



Independent Scientific Review Panel

for the Northwest Power & Conservation Council
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Memorandum (2021-9)

November 10, 2021

To: Guy Norman, Chair, Northwest Power and Conservation Council

From: Stan Gregory, ISRP Chair

Subject: Response Review of Fort Hall Habitat Restoration Project (#1992-010-00)

Background

On August 23, 2021, the Council asked the ISRP to review a [revised proposal](#) from the Shoshone Bannock Tribes (SBT), regarding Project #1992-010-00, *Fort Hall Habitat Restoration*. The project proponents revised their [original proposal](#) to address the ISRP's "Response Requested" recommendation from the ISRP's Preliminary Report ([ISRP 2020-4](#), pages 237-243; April 2, 2020) for the [Resident Fish and Sturgeon Project Review 2019/2020](#). The ISRP's 2020 recommendation states:

This is a long running project that reflects a great deal of sustained commitment and hard work by the proponents. There have been numerous accomplishments and continued development of an understanding of fish life history, limiting factors, and restoration needs. The restoration of native runs of Yellowstone Cutthroat Trout faces daunting challenges including adjacent agricultural land and associated land-management practices, hybridization and competition with rainbow trout, climate change, and hydrosystem/reservoir operations. It appears that the project is making a major transition towards larger scale projects with increased sophistication in design and more complex demands for successful implementation. There have also been promising products from a partnership with Idaho State University.

[Nonetheless,] the current proposal does not meet scientific review criteria. ... The proposal does not adequately address the review questions, and it needs improved focus and organization. Proposal sections needing the most attention include: Goals and Objectives, Methods, Program Evaluation and Adjustment Process, Timeline, and Response to Past Council Recommendations and ISRP Reviews.

Given the substantial changes needed for this proposal, it is suggested that a conference call be arranged between the proponents, ISRP, and Council Staff to discuss a strategy for future work on the proposal. ... Given that a good deal of hard work and commitment

have gone into this project and personnel appear highly motivated and want to see successful implementation, the chances for improving the proposal seem good.

To address the ISRP's preliminary recommendation, the Council provided the proponents a time extension to complete the response and revise their proposal beyond the August 6, 2020 deadline for responses for the Resident Fish and Sturgeon Project Review. As part of the response process, the ISRP and the proponents met by teleconference on July 9, 2020 to clarify and develop a strategy to address the ISRP's requests for further information. The ISRP's review below considers to what extent the SBT's August 2021 revised proposal addresses the ISRP response request.

Final ISRP Recommendation: Meets Scientific Review Criteria - Conditional

Overall Comment

The revised proposal is a significant improvement from the original. The re-write of the proposal is much appreciated for its clarity, brevity, and improved organization. It improves understanding of past accomplishments and future, proposed work. Clearly, the proponents put a lot of extra work in re-writing the proposal, and they have made a convincing statement that their project is important and generally well planned.

However, a few issues remain, and the proponents should update their revised proposal to address the following Conditions. The ISRP recommends that the updated proposal should be submitted for review by February 28, 2022 to inform the 2022 field season, understanding that the Council and the proponents will reach an agreed-upon date that reflects other commitments and funding cycle milestones.

- 1. Implementation and effectiveness objectives meeting SMART criteria.** While the proponents provide a list of goals, the five objectives associated with each of the three goal statements do not provide enough detail to qualify as SMART Objectives. The current list is a good start toward this effort, but the proponents should provide revised SMART objectives describing key activities and outcomes that are measurable and time bound (see proposal instructions). Also, there are several activity descriptions provided in the Methods section of the proposal that describe key activities and provide critical details needed in the full set of objectives.
- 2. Strategy to address expanded project activities.** The proponents should provide a clear description of the strategic plan that will guide implementation of this expanded project into the future. The proposal notes "Tributaries Assessment and Enhancement Strategy was completed in 2013, providing a geomorphic and habitat-based assessment of the springbrooks of the Bottoms and prioritized reaches for enhancement." The Assessment

