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July 9, 2019

MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Laura Robinson

SUBJECT: Draft letter and science questions for ISAB review of Upper Columbia United Tribes' fish passage and reintroduction investigation report

BACKGROUND:

Presenter: Staff

Summary: At the June Fish and Wildlife Committee and Council meeting, the Committee and Council received presentations on the technical and policy aspects associated with the Upper Columbia United Tribes' (UCUT) report on fish passage and reintroduction investigations in the blocked waters above Grand Coulee and Chief Joseph dams. At the July Fish and Wildlife Committee meeting, staff will brief the committee on a draft letter requesting the ISAB to commence a review of the UCUT's report. Staff is seeking the committee's input on the letter and its science questions before bringing the draft letter to the full Council at Council business on July 17.

Relevance: This work addresses the 2014 Program's anadromous fish mitigation in blocked areas strategy and Emerging Priority #4: *Investigate blocked areas mitigation options through reintroduction, passage and habitat improvement, and implement if warranted.*

Workplan: 2019 Fish and Wildlife Division work plan: Phase I Upper Columbia Habitat Assessment above Chief Joseph Dam report submittal

Background: The 2014 Fish and Wildlife Program contains the *Anadromous fish mitigation in blocked areas* strategy. Within that strategy is a measure that calls for a science-based phased approach to investigate reintroduction of anadromous fish above Chief Joseph and Grand Coulee dams to mainstem reaches and tributaries in the United States. In 2016, the Council approved a project submittal from the Spokane Tribe of Indians (STI) to conduct a habitat assessment, one of the requirements of the Program's first phase. In 2018, the ISRP reviewed the STI project in the Research Projects review process and found that it "Meets Scientific Review Criteria (Qualified)." The [ISRP](#) and [Council recommended](#) that the assessment of potential for reintroduction receive science review when completed by the tribes.

On May 9, 2019, UCUT released their report: [*Fish Passage and Reintroduction Phase 1 Report: Investigations Upstream of Chief Joseph and Grand Coulee Dams*](#). This report includes a donor stock and risk assessment, several habitat assessments (including the one that received ISRP review in 2018), life-cycle modeling, adult and juvenile fish passage, and future field studies and recommendations. The UCUT report will be submitted for scientific review with the understanding that a Phase 1 cost assessment of upstream and downstream passage options for salmon and steelhead is not complete but is needed to satisfy the Council Program's Phase 1 components.

More Info:

UCUT -

[Fish Passage and Reintroduction Phase 1 Report and supporting materials](#)

Council -

June 2019 [Fish and Wildlife Committee packet memo](#) and [Council packet memo](#)

Attachment 1

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[Date]
DRAFT

Dear Dr. Stan Gregory,

In the 2014 Fish and Wildlife Program, the Council included a science-based, phased approach to investigate the reintroduction of anadromous fish above Chief Joseph and Grand Coulee dams. The Program states that the first phase will:

- “Evaluate information from passage studies at other blockages and from previous assessments of passage at Grand Coulee and Chief Joseph dams.
- Investigate habitat availability, suitability and salmon survival potential in habitats above Grand Coulee. This might include selective releases of salmon and steelhead. Investigate the scientific feasibility and possible cost of upstream and downstream passage options for salmon and steelhead. Before funding new investigations, provide the Council with a report for consideration of subsequent work to advance the fish passage planning process.
- As part of Phase 1, the Council will engage in discussions with tribal, state, and federal agencies and others regarding the purpose, scope and progress of reintroduction efforts above Chief Joseph and Grand Coulee dams.”

In 2016, the Council solicited for a collaborative project to assess suitable and available habitat in the blocked waters above Grand Coulee. The Spokane Tribe of Indians submitted a [proposal](#) with support from the Confederated Tribes of the Colville Reservation, Coeur d’Alene Tribe, Washington Department of Fish and Wildlife, U.S. Geological Survey Columbia River Research Laboratory, and NOAA Fisheries. The [Council recommended](#) to the Bonneville Power Administration (Bonneville) that the project be funded and implemented. The Spokane Tribe, along with the five other listed entities, completed the assessment and submitted it for science review within the Council’s 2018 Research Projects review process. The ISRP stated that the work provided useful estimates of available habitat and quality. However, a more detailed discussion of the limits of the assessment methods was needed, particularly for the Intrinsic Potential and Ecosystem Diagnosis and Treatment models since they were based on highly uncertain data. In addition, the ISRP recommended the need for a detailed description of individual objectives and components of Phase 1 and how they fit together. Finally, the ISRP recommended that the assessment of potential for reintroduction receive science review when completed by the tribes ([ISRP 2018-8](#)). The

Council's recommendation concurred with the ISRP's recommendation. ([December 20, 2018 Decision Letter](#)).

