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| Lead Entity: | Snake River Salmon Recovery Board |  |  | Date | Status**[[1]](#footnote-1)** |
| Project Number: | 17-1304 |  | Post-Application |  |  |
| **Project Name:** | Asotin IMW Monitoring 2017 |  | Final |  |  |
| **Project Sponsor:** | Asotin County Conservation District |  |
| Grant Manager: | Keith Dublanica |  |

# 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:**  **Final Project Status: None**

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

1. **If the project is a POC, identify the SRFB monitoring eligibility criteria used to identify the status of the project:**
2. **If the project is Conditioned, the following language will be added to the project agreement:**
3. **Other comments:**

# Monitoring PANEL Questions

**Date: 9/8/17 Project Status:** NMI

**Review Panel Member(s):**

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.**

**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 shiftingsubstrate 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 reqesting the SRFB funds to replace the exisiting 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 Asotion steelhead population.**

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

**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 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 populaitons change in treatment versus control areas and 2) determine the likely casual mechanisms of these changes. We have attached the original power analysis report.**

1. CLEAR: Cleared to proceed; CONDITIONED: Cleared to proceed with a condition; NMI*:* Needs More Information; POC: Project of Concern; NOTEWORTHY: Exemplary Project [↑](#footnote-ref-1)