includes a comprehensive project matrix and timelines for implementation from 2013 through 2018. However, the proposal does not indicate whether this approach will be updated and used to cover the current time frame or if a different approach will be used. Also, development of a fish management plan is mentioned, but it is not clear if this will replace the current strategic elements of the Assessment. The current proposal broadens the focus of the project to three goals: 1) maintain and restore ecological health and resilience in coupled river-floodplain and stream-riparian ecosystems of the Fort Hall Reservation; 2) achieve a naturally sustainable population of Yellowstone Cutthroat Trout (YCT) and maintain a fishery for Tribal members; and 3) foster place-based education for Tribal members and promote traditional ecological knowledge and culture. The proposal also includes large increases in annual funding to support these goals, but there is no clear description of a strategic plan to guide this expanded project in the future. The proponents should identify the specific document(s) that will provide this guidance.

3. **Timeline providing a detailed description for major project activities under each of the three goals.** The current timeline is general and does not fully describe the full suite of proposed actions and associated timelines for their implementation. The proponents should revise the proposed timeline to more thoroughly identify the proposed actions and timelines for each, particularly given the proposed expansion of activities and scope in the current proposal.
4. **Methods for fish and habitat sampling methods need additional detail.** The proponents should describe the methods for sampling fish and habitat in greater detail. Descriptions for these methods in the proposal are general and do not provide adequate detail and information to evaluate the scientific merit of the proposal. Even when specific methodologies are described (e.g., BACI design, three-pass removal method), details are lacking for evaluating their application (e.g., sampling design and sampling units) and for assessing potential rigor of results (e.g., detectability of change, power of tests, and confidence intervals).

The ISRP suggests that the proponents start with developing a full list of SMART Objectives and drafting a few paragraphs on the strategic plan that includes rationale for the large budget increase. The ISRP would be willing to review these initial drafts, discuss through a teleconference, and provide feedback on the extent to which they address our conditions.

1. Problem statement

The revision of the problem statement is thorough and complete. It does an exemplary job in describing the array of problems affecting the project area. It provides more detail than the previous proposal, particularly in the areas of addressing water management issues driven by

actions outside of direct Tribal control and in emphasizing improved alignment of resource management with Traditional ways of knowing and existing cultural connections between Tribal members and Reservation lands and waters. Also, this section of the proposal provides an excellent listing of references for studies and research relating to issues affecting the Fort Hall riparian and aquatic ecosystems.

2. Progress to date

The revised proposal provides additional information on past, individual treatments and their completion and ultimate results. The Appendix Tables 1-3 provides an excellent summary of the progress-to-date on an annual basis. The activity listed for 2018 and 2019 appears to include fewer actions than previous years. This section also includes a detailed discussion of work accomplishments and findings from M/E and research. Informative sequences of before/after photographs clearly show project outcomes over several years following initial treatments. The current discussion of progress is a major improvement over the initial proposal. Information is presented in 10-year segments up to the present including detailed tables of specific projects, their timing and specific accomplishments associated with each one. Unfortunately, a discussion is missing of progress in changing conditions at a watershed or landscape scale. Given the long history of this project, a discussion of current conditions as related to those that are desired and at a broader scale (watershed or entire project area) is needed. A key question that needs discussion is what the trajectory of progress is toward meeting long-term goals?

The basic approach for the work is discussed and reference is made to an Appendix that includes the "Tributaries Assessment and Enhancement Strategy." This presents a suite of potential enhancement actions to achieve the stated enhancement objectives. The revised proposal includes a detailed matrix that displays priority protection and restoration actions by stream. The Assessment document is over 60 pages long, and a summary would have been helpful of key elements that most clearly represent the strategic approach for past project actions.

The overall strategic approach provided by the Assessment and Enhancement Strategy is designed to guide the project until 2018. It does not appear to have been updated for the current proposal nor is there any discussion of a strategic approach to guide future efforts. Development of a fish management plan is mentioned, but it is not clear if this will replace the current strategic elements of the Assessment.