In May 2019, the Upper Columbia United Tribes (UCUT) completed their [report](#) investigating fish passage and reintroduction upstream of Chief Joseph and Grand Coulee dams, and presented the findings to the Council at the June Council meeting. UCUT represents the Confederated Tribes of the Colville Reservation, the Spokane Tribe of Indians, the Coeur d'Alene Tribe, the Kalispell Tribe of Indians, and the Kootenai Tribe of Idaho. The UCUT's report contains several habitat assessments, including the one reviewed by the ISRP; a donor stock and risk assessment; a life-cycle model developed by UCUT with various scenarios and assumptions based on the results of the habitat and donor stock assessments; information on adult and juvenile fish passage facilities that could be used for reintroduction at Chief Joseph and Grand Coulee dams; and recommendations for future field studies and continued investigation and implementation of reintroduction.

The ISRP's review of the habitat assessment was very useful, and the Council is now asking that the ISAB provide a science review of all components of the UCUT report. The ISAB should focus the review on the [UCUT report, its supporting documents](#), and the 2014 Fish and Wildlife Program. The ISAB should review the report for its scientific validity while answering the following questions and considering the sub-questions:

1. What are the strengths, data uncertainties, and limitations of each element of the UCUT's report and are there any critical gaps in the analyses?
 - a. Donor stock and risk assessment
 - What are the potential disease risks posed by an anadromous reintroduction to redband trout, for example from infectious hematopoietic necrosis (IHN)?
 - The ISAB's recent report on the likely broad adverse impacts of northern pike and other fish and avian predators ([ISAB 2019-1](#)) was released after the UCUT's report. Is there information in the ISAB's report regarding predation that could inform the reintroduction assessment? In addition, what methods could be considered to estimate predator populations in areas above Chief Joseph and Grand Coulee dams, and what is the feasibility of accurately estimating the predator abundance in Lake Rufus Woods, Lake Roosevelt, and the associated tributaries?
 - b. Habitat assessments
 - Do the habitat assessments assume potential production from currently accessible habitat in its current condition or that future habitat restoration would be needed (i.e., fish passage at irrigation diversions, small hydropower dams, irrigation intake screens, instream flows, etc.)?
 - Does the report rely on future potential from the Canadian portion of the basin? What does the report assume about fish distribution in the Canadian portion of the basin?
 - Do the results from the compilation of the habitat assessments provide a reasonable set of hypotheses about the environment and provide

- enough information to satisfy the Fish and Wildlife Program's direction to assess the quantity and suitability of habitat in the blocked area?
- c. Life-cycle modeling
 - Are the modeling assumptions reasonable, do the variants and sensitivity analyses adequately account for variability and uncertainty, and are other appropriate parameter values for critical life stages considered?
 - d. Adult and juvenile fish passage
 - The UCUT Report focuses on biological and physical assessments but does not address the 2014 Fish and Wildlife Program Phase 1 element to investigate the possible cost of upstream and downstream passage options for salmon and steelhead. Does this section cover the potential passage technologies and alternatives for upstream and downstream passage, their feasibility, and associated biological information that should be evaluated to inform an estimated cost? Is additional information on passage alternatives needed to provide a cost estimate; if so, what information?
 - e. Future field studies and recommendations
2. In sum, how well does the report and its supporting documents address the biological and physical elements of Phase 1, as described in the Council's Fish and Wildlife Program?

The ISAB review should focus on the scientific soundness of the biological and physical assessments. The Council will use this information, along with all elements of the Fish and Wildlife Program's Phase 1, to decide how to proceed.

We look forward to a constructive discussion and review. We request that this review be complete by November 15, 2019. If there is anything that we can do to help facilitate this review, please let us know.

[Currently in process] The ISAB Administrative Oversight Panel and Ex Officio representatives provided input on the request letter and approved the ISAB assignment.

Sincerely,

Jennifer Anders, Chair

Cc: Jaime Pinkham, Columbia River Inter-Tribal Fish Commission
Kevin Werner, NOAA Fisheries