the program's comprehensive approach to White Sturgeon in the Columbia River Basin that involves assessing the factors limiting the recruitment and productivity of sturgeon and developing and implementing measures to address those factors.*

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

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

In this review, the project proposal (Project #1986-050-00) included a series of closely coordinated and complementary activities by the comanagers (Oregon Department of Fish and Wildlife, Columbia River Inter-Tribal Fish Commission and Washington Department of Fish and Wildlife) in the Columbia River upstream of Bonneville Dam and downstream of McNary Dam. Included in the proposal is the potential for expanding monitoring in the Columbia River in the McNary Reservoir and Hanford Reach, and in the Snake River downstream of Lower Granite Dam.

The proposal provided the following details and cost estimates for the expansion into the McNary and Snake River reservoirs, which would be additive to the baseline scope and budget for this project (FY 2021 at \$1,457,017).

Snake River reservoirs: Expand the geographic scope of biological monitoring abundance and age structure of white sturgeon populations in Ice Harbor, Lower Monumental, and Little Goose reservoirs to measure progress towards persistence of a healthy and harvestable population. Healthy populations are

defined as abundant, productive, stable, genetically diverse, and spatially distributed in areas of historic sturgeon range within the Columbia River Basin.

Snake River reservoirs	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Total	674,315	322,800	335,712	349,141	363,106

McNary Reservoir: *Expand the geographic scope of biological monitoring abundance and age structure of white sturgeon populations in McNary Reservoir and the Hanford Reach to measure progress towards persistence of a healthy and harvestable population.*

McNary Reservoir	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Total	648,695	296,320	308,173	320,500	333,320

The ISRP found that the project as a whole met science review criteria and found the proposed expansion into the McNary and Snake River reservoirs justified and supported baseline information needs associated with harvest rates and the effects of hatchery activities.

In consideration of the Program measures and the inclusion of sturgeon as a near-term priority for implementation and funding, the Council staff supports the proposed expansion of this project to gather core baseline information in the Columbia River below Chief Joseph and in the Snake River below Lower Granite. There is a need for continuity and stability of core baseline data, as presented by this collaborative project, to track and understand the trends of this species through time, particularly as the program invests in hatchery actions to ensure protection and conservation of the remaining natural sturgeon populations in the Lower Columbia River.

Council Recommendation:

1. Bonneville to implement the expansion into the Snake River reservoirs and McNary Reservoir, as proposed by the *Oregon Department of Fish and Wildlife, Columbia River Inter-Tribal Fish Commission and Washington Department of Fish and Wildlife*, at the FY2021 funding level identified by the sponsor (approx. \$1,323,010) and maintain and fund the current core baseline project scope as reviewed at \$1,457,017. Total reviewed and recommended project budget for FY 20201 is \$2,780,027.

2. Lake Roosevelt Hatcheries Program (LRHP)

- a. Project #1991-046-00, *Spokane Tribal Hatchery Operations and Maintenance (O&M)*
- b. Project #1991-047-00, *Sherman Creek Hatchery Operations and Maintenance (O&M)*
- c. Project #2001-029-00, *Ford Hatchery Operations and Maintenance (O&M)*

d. Project #1995-009-00, *Lake Roosevelt Rainbow Trout Net Pens*

The Lake Roosevelt Hatcheries Program (LRHP) is a coordinated and collaborative effort that includes the Program's Spokane Hatchery, operated by the Spokane Tribes of Indians (STOI), and the Sherman Creek Hatchery, operated by the Washington Department of Fish and Wildlife (WDFW). In addition, the LRHP uses the Ford Trout Hatchery, operated by the WDFW, and the Lake Roosevelt Rainbow Trout Net Pen Program, operated by a coordinator and volunteers of the Lake Roosevelt Development Association. The net pens function as an extension of the Spokane and Sherman Creek hatcheries to provide rearing capacity for the LRHP. The project addresses losses of anadromous fish caused by the Federal Columbia River Power System (FCRPS) and supports sustainable resident fisheries in Lake Roosevelt.

