OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE – 23 LWG 02 PNNL Autonomous Receiver Install
COORDINATION DATE – 16 February 2023
PROJECT - Lower Granite Dam
RESPONSE DATE – 2 March 2023

Description of the problem- PNNL study to address management questions about potential effects of Federal Columbia River Power System (FCRPS) dam operations and configurations on behavior and survival of juvenile Pacific lamprey is scheduled to continue at LWG during the 2023 migration season.

Detections in the juvenile bypass collection channel requires installation of autonomous receivers in the channel flow at the upstream end of the primary dewaterer (PDW). Two hydrophones (Figure 1) on a single mount attached to a 0.5-inch cable will be deployed on the north and south side of the channel (Figure 2). The casing is designed to direct flow around the receiver with a low profile to minimize impacts to fish passage (Figure 1).

PNNL also plans to use hydrophones to monitor lamprey in raceways this season. They will be using a combination of a portable receiver (Figure 3) lowered into the raceway prior to fish being loaded onto the barge and the installation of a stationary autonomous receiver (Figure 1).

Type of outage required- No outages are required.

Impact on facility operation (FPP deviations)- No deviations from FPP.

Impact on unit priority- N/A

Impact on forebay/tailwater operation- N/A

Impact on spill- N/A

Dates of impacts/repairs- March 25-November 1.

Length of time for repairs- N/A

Analysis of potential impacts to fish

1. 10-year average passage by run during the period of impact for adults and juvenile listed species, as appropriate for the proposed action and time of year;

   Adult fish passage facilities will not be impacted. LWG 10-year daily average juvenile fish passage is summarized in Figure 4. The 10-year average number of fallbacks at LWG by species is summarized in Figure 5.

2. Statement about the current year's run (e.g., higher or lower than 10-year average);

   No data available on the current year's run.

3. Estimated exposure to impact by species and age class (i.e., number or percentageof run exposed to an impact by the action);

   Autonomous receivers will be installed in the PDW where juvenile salmonids and adult fallbacks will be passing. The receiver housing is smooth and designed to channel the flow around the receiver to minimize the potential to negatively impact fish.

4. Type of impact by species and age class (increased delay, exposure to predation, exposure to a route of higher injury/mortality rate, exposure to higher TDG, etc.);

   Minimal impacts to juvenile or adult fish are expected.

Summary statement - expected impacts: N/A

Downstream migrants: N/A

Upstream migrants (including Bull Trout): N/A

Lamprey: N/A

Comments from agencies:

Final coordination results:

After Action update:

Please email or call with questions or concerns.

Thank you,
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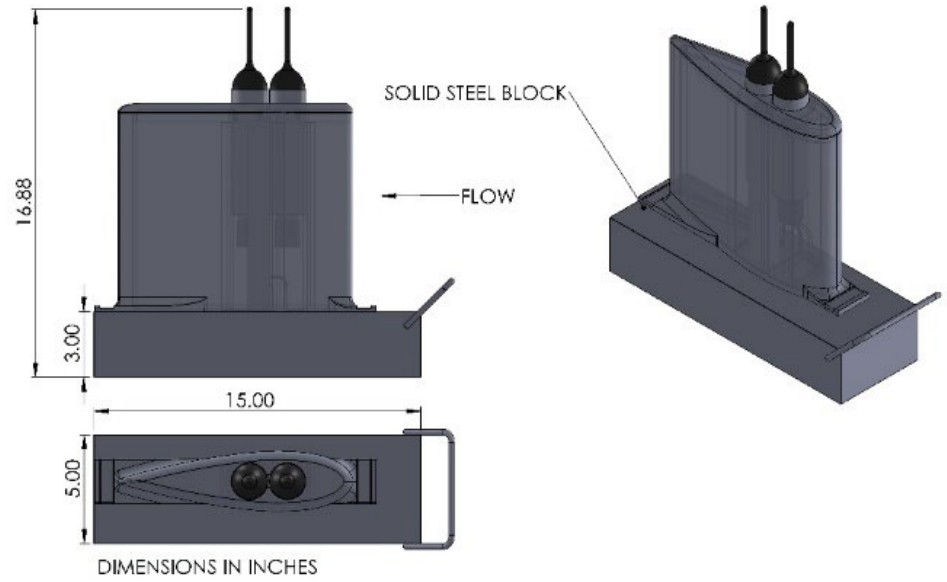

Figure 1. Dual hydrophone mount design for deployment in the PDW at LWG.


Figure 2. Location of the hydrophones at the downstream end of the emergency bypass hatch of the Primary Dewaterer (PDW) at LWG.

Figure 3. Raceway monitoring method 1: dipping a hydrophone into the raceway from the water surface.

