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October 28, 2014

DECISION MEMORANDUM

TO: Council members

FROM: Mark Fritsch, project implementation manager

SUBJECT: Follow-up review action for accord Project #2008-458-00, *Steelhead Kelt Reconditioning*

BACKGROUND:

Presenter: Mark Fritsch, project implementation manager, and Keely Murdoch and Matt Abrahamse, project leads, Yakama Nation

Summary: The Fish and Wildlife Committee recommends to the Council that the condition placed on this project as part of the Research, Monitoring and Evaluation and Artificial Production Project Review has been addressed. This recommendation is conditioned that the Yakama Nation and Bonneville address the questions raised by the ISRP within the current scope and budget of the project as part of annual reports and future reviews. In addition, the Fish and Wildlife Committee requests that Bonneville and NOAA provide an update and status review, in 2016, of this kelt project and how it relates to meeting the intent of RPA 42.2 of the 2008 BiOp.

Relevance: The proposed action will address a condition placed on the project, as part of the Council's project review of January 12, 2010 and the Research, Monitoring and Evaluation and Artificial Production Project Review on June 12, 2011. The funding associated with this accord project totals \$5,184,948 in expense funds for Fiscal Year 2008 through 2017. The Fiscal Year 2014 expense budget for the project is \$454,086 and has a performance period of February 1, 2014 to January 31, 2015.

Workplan: There are no 2014 division workplan tasks linked directly to this presentation.

Background: The project's goal is to enhance the abundance and life history diversity of naturally produced steelhead in the Upper Columbia River (UCR) by taking advantage of their unique ability to repeat spawn (i.e., iteroparity). This project assists in satisfying commitments under the 2008 Federal Columbia River Power System Biological Opinion (BiOp)¹. The project proposes to recondition post-spawned steelhead (kelts) in captivity under a long-term treatment program (6 to 10 months), monitor their condition and reproductive state, release them to spawn naturally, and track their post-release contribution to natural spawner abundance. Natural-origin steelhead kelts will be collected from hatchery broodstock that are live-spawned and at locations known to encounter kelts, such as UCR hydroproject fish bypass systems, tributary smolt traps, and weirs.

On January 12, 2010, based on the current level of science and the needs for answers, the Council recommended that the proposal proceed with implementation as reviewed to provide information to the current debate on the reproductive viability of reconditioned kelts. This recommendation for implementation was conditioned on the understanding that the project will have a performance check in 2014. This recommendation was reconfirmed on June 10, 2011 as part of the Research, Monitoring and Evaluation and Artificial Production Project Review² by conditioning the project with a need to have the ISRP review a results report in 2014.

On July 7, 2014 a submittal was received from the Yakama Nation and Bonneville intended to address the above recommendations as outlined above. The submittal was titled *Upper Columbia Kelt Reconditioning Program Update, 2014 ISRP Check-In*.

On August 13, 2014 the ISRP provided their review (ISRP document 2014-9). The ISRP found the progress report *meets scientific review (qualified)*.

As part of the review the ISRP stated that the project has achieved many milestones in the kelt reconditioning and has the ability to make important contributions to protect and restore this life history diversity of the naturally produced steelhead in the Upper Columbia River. That said the ISRP

¹ Under Reasonable and Prudent Alternative (RPA) Action 42 of the BiOp the Action Agencies committed to *Implement Conservation Programs to Build Genetic Resources and Assist in Promoting Recovery (RPA 42.2 UCR Steelhead-Fund kelt reconditioning for Entiat/Methow/Okanogan - For Upper Columbia Steelhead: Fund a program to recondition natural origin kelts for the Entiat, Methow and Okanogan basin including capital construction, operation and monitoring and evaluation costs*

² In addition, as part of this category review the project was tagged with Programmatic Issue #6 – Research projects in general.

qualified their review to ensure previous questions and concerns be addressed in future proposals and reports.

The benefit of reconditioning kelts remains to be determined and the ISRP's extensive review continues to challenge and encourage the Yakama Nation and the region to address the questions asked in their qualification.

- *The prior recommendation, by the ISRP, to establish methods to assess how kelt reconditioning may benefit population growth, abundance, spatial structure, and diversity still needs to be addressed.*
- *Some modeling and a power analysis need to be conducted to clarify how many juvenile and F_1 adults should be sampled to detect meaningful differences in the breeding and reproductive success of HOR, NOR, and reconditioned NOR females.*
- *Methods to assess the fat levels, maturation timing, fecundity, egg size, and gamete viability of the project's reconditioned kelts need to be developed and implemented. The fate of non-maturing or skip-repeat reconditioned fish also should be disclosed.*
- *Viable plans are needed to monitor the homing and straying rates of reconditioned kelts released by the project.*
- *Experiments are needed to discover the best geographic locations and times of year for release of the project's reconditioned fish.*

As is evident by these questions, the Yakama Nation and Bonneville would need to expand the intent and scope of the existing project to achieve these additional benefits and the ISRP is aware of this limitation. In addition, the qualifications raised by the ISRP are intended to strengthen the project implementation as it relates to the importance of the RPA for the BiOp. The questions raised by the ISRP should be addressed as part of the annual reports and future reviews within the current scope and budget of the project.

Based on the ISRP review and extensive comments the Fish and Wildlife Committee recommends to the Council that the condition placed on this project has been addressed. This recommendation is conditioned that the Yakama Nation and Bonneville address the questions raised by the ISRP within the current scope and budget of the project as part of annual reports and future reviews. In addition, the Fish and Wildlife Committee requests that Bonneville and NOAA provide an update and status review, in 2016, of this kelt project and how it relates to meeting the intent of RPA 42.2 of the 2008 BiOp.

More Info: [RMECAT-2008-458-00](#)

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