

# Monitoring Panel

## Individual Comment Form



<b>Lead Entity:</b>	Snake River Salmon Recovery Board
<b>Project Number:</b>	17-1304
<b>Project Name:</b>	Asotin IMW Monitoring
<b>Project Sponsor:</b>	WDFW
<b>Grant Manager:</b>	Keith Dublanica

	<b>Date</b>	<b>Status<sup>1</sup></b>
Final	10/5/17	<b>Conditioned</b>

### PROJECT SUMMARY *(for Monitoring Panel reference only)*

This proposal requests \$150K to supplement the monitoring activities associated with the Asotin IMW project, which is investigating the effects of adding large wood to several sites in Asotin Creek on the productivity of juvenile steelhead. The funds will be used to support i) juvenile steelhead PIT tagging and mark-recapture surveys and replace damaged PIT tag array equipment, and ii) habitat monitoring using the Columbia Habitat Monitoring protocol (CHaMP). Three tributaries in Asotin Creek need to be monitored: Charley Creek, North Fork Asotin Creek, and South Fork Asotin Creek. extent of fish monitoring is 12 sites 300,500 m in length, 4 in each tributary (see attached map). The extent of the habitat monitoring is 12 CHaMP sites (length 160,200 m) in Charley and North Fork Creek – Tetra Tech is funding CHaMP monitoring in South Fork Creek in 2017. The updated study plan submitted with the proposal by Utah State University and Eco Logical Research is two years old and is essentially the same as the study plan for the Asotin IMW.

### FINAL MONITORING PANEL COMMENTS

**Date:** 10/5/17

**Final Project Status:** Conditioned

**Monitoring Panel Member(s):** Full Monitoring Panel

- If the project is a POC, identify the SRFB monitoring eligibility criteria used to identify the status of the project:**
- If the project is Conditioned, the following language will be added to the project agreement:**
  - Sponsor will append to the proposal the detail about the PIT tag purchases included in responses to Monitoring Panel questions (the proposal becomes part of the grant contract upon funding).
  - Sponsor will update the scope of work with a schedule of deliverables to be included in the regional monitoring project agreement.
  - Do not alter existing treatments unless absolutely necessary so the results of the study will reflect the efficacy of restoration actions without continued maintenance.
  - Steelhead abundance data should be aggregated over the entire watershed so it will be possible to determine if habitat structure additions have improved viable salmonid population (VSP) parameters at the population scale.
  - A summary of the work completed under this regional monitoring project agreement is due December 31, 2018.

<sup>1</sup>CLEAR: Cleared to proceed; CONDITIONED: Cleared to proceed with a condition; NMI: Needs More Information; POC: Project of Concern; NOTEWORTHY: Exemplary Project

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f. During the grant period, sponsor will conduct an updated power analysis to predict the number of years necessary to detect change in juvenile abundance and will include the results of this analysis in the summary report due December 31, 2018.

### 3. Other comments:

The project is consistent with the Asotin IMW study plan previously reviewed by the monitoring panel. The conditions included here are consistent with the conditions recommended to the Board for the overall IMW study.

The list of related projects on page 1 of Appendix C-4 is helpful. In future proposals, please include a high level description of the funding sources supporting the project and the category of activities supported by each source.

## MONITORING PANEL QUESTIONS

**Date:** 9/7/17

**Review Panel Member(s):** Full Monitoring Panel

1. There is little in the narrative to describe the extent of damage or the PIT-tag items needing replacement. The proposed budget provides some information about what will be purchased but additional details in the study plan would help. In addition, the Asotin IMW project already includes funding for CHaMP and Rapid habitat assessments. Will the work covered by this proposal allow investigators to include additional habitat parameters not currently being surveyed by the CHaMP crew? As with the PIT-tag monitoring, more information about the new CHaMP survey elements would be helpful.

*Response: All the interrogation sites (ACM, ACB, AFC, CCA) were damaged and needed repair after the 2017 spring (February through April) high flows. One or more antennas were broken at each interrogation site (due to shifting substrate at high flows). Since the high flows WDFW and ELR have reinstalled parts of the original antenna infrastructure that were not damaged and replaced parts that were damaged with used antennas donated by both WDFW and ELR from other projects. All sites are now operational, however, all of the interrogation equipment (antennas, PIT tag readers, and data loggers, wiring/cables, etc.) are dated technology and are no longer supported by BIOMARK and have lower detection efficiency than newer equipment. One of MUX (PIT tag readers) no longer supports antennas on all ports and may be unusable in the near future. We are requesting the SRFB funds to replace the existing interrogation infrastructure at three sites (ACM, ACB, AFC) because we are in the last few years of the IMW and it is critical that we maintain high antenna efficiency and have a backup system should sites be damaged in the future. WDFW also depends on this infrastructure for its monitoring of the Asotin steelhead population.*

2. The power analysis is used to evaluate alternative sampling designs. Now that the project is 2 years post-treatment, can the power analysis be used to predict when significant changes in abundance or production could be known?

*Response: We completed a power analysis back in 2010 and have presented numerous times to the SRFB and SRSRB on the progress of the IMW and our ability to detect change. The power analysis indicated our*

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*study would have the ability to detect a 25% change in juvenile abundance in 12 years. Production is a far harder issue and one that a power analysis likely cannot really answer. People have completed power analyses for the number of smolts leaving but have not combined that with adult abundance (e.g., smolts per spawner) – which is our goal. The variability in estimating smolts and adults (and also relating these numbers spatially – i.e., in treatment and control areas) is large and we did not have the data at the time of our power analysis to try and estimate our ability to detect the change. However, our design and monitoring plan (detailed in our 2015 Study Plan Revision available on the SRSRB website) is robust and will provide a variety of data that will help us 1) determine if habitat and fish populations change in treatment versus control areas and 2) determine the likely causal mechanisms of these changes. We have attached the original power analysis report*