The LRHP is the largest resident fish hatchery supported by the Program, with the goal of collectively producing triploid rainbow trout and kokanee salmon to provide sustainable resident fisheries in Lake Roosevelt for Tribal subsistence and sport fisheries.

The four proposal narratives for these operation and maintenance projects requested additional funds for recurring maintenance to ensure the longevity and integrity of the program's past investments or to purchase equipment to ensure adequate hatchery practices to minimize stress on the fish produced at these hatcheries.

It is important to note that the Asset Management Strategic Plan (Plan),² adopted by the Council in October of 2108, defines and provides a strategy to achieve a long-term, non-recurring maintenance,³ rehabilitation, and replacement systems for Program investments associated with hatcheries. The Plan was crafted with guiding principles that emphasized the need and importance of regular maintenance and adequate annual budgets to cover annual operation and maintenance costs to ensure the longevity and integrity of the Program's past investments

Based on the proposals received, funding for O&M to support and maintain the integrity of the LHRP is inadequate as outlined below:

1. Sherman (Project #1991-047-00, *Sherman Creek Hatchery Operations and Maintenance (O&M)*) and Ford (Project #2001-029-00, *Ford Hatchery Operations and Maintenance (O&M)*) hatcheries are not receiving adequate annual budgets for recurring maintenance to provide capacity to meet the intended purposes of the facilities nor to protect these investments, and, therefore, are requesting \$66,027 and \$59,545 in additional funds, respectively.

² As part of the 2014 Fish and Wildlife Program implementation, an investment strategy is outlined (Part Six; Section II, and Appendix P). Within this strategy long-term maintenance of past investments was the highest Program priority.

³ Any maintenance that isn't performed at pre-determined intervals and is not addressed through annual operation budgets.

2. *Lake Roosevelt Rainbow Trout Net Pens* (Project #1995-009-00) is requesting \$495,401 in additional funds for new net pen arrays as the current net pen arrays are aged, damaged and pose a safety issue to the volunteers. The net pens need to be replaced.
3. The STOI need a mass marking trailer to secure better marking and minimize stress on the hatchery production of 750,000 rainbow trout (Project #1991-046-00, *Spokane Tribal Hatchery Operations and Maintenance (O&M)*). They have initiated a cost share plan to secure a mass marking trailer similar to the Program's anadromous hatcheries. Total cost of the trailer is \$1.2M and they are requesting a cost share of \$600,000.

The ISRP review noted the *lack of consistent maintenance* support for the LHRP and stated that sponsors need to address this in the future. They also acknowledged and supported the mass marking of hatchery fish to improve mark quality and protect the harvest of native redband trout.

Council Recommendation:

1. Bonneville to provide adequate budgets to cover annual operation and maintenance costs to ensure the longevity and integrity of the Program's past investments at Sherman Hatchery (\$66,027) and Ford Hatchery (\$59,545) and in Net Pens (\$495,401). In addition, Bonneville to provide cost share funds for the mass marking trailer for the LRHP at \$600,000.

3. Project #1995-027-00, Lake Roosevelt Sturgeon Recovery

The goal of the Lake Roosevelt Sturgeon Recovery Project (LRSRP), managed by the Spokane Tribes of Indians (STOI), is to conserve and restore white sturgeon within the U.S. portion of the Roosevelt (Transboundary) Reach (i.e., Lake Roosevelt above Grand Coulee Dam to Hugh Keenleyside Dam, British Columbia) of the Columbia River. The LRSRP works closely with the Colville Confederated Tribes (CCT), specifically Project #2008-116-00, to ensure objectives for the project(s) are met. The co-managers originally intended on pursuing the construction of a hatchery but recognized they could meet their goals without building a hatchery by collecting white sturgeon larva and rearing them to a larger size to provide them an opportunity to survive in the Lake Roosevelt environment.