A strategic approach to guide the project into the future is needed, particularly since the proponents intend to expand the scope and magnitude of project activities substantially. The revised proposal adds two goals (overall ecosystem health and improved alignment of resource management with Traditional ways of knowing and existing cultural connections between Tribal members and Reservation lands and waters. Proposed budgets reflect this expansion and increase from \$270k in Fiscal Year (FY) 2021 to \$935k in FY 2025.

3. Goals and objectives

This section is a major improvement from the original proposal in its organization and in identifying major activities than the previous proposal. In most cases, however, the objectives are too general, qualitative and lack time frames for implementation. In the current form, the proposal does not address a number of questions regarding key activities and accomplishments. These include: How will improved quality of habitats be measured? What percent increase in density of YCT is targeted by 2025? How much stream habitat work will be done annually? How many YCT will be stocked on an annual basis? How many events will be held to connect tribal members to organisms and ecosystems? How many interpretive placards would be made? Additional detail is needed to spell out major, specific activities, quantitative descriptions of expected accomplishments, and projected outcomes and time frames for completion. Clear statements of these measurable and time-bound objectives will help reviewers assess how well the project is progressing based on summary evaluations and statistics presented in annual reports.

The proposal includes three primary goals: 1) ecosystem health, 2) restore YCT, and 3) engage Tribal members and place-based education for Tribal members and promote traditional ecological knowledge and culture. Three sets of objectives are nested within the goals: 1) biological /social; 2) implementation; and 3) research, monitoring and evaluation. A summary of the objectives that fall within each of the primary goals is presented, and several objectives are categorized as inclusive of all three primary goals. This discussion is quite confusing and could be more clearly stated.

Under Goal 1 – Ecology, five objectives list the general needs and activities. Other than Objective 2 (Plant 30K YCT by 2025, 5k per year) which meets SMART criteria, the remaining four objectives are not quantitative or time bound. For example, two of the objectives include: 1) Improve quality of springbrook, wetland, and mountain habitat stream habitats and 2) increase densities of YCT in springbrook and mountain streams. As an example, these could be written: *By 2025, in springbrook and mountain stream habitat, increase the number of primary pools by at least 30% and reduce the length of unstable streambanks by at least 50%. By 2025, increase the density of adult YCT by at least 25% in restored streams.*

Also, under this Goal, there are two objectives for developing specific models, but time frames are not provided. Under Goal 2 - Fishery, Objective 2 meets SMART criteria, but the other four objectives either lack dates for accomplishment or lack quantitative measures of accomplishments and desired outcomes. Under Goal 3 – Culture, the proposal provides a general discussion of main activities. However, more detail is needed to describe specific activities, quantitatively describe expected accomplishments, and identify the outcomes and associated time frames that are expected.

To assist in the update and revision of project objectives, the Methods section provides a comprehensive discussion of specific work activities and could provide a very good foundation for providing additional detail for development of SMART implementation and effectiveness objectives. It would be useful to organize and link the methods descriptions to the project's three major goals/work categories: Ecology, Fisheries/YCT and Cultural.

Some examples of potential objective statements contained in the Methods section by major Goal include:

Ecology

RFP will seek to enter a cooperative partnership with the Bureau of Reclamation (BOR), Idaho Department of Water Resources (IDWR), and Idaho Fish and Game (IDFG), such that resources and data will be shared between agencies and the Tribes, yet no funds will be transferred.

As an objective this would benefit by indicating the nature of the agreement and when it is expected to be completed (e.g., By 2025 a cooperating agreement will be signed with BOR and IDFG to allow sharing of resources and data with the Tribes with no transfer of funds).

Collaboration with the BOR and IDWR will facilitate alignment of proper floodplain management, namely the creation of floods following spring run-off (but also avoidance of ecologically damaging, abrupt draw-down events).

As an objective, this needs some additional detail on key activities, especially input and involvement in the relicensing of American Falls Dam.

Reduce the number of adult rainbow trout stocked to the Snake River at Tilden Bridge and American Falls Reservoir.

As an objective this needs additional detail on numbers and timing such as: By 2025, reduce the number of adult rainbow trout stocked at Tilden Bridge and American Falls reservoir by at least 50%.

