

James Yost
Chair
Idaho

W. Bill Booth
Idaho

Guy Norman
Washington

Tom Karier
Washington



Northwest Power and Conservation Council

Jennifer Anders
Vice Chair
Montana

Tim Baker
Montana

Ted Ferrioli
Oregon

Richard Devlin
Oregon

May 1, 2018

MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Kendall Farley

SUBJECT: Briefing on the final Screw Trap Report

Presenters: Kendall Farley, Washington Council staff, and Scott Donahue, Bonneville Power Administration

SUMMARY:

Consistent with on-going efforts to conduct policy reviews of relatively small groups of projects or activities, and identify possibly cost savings, Council and Bonneville staff looked closely at the array of rotary screw traps funded through the BPA fish and wildlife funds. An [inventory](#) of screw traps was compiled by Bonneville Staff. Sponsors were asked to review the inventory and to respond to a list of questions compiled by Council and Bonneville staff. Bonneville has mapped the location of all Bonneville funded screw traps currently in use.

Overall, screw traps are operated well by the sponsors and are usually getting useable data. No cost savings were identified through this review. Staff will present the map and inventory at the Council meeting in May.

MORE INFO:

There are currently 41 BPA funded projects using over 100 rotary screw traps (RSTs) in their research, monitoring, and evaluation efforts. Based on a review of project work elements in cbfish.org the collective BPA funding amount supporting RST operations (excluding the cost of PIT Tags) fluctuates between \$6,000,000 and \$8,000,000 annually for operation, data collection and related analysis. Council and Bonneville staff reached out to all program sponsors with RSTs in BPA's inventory in October, 2017 primarily to develop an accurate geospatial inventory of these BPA funded assets. By December 2017 we heard back from the majority of sponsors who helped us fill those data gaps and who also provided a better understanding of the purpose of each operational screw trap, their data collection, use, and accessibility, and their project O&M challenges. We learned that the deployment of each trap is unique; there exists a diverse array of protocols for operating each trap given vastly different geographic, hydrologic and environmental conditions that pose distinct challenges at each site. We were also able to get a better sense of the dynamic job of maintaining a RST and that each one is staffed by dedicated technicians who have special expertise pertaining to their individual RST projects. Coordination is common between and across entities, from timing the release of juveniles from upstream hatcheries, to an O&M inventory exchange exceeded expectations. Finally, we further developed knowledge of the varied goals of each project, assessed the level of data flow coming from each trap, and the level of confidence in the data, helping to manage expectations moving forward.

In December 2107, Council and Bonneville staff was able to have meaningful discussions with some of the sponsors to facilitate a deeper understanding of the unique qualities and challenges of each trap and to clarify general and technical staff questions. We learned that most program sponsors are aware of the areas of strength and areas in need of improvement pertaining to their traps, which made for thoughtful and productive dialogue. Through this collaborative process, we have accomplished our primary objective of updating the condition and location of each trap and ultimately confirming Bonneville's inventory. Additional information continues to flow in to fill lingering gaps, and we intend for this inventory and an accompanying map of screw trap

locations to be living documents which can be continually updated as we gain further data. Bonneville staff are continuing to work with a couple of sponsors to clarify data standardization, availability and usefulness for a few rotary screw traps.

Rotary Screw Trap Review Final Report

Kendall Farley, Washington Staff

Scott Donahue, Bonneville Power Administration



Photo: CTUIR

Why, How, and When?

- BPA assets - needed to validate the number, location, and deployment status of RSTs
- Tool used for “fish-out” data collection
- Questionnaire style
- Feedback in Q4 2017