As outlined above (see above Project-Specific Recommendations – further discussion; #1) the Council's program calls for an increase in support to address critical uncertainties and to continue to make progress in implementing the program's comprehensive approach to white sturgeon. The 2014 Fish and Wildlife Program has identified the implementation of additional sturgeon measures as one of its emerging priorities.

As part of this review, the project sponsor is requesting additional funds to retrofit a 2003 Sturgeon Landing craft, with new outboard motors, electronics, and a resurfaced

main deck of the vessel. After several years of use, the vessel needs updating to maintain reliability for collecting and gathering data in support of this project.

Council Recommendation:

1. Bonneville to fund the retrofit of the sturgeon landing craft at a cost not to exceed \$100,000 in FY2021 to ensure continued use of the vessel in support of this collaborative sturgeon effort.

4. Project #2007-024 00, *Coeur d'Alene Trout Ponds*

The Coeur d'Alene Tribe's (CDA) trout ponds provide fishing opportunities to partially mitigate for lost anadromous fisheries. The four isolated ponds associated with this project are stocked with triploid rainbow trout with the goal of reducing fishing pressure on native fish as they recover and respond to management actions.

In an effort to support cultural needs, the CDA is requesting additional funds to develop an approach that incorporates educational programming, community engagement and a cultural fishery for salmon.

The intent is to build on similar Program supported efforts in other blocked areas in the Columbia River Basin, with the transport and release of hatchery salmon and steelhead to support ceremonial fisheries, complemented by culturally relevant educational components to connect youth to not only the ceremonial fisheries but also to the salmon lifecycle.

The Coeur d'Alene Tribe's effort complements existing educational programs (Smlich (Salmon) In the Classroom (SIC) program – pre-k through 12) and the supporting 'Nik'wln (a place for fish to grow) Room, which provides educational opportunities in the classroom and opportunities for a vocational internship (Lakeside High School, Natural Resources Career Pathway program (NRP). The CDA is proposing to secure 5,000 eyed Chinook salmon eggs and rear to parr stage in SIC and 'Nik'wln programs for cultural releases into Hangman Creek in May of each year.

The artificial production elements as described in the proposal (utilization of the 5,000 eyed Chinook eggs for educational or vocational purposes) does not trigger the three-step review process.

The ISRP provided a favorable review for this project and included final review comments intended to improve the project.

The CDA effort supports the Council's program measures to restore ceremonial fisheries in some portions of the Columbia River Basin through trap and transport operations and provides public engagement and education.

Council Recommendation:

1. Bonneville to fund the implementation of Project #2007-024 00, *Coeur D'Alene Trout Ponds* as reviewed. Total reviewed and recommended project budget for FY 20201 is \$255,240. This recommendation is conditioned on an increase to the artificial production level of 5,000 eyed Chinook eggs, which may trigger a three-step review.

5. Project #2017-004-00, Northern Pike Suppression and Monitoring

Northern pike have been found with increasing frequency in Lake Roosevelt since 2009. In early 2015, alarming increases in pike abundance caused concern among co-managers (Spokane Tribe of Indians (STOI), Washington Department of Fish and Wildlife (WDFW), and Colville Confederated Tribes (CCT)).

On November 8, 2017, the STOI, WDFW and CCT submitted proposal #2017-004-00, Northern Pike Suppression and Monitoring, and on June 13, 2018 the Council approved Project #2017-004-00, Northern Pike Suppression and Monitoring for implementation.

To date this project has not received the funds necessary to meet the scope and intent of the project as reviewed and recommended.

In the 2014 Fish and Wildlife Program, one of the ways the Council proposed to preserve program effectiveness is to aggressively address non-native and invasive species and prioritized this work as part of its' emerging priorities.