Fisheries

Fish management actions will be guided by the completion of the Reservation fish management plan and will include the stocking of Yellowstone cutthroat trout to Reservation waters, the reduction of rainbow trout in the springbrooks, and removal of brook trout in the mountain streams.

As objectives, additional details on numbers, timing and expected outcomes should be included (e.g., By 2025, the Reservation Fish Management Plan will be completed. The Plan will provide guidance in a number of areas including stocking of YCT to Reservation waters, the reduction of rainbow trout in the springbrooks, and removal of brook trout in the mountain streams).

Cultural

Education and outreach programs for Tribal members will be continued and further developed with the assistance of the Tribes' Language and Culture Preservation department.

As objectives, additional detail on key programs, their timing and expected outcomes would be needed.

RFP will provide information on the ecology and natural history of the Fort Hall Bottoms, which will be described in parallel to cultural history and traditional knowledge.

As an objective, additional detail is needed on how and when this will be presented and expected outcomes.

An interpretive overlook to be placed on the ancient floodplain terrace east of the Bottoms.

As an objective, additional detail is needed on when this is to occur, the major focus, and a more complete description of the overlook development (e.g., *By 2025, an interpretive overlook site describing the relation of the bottoms and its fish and wildlife resources to the values and culture of the Tribes will be built on the ancient floodplain terrace east of the Bottoms*).

The proposal also describes a number of activities for research, monitoring and evaluation, which provide a solid basis for development of implementation and effectiveness objectives. Additional detail on timing and outcomes will be needed for most activities.

4. Methods

The Methods section is generally quite detailed and provides adequate descriptions of activities and methods for their accomplishment. As mentioned earlier, this section identifies a number of key activities for the project. Although not explicitly stated, it appears that documents, such as the Bottoms Tributary Assessment (designed for use up until 2018) and the soon-to-be-completed Reservation fish management plan, will be used for planning purposes. The educational and culture aspects appear to be well thought out and planned.

The fish and habitat sampling methods and associated metrics are general and not detailed enough to evaluate for scientific merit. Methods need to be more fully described, and metrics should have specified levels of accuracy and precision. Sampling designs need to be more fully described to include description of the sampling unit(s) and the level of detectable change expected. Even when specific methodologies are described (e.g., BACI design, three-pass removal method), details are lacking for evaluating their application (e.g., sampling design and sampling units) and for assessing potential rigor of results (e.g., detectability of change, power of tests, and confidence intervals).

Overall, the section provides a description of most key activities and can be used to develop a strong set of project objectives. In most cases time frames and expected outcomes will need to be developed.

5. Project evaluation and adjustment process

The proposal provides a complete and well-organized discussion of project evaluation and adjustment. It is a major improvement over the previous proposal's description. Additional improvements that would be useful include an expanded discussion of how methods would be evaluated (e.g., desired coefficient of variation) and potentially adjusted (e.g., increased sample size) and a more specific description of documentation and reporting of RME findings and subsequent adjustments to management. The project will need to assess the outcomes of their actions for instream and floodplain conditions, for cutthroat trout populations, and for cultural awareness. This documentation will be particularly valuable for future project staff and other projects that are interested in this type of restoration effort.

6. Potential confounding factors

The discussion of confounding effects is sufficiently detailed, coherent, and complete.

7. Timeline

The Timeline identifies only broad, major program elements and timelines. It needs additional detail to link the full suite of activities described in the Methods section to the expanded set of project goals and associated activities. The current lack of detail may be related to the absence of a current strategic framework to guide development and implementation of individual projects and related activities. The need for additional detail is particularly important, given the major proposed expansion of the project in the next five years. This involves more than a tripling of the proposed project budget from around \$270K to over \$900K.

8. Relationships to other projects

The relationship of this project to the Crystal Springs project (2008-905-00) is clarified.

9. Response to past Council recommendations and ISRP reviews

The proponents responded to comments provided in the current review.

10. Miscellaneous Sections 10-13 (references, key personnel, appendices, budget)

The revised proposal addresses all of the ISRP's concerns regarding these sections of the previous proposal. Specifically, the revision includes a substantial number of references that support proposed elements of the project.