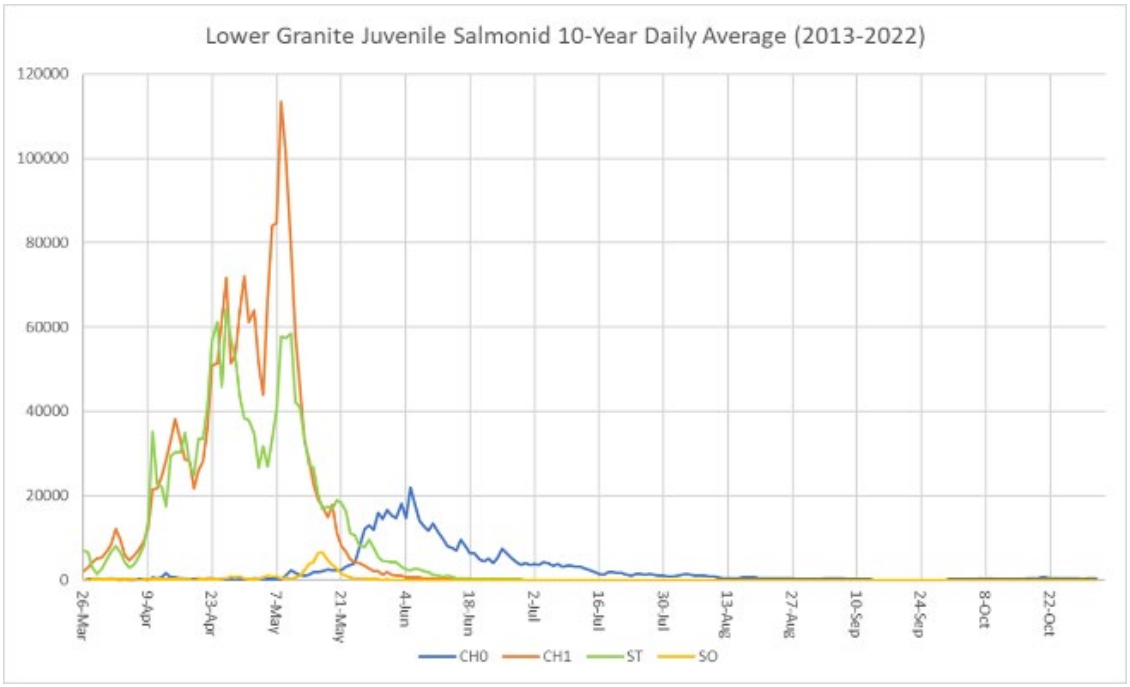

Figure 4. Lower Granite Juvenile Salmonid 10-Year Daily Average Passage by species.

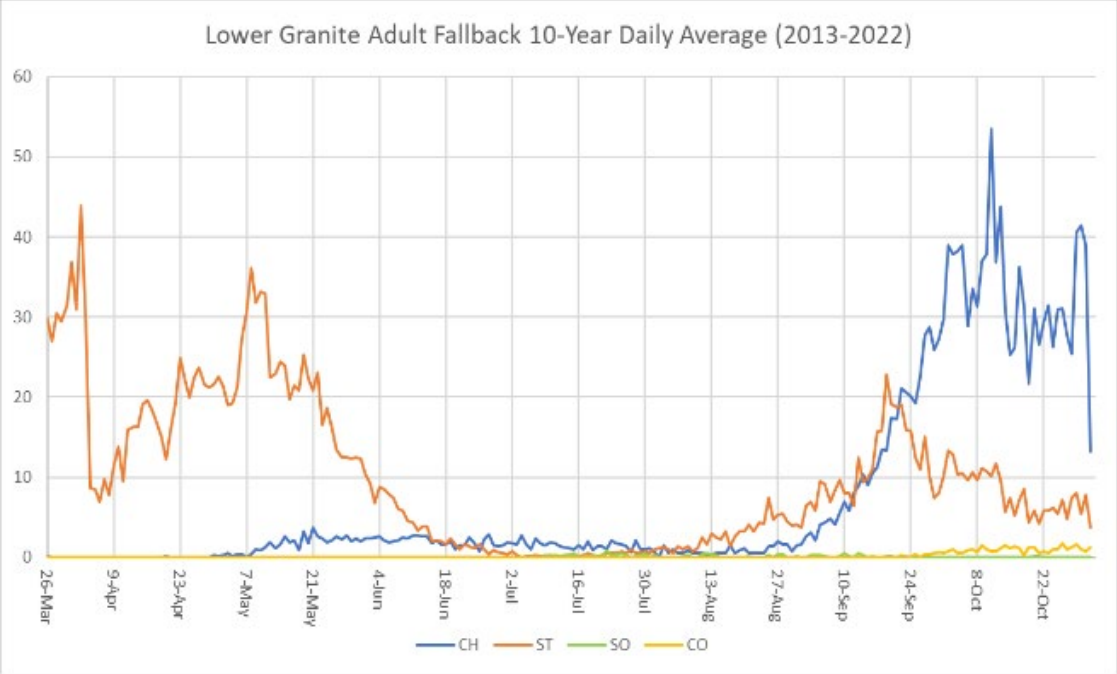

Figure 5. Lower Granite Adult Fallbacks 10-Year Daily Average by species.