Part II of the 2020 Addendum to the 2014 program continues to request that implementers *adequately sustain and support ongoing efforts to reduce predation* and states the following:

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

It its final project recommendation, the ISRP states that the sponsors should be commended on refreshing the original proposal and providing clearer understanding of the project's objectives, but also note the inadequate funding. The ISRP noted that "*this is an extremely important Tribal and State effort designed to monitor, suppress, and control northern pike in Lake Roosevelt. It deserves to be fully funded so that additional measurement and analysis of three critical components, northern pike diet,*

bioenergetics, and abundance can be added to the information collected on CPUE, eDNA, and otolith microchemistry to evaluate the overall distribution and impact of this highly invasive and predatory species on the fish assemblages in Lake Roosevelt.”

In its Programmatic comments to the Council, the ISRP suggested the Council should explore the creation of a multi-state task force for northern pike; that BPA and the Council should consider an angler reward program to engage local and regional communities; that education and outreach programs should be encouraged, perhaps hiring specialists to help with effective communication.

Council Recommendation:

1. Bonneville to fund the implementation of Project #2017-004-00, *Northern Pike Suppression and Monitoring* as reviewed and recommended by the Council on June 13, 2018, and as updated for budget and scope of work through this review, while continuing to work with the relevant state agencies and tribes on a strategy to solicit and obtain contributions to this effort from other affected entities.

PART 4: Project Recommendation Summary Spreadsheet (Attachment 1)

Project	Title	Sponsors	Meets ISRP Criteria	FY 2021 EXP SOY	FY 2021 EXP Requested	Budget Discrepancy (10 percent or more)	Supported budget increase	Council recommendation
198503800	Colville Hatchery Operation and Maintenance (O&M)	Colville Confederated Tribes	Yes	\$1,994,234	\$1,992,423			Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible.
198605000	Evaluate Sturgeon Populations in the Lower Columbia River	Oregon Department of Fish and Wildlife	Yes	\$1,336,827	\$2,780,027	X	\$1,323,010	Supported as reviewed. Additional funding supported (Project addition A - Snake River @ \$674,315, and B - McNary @ \$648,695) supported as core baseline information (2020 Addendum Part II, page 9) and support/monitoring needs associated with investment in artificial production baseline information. Linked to #2007-155-00 and #2008-845-00. <u>Also see Part 3: Project-Specific Recommendations.</u>
198806400	Kootenai River White Sturgeon Aquaculture Conservation Facility	Kootenai Tribe	Yes	\$3,090,057	\$3,051,908			Supported as reviewed.
198806500	Kootenai River Fishery Investigations	Idaho Department of Fish and Game (IDFG)	Yes	\$953,693	\$953,693			Supported as reviewed.
199001800	Lake Roosevelt Rainbow Trout Habitat and Passage Improvement	Colville Confederated Tribes	Yes	\$801,956	\$882,635			Supported as reviewed.
199004400	Coeur D'Alene Reservation Fisheries Habitat	Coeur D'Alene Tribe	Yes	\$1,588,020	\$1,724,436			Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible.

Project	Title	Sponsors	Meets ISRP Criteria	FY 2021 EXP SOY	FY 2021 EXP Requested	Budget Discrepancy (10 percent or more)	Supported budget increase	Council recommendation
199101901	Hungry Horse Mitigation/Flathead Lake Restoration and Research, Monitoring and Evaluation (RM&E)	Salish and Kootenai Confederated Tribes	Conditional	\$546,124	\$850,000	X	\$303,876	Managers of #1991-019-01 and #1990-019-03 to jointly respond to ISRP conditions by March 31, 2021. Managers should also discuss, where pertinent, the conditions placed on USFWS (#1991-019-04) as they may relate to their projects. Council supports additional funding for CSKT (#1991-019-01) to address O&M costs incurred on lands acquired under project #2002-003-00 while manager and Bonneville work out long term stewardship funding agreement.
199101903	Hungry Horse Mitigation Habitat Restoration and Research, Monitoring and Evaluation (RM&E)	Montana Fish, Wildlife and Parks (MFWP)	Conditional	\$1,768,693	\$1,746,857			Managers of #1991-019-01 and #1990-019-03 to jointly respond to ISRP conditions by March 31, 2021. Managers should also discuss, where pertinent, the conditions placed on USFWS (#1991-019-04) as they may relate to their projects.
199101904	Hungry Horse Mitigation-Creston Hatchery	US Fish and Wildlife Service (USFWS)	Conditional	\$160,815	\$160,815			Not Applicable – see recommendations for projects #1990-019-01 and #1990-019-03.
199104600	Spokane Tribal Hatchery Operations and Maintenance (O&M)	Spokane Tribe	Yes	\$788,973	\$1,409,706	X	\$620,733	Supported as reviewed. Additional funding supported - fish marking trailer (\$600K for half cost, remainder is cost