General Deployment and Operation

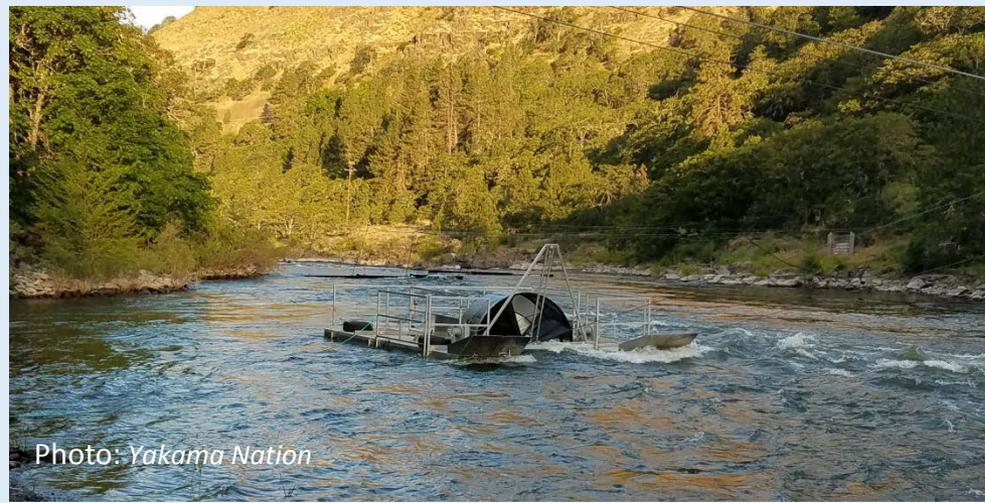


Photo: Yakama Nation



Photo: ODFW



Photo: WDFW



Photo: CTUIR

Wear and Tear



Photo: T Grover



Photo: ODFW

Responses yielded validated locations an ownership of RSTs

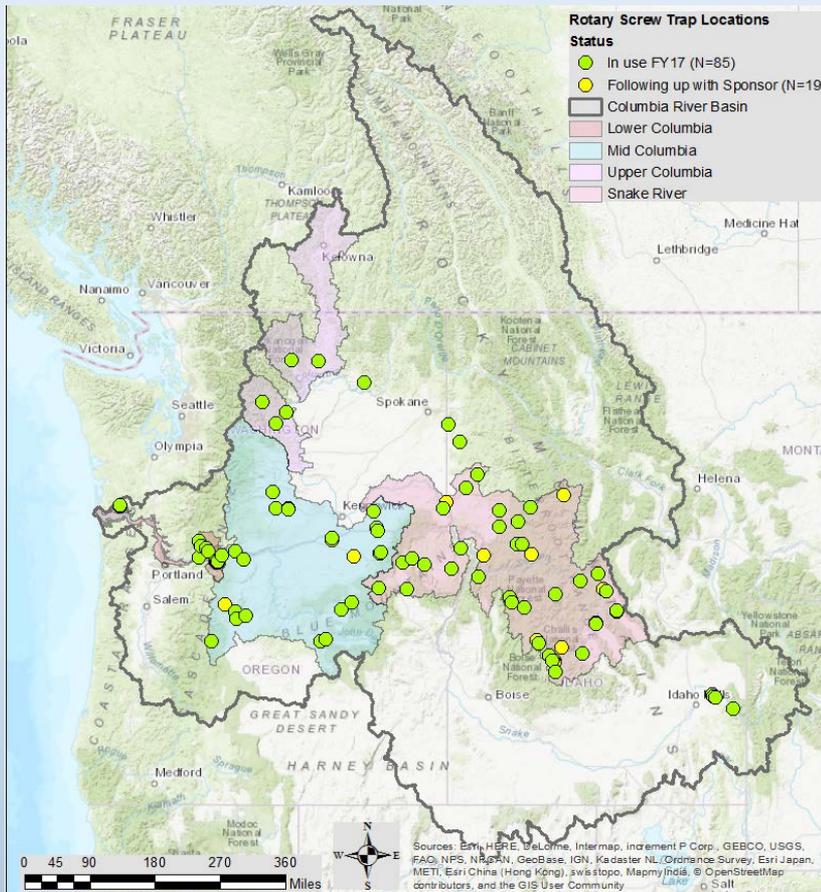


Figure 1. Location of rotary screw traps confirmed in use during FY17 (green dots) and potential location of traps that require follow up with sponsors (yellow dots). The number of each is denoted in the legend because the scale of the image forces some dots to stack or overlap.

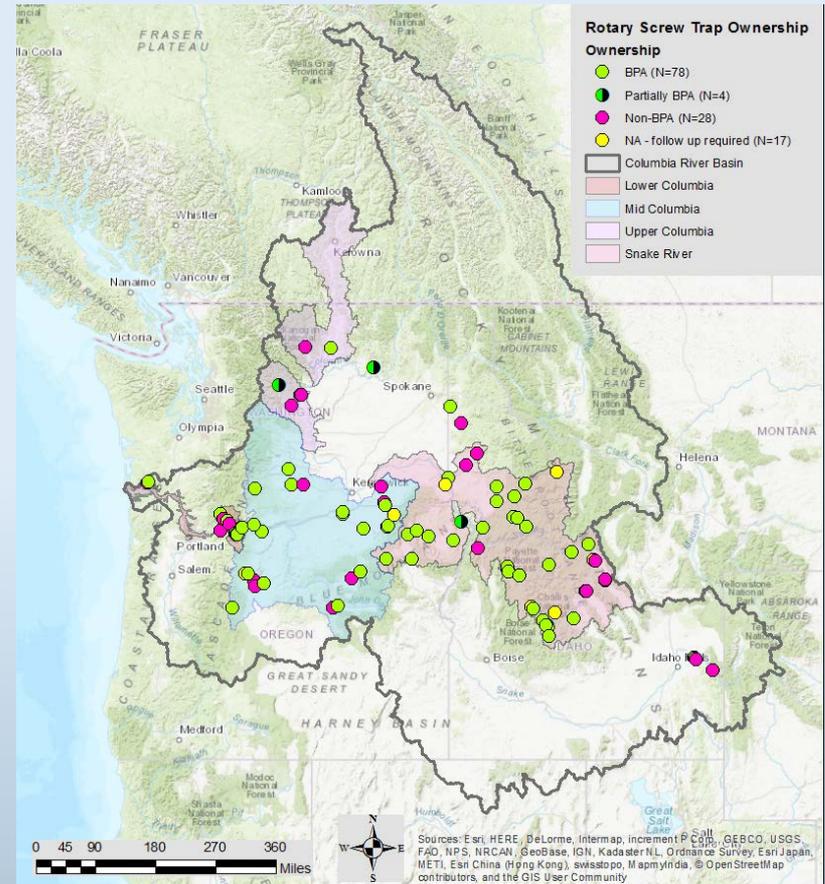


Figure 2. Location and ownership of rotary screw traps captured in the survey that were confirmed in use during FY17. The number of traps in each ownership category is denoted in the legend because the scale of the image forces some dots to stack or overlap.

Results and Lessons Learned

- Primary goal achieved
- Each screw trap is unique
- Technicians are invaluable
- Coordination with hatcheries is common
- No cost savings were identified

Considerations and possible next steps:

- RST “data management, use, and access”
- Operational costs estimates per RST at a ‘sub basin level’ could be worth calculating
- Consider hosting a workshop regarding RST data analysis
- Consider hosting a workshop that examines new data entry software

Considerations and possible next steps (cont):

- Promote sharing of RST spare parts across the basin
- Consider developing regional O&M support project that integrates the RST assets into a common tracking system
- Consider revisiting this inventory exercise every 4-5 years