Project	Title	Sponsors	Meets ISRP Criteria	FY 2021 EXP SOY	FY 2021 EXP Requested	Budget Discrepancy (10 percent or more)	Supported budget increase	Council recommendation
								share) to improve marking quality and minimize stress on fish. Link to #1991-047-00, #1995-009-00 and #2001-029-00. <u>Also see Part 3: Project-Specific Recommendations.</u>
199104700	Sherman Creek Hatchery Operations and Maintenance (O&M)	Washington Department of Fish and Wildlife (WDFW)	Yes	\$337,304	\$403,331	X	\$66,027	Supported as reviewed. Additional funds supported to maintain Lake Roosevelt Hatcheries Program. Link to #1991-046-00, #1995-009-00, and #2001-029-00. <u>Also see Part 3: Project-Specific Recommendations.</u>
199201000	Fort Hall Habitat Restoration	Shoshone-Bannock Tribes	Pending	\$339,429	\$335,239			To Be Determined. Continue to implement as previously reviewed and recommended. Outyear funding (FY 2022) dependent upon completion of this review cycle.
199404300	Lake Roosevelt Data Collection	Spokane Tribe	Conditional	\$1,349,691	\$2,001,707	X, TBD		Manager address ISRP review conditions in a detailed report for the project. Additional budget request dependent on detailed report for review and decision. Report due no later than March 1, 2021.
199404900	Kootenai River Ecosystem Restoration	Kootenai Tribe	Conditional	\$1,799,906	\$1,701,131			Manager address ISRP review conditions in a detailed report for the project. Report due no later than March 1, 2021.
199500100	Kalispel Tribe Resident Fish Program	Kalispel Tribe	Yes	\$828,979	\$839,928			Supported as reviewed. Bonneville and Manager review ISRP programmatic

Project	Title	Sponsors	Meets ISRP Criteria	FY 2021 EXP SOY	FY 2021 EXP Requested	Budget Discrepancy (10 percent or more)	Supported budget increase	Council recommendation
								comments and incorporate where possible.
199500400	Libby Reservoir Mitigation Restoration and Research, Monitoring and Evaluation (RM&E)	Montana Fish, Wildlife and Parks (MFWP)	Conditional	\$1,314,268	\$1,187,460			Manager to respond to ISRP conditions in a report no later than March 31, 2021
199500900	Lake Roosevelt Rainbow Trout Net Pens	Lake Roosevelt Development Association	Yes	\$187,210	\$682,611	X	\$495,401	Supported as reviewed. Additional funding supported - Net Pen replacement (\$489,748) to improve safety for the volunteers and security to rainbow trout. Link to #1991-047-00 and #1995-009-00. <u>Also see Part 3: Project-Specific Recommendations</u>
199501100	Chief Joseph Kokanee Enhancement	Colville Confederated Tribes	Yes	\$620,953	\$620,953			Supported as reviewed.
199501300	Nez Perce Trout Ponds	Nez Perce Tribe	Yes	\$217,316	\$235,685			Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible.
199501500	Duck Valley Reservation Reservoir Fish Stocking Operations and Maintenance (O&M)	Shoshone-Paiute Tribes	Conditional	\$544,106	\$576,590			Bonneville to assist manager in addressing ISRP review conditions in a revised proposal for the project. Proposal due no later than March 1, 2021.
199502700	Lake Roosevelt Sturgeon Recovery	Spokane Tribe	Yes	\$505,982	\$657,000	X	\$151,018	Supported as reviewed. Additional funding supported - retrofit the existing 2003 sturgeon landing craft to conduct field activities and

Project	Title	Sponsors	Meets ISRP Criteria	FY 2021 EXP SOY	FY 2021 EXP Requested	Budget Discrepancy (10 percent or more)	Supported budget increase	Council recommendation
								provide safe environment for crew and sturgeon. Linked to #2008-116-00. Also see Part 3: Project-Specific Recommendations .
199700400	Resident Fish above Chief Joseph and Grand Coulee Dams	Kalispel Tribe	Yes	\$749,382	\$845,798	X, MOA and Accord		Supported as reviewed - Bonneville and Manager(s) review ISRP programmatic comments and incorporate where possible. Budget discrepancy governed by budget rules of Kalispel's MOA and Colville's Accord.
199701100	Duck Valley Reservation Habitat Enhancement	Shoshone-Paiute Tribes	Conditional	\$301,788	\$313,016			Bonneville to assist manager in addressing ISRP review conditions in a revised proposal for the project. Proposal due no later than March 1, 2021.
199701900	Evaluate Life History of Native Salmonids in Malheur River Subbasin	Burns-Paiute Tribe	Yes	\$266,016	\$272,745			Supported as reviewed.
200102900	Ford Hatchery Operations and Maintenance (O&M)	Washington Department of Fish and Wildlife (WDFW)	Yes	\$147,007	\$206,552	X	\$59,545	Supported as reviewed. Additional funding supported to maintain Lake Roosevelt Hatcheries Program. Link to #1991,046-00, #1991-047-00, and #1995-009-00. Also see Part 3: Project-Specific Recommendations .
200103200	Coeur D'Alene Fisheries Enhancement-Hangman Creek	Coeur D'Alene Tribe	Conditional	\$307,100	\$473,000	X, TBD		Manager address ISRP review conditions in a revised proposal for the project. Additional budget request

Project	Title	Sponsors	Meets ISRP Criteria	FY 2021 EXP SOY	FY 2021 EXP Requested	Budget Discrepancy (10 percent or more)	Supported budget increase	Council recommendation
								dependent and linked to the revised proposal. Revised proposal due no later than January 29, 2020.
200103300	Hangman Creek Fish & Wildlife Restoration	Coeur D'Alene Tribe	Conditional	\$317,750	\$363,176	X, TBD		Manager address ISRP review conditions in a revised proposal for the project. Additional budget request dependent and linked to the revised proposal. Revised proposal due no later than January 29, 2020.
200200200	Kootenai River Habitat Restoration Program	Kootenai Tribe	Yes	\$6,075,000	\$6,000,000			Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible.
200200300	Secure and Restore Fish and Wildlife Habitat in Montana	Salish and Kootenai Confederated Tribes	Yes	\$108,659	\$100,000			Support as reviewed. Requested budget also includes annual capital budget of up to \$2.5 million annually. Also see project #1991-019-01.
200702400	Coeur D'Alene Trout Ponds	Coeur D'Alene Tribe	Yes	\$64,614	\$255,240	X	\$190,626	Supported as reviewed - Bonneville and Manager review ISRP comments and address where possible. Additional funding supported for <i>cultural fisheries and educational objectives</i> . This recommendation is conditioned on an increase to the artificial production level of 5,000 eyed Chinook eggs,

Project	Title	Sponsors	Meets ISRP Criteria	FY 2021 EXP SOY	FY 2021 EXP Requested	Budget Discrepancy (10 percent or more)	Supported budget increase	Council recommendation
								which may trigger a three-step review. Also see Part 3: <u>Project-Specific Recommendations</u> .
200714900	Non-Native fish Suppression	Kalispel Tribe	Yes	\$516,834	\$583,696	X, MOA		Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible. Budget discrepancy governed by budget rules of Kalispel MOA.
200715500	Develop a Master Plan for a Rearing Facility to Enhance Selected Populations of White Sturgeon in the Columbia River Basin	Columbia River Inter-Tribal Fish Commission (CRITFC)	Not Applicable	\$144,457	\$144,456			In STEP - in response review, include ISRP review comments in response. Link to #2008-455-00. Also see #1986-050-00.
200715700	Bull Trout Status and Abundance on Warm Springs Reservation	Confederated Tribes of Warm Springs	Pending	\$141,867	\$140,116			To Be Determined. Continue to implement as previously reviewed and recommended. Outyear funding (FY 2022) dependent upon completion of this review cycle.
200717000	South Fork Snake River Yellowstone Cutthroat Trout Recruitment and Survival Improvement	Idaho Department of Fish and Game (IDFG)	Yes	\$176,790	\$177,941			Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible.
200724600	Restoration of Bull Trout Passage at Albeni Falls Dam	Kalispel Tribe	Yes	\$670,717	\$674,835			Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible.
200740500	Rufus Woods Habitat/Passage	Colville Confederated Tribes	Yes	\$267,319	\$268,319			Supported as reviewed. Bonneville and Manager

Project	Title	Sponsors	Meets ISRP Criteria	FY 2021 EXP SOY	FY 2021 EXP Requested	Budget Discrepancy (10 percent or more)	Supported budget increase	Council recommendation
	Improvement, Creel and Triploid Supplementation							review ISRP comments and implement to the extent possible.
200810900	Resident Fish Research, Monitoring and Evaluation (RM&E)	Colville Confederated Tribes	Yes	\$267,319	\$307,583	X, Accord		Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible. Budget discrepancy governed by rules of Colville Accord.
200811500	Lake Roosevelt Burbot Population Assessment	Colville Confederated Tribes	Yes	\$427,034	\$414,150			Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible.
200811600	White Sturgeon Enhancement	Colville Confederated Tribes	Yes	\$618,961	\$612,160			Supported as reviewed. Link to #1995-027-00.
200845500	Sturgeon Management	Yakama Confederated Tribes	Not Applicable	\$149,578	\$149,578			In STEP - in response review, include ISRP review comments in response. Link to #2007-155-00. Also see #1986-050-00.
201101800	Pend Oreille River Basin Initiative: Land Acquisitions, Watershed Restoration, Conservation Hatchery	Kalispel Tribe	Yes	\$724,704	\$844,400	X, MOA		Supported as reviewed. Budget discrepancy governed by budget rules of Kalispel MOA.
201700400	Northern Pike Suppression and Monitoring	Colville Confederated Tribes, Spokane Tribe, Washington Department of Fish and Wildlife (WDFW)	Yes	\$478,981	\$997,576	X	\$518,595	Bonneville to fund the implementation of Project #2017-004-00, <i>Northern Pike Suppression and Monitoring</i> as reviewed and recommended by the Council on June 13, 2018, and as updated for budget and scope

Project	Title	Sponsors	Meets ISRP Criteria	FY 2021 EXP SOY	FY 2021 EXP Requested	Budget Discrepancy (10 percent or more)	Supported budget increase	Council recommendation
								of work through this review, while continuing to work with the relevant state agencies and tribes on a strategy to solicit and obtain contributions to this effort from other affected entities. <u>Also see Part 3: Project-Specific Recommendations.</u>
201900100	Sekokini Springs Hatchery	Montana Fish, Wildlife and Parks (MFWP)	Yes	\$271,031	\$267,685			Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible.
201900500	Lake Pend Oreille/Dworshak	Idaho Department of Fish and Game (IDFG)	Yes	\$1,199,390	\$1,199,388			Supported as reviewed. Bonneville and Manager review ISRP comments and implement to the extent possible.
Total				\$35,466,834	\$40,405,545		\$3,728,831	