

**OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE**

COORDINATION TITLE- 23BON077 MOC Pre-Rock Removal Hydro-Survey
COORDINATION DATE- 08/10/23
PROJECT- Bonneville Lock & Dam
RESPONSE DATE- 8/24/23

Description of the problem - BON will require spill bay closures to support a pre-rock removal hydro-survey. The specific closure will be as follows: On September 6th, spillbays 1-18 will be closed from 0900-1500 (up to 6 hours). Spill operations will have concluded for the season, attraction flow from bays 1 and 18 will be reduced to zero. All spill bay closures will require a clearance issued on the equipment to complete the work safely.

Pending the results of this hydro-survey, a ROV inspection conducted by the NWP Dive Team is tentatively scheduled for 11 October 2023. This will require a Spillway clearance and the closure of at least one attraction flow spillbays (Bays 1 and 18).

Type of outage required- Spillbays 1-18 on Sept 6th

Impact on facility operation - (FPP deviations) The hydro-survey will require a deviation from FPP section 2.2.4.4., which states “From September 1 through April 9, during day hours, spill will occur from Bays 1 and 18 each open one stop (6”) to provide attraction flow to the Cascades Island and Bradford Island B-Branch entrances, respectively.” (FPP, 2023). No attraction flow will occur during the survey.

Impact on unit priority- none.

Impact on forebay/tailwater operation none.

Impact on spill Spill operations have finished for the season, however, attraction flow from both bays 1 and 18 will be reduced to zero for the duration of the survey. Attraction flows will be restored as soon as survey is completed.

Dates of impacts/repairs – September 6th

Length of time for repairs- 0900-1500 (6 hours)

Analysis of potential impacts to fish - See **Table 1** for the 10-year average BON adult passage for September 1 compared to the 10-year average total run. Note that the passage numbers from the 10-year average for work period are 24-hour counts. These numbers reflect a higher number than what will be impacted for the 6-hour closure.

Table 1: 10-Year Average (2013-2022) of BON Adult Passage for Sept 6 and Total Run Impacts.

Species	10-year average on 9/6	10-year average – total run	% of run affected
Chinook	19,913	831,387	2.4%
Coho	2,980	125,636	2.37%
Steelhead	1,657	162,989	1%
Sockeye	1	315,420	<1%
Chum	NA	333**	See footnote*
Pink	NA	324**	See footnote**
Lamprey	40	37,430	0.1%

*No 10-year average for work period for Chum, but 10-year average first fish for Chum is September 8th which is several days after the survey dates so impact is negligible.
 **No 10-year average for work period for Pink, but based on 10-year average run time, 95% of run has passed by 9/16

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

Table 2: Run Predictions (obtained from WDFW)

Fall Chinook	Slightly below average
Coho	Well above average
Steelhead	Well below average

Summary statement - expected impacts on:

Downstream migrants (including Lamprey) -- Scheduling the spill bay outage during September ensures that both the DSM2 and the Ice and Trash Sluiceway will be operating for downstream migrants. The number of fish exposed is expected to be minimal, as most downstream migrants have already passed.

According to the historic 10-year average passage indexes for sub-yearling Chinook at Bonneville Dam (2012-2021), 95% of the run has passed by 21 July (DART). As of August 7th, 2023, DART estimates that 99% of this year’s sub-yearling chinook have passed.

Impacts to upstream migrants (including Bull Trout) by date:

September 6th all spillbays closed:

All fish ladder entrances will be functioning including the two entrances in the spillway tailrace. Entrance differentials are temporarily reduced when the survey vessel passes in front of them but quickly restored. Fish that approach the spillway tailrace may have to search longer for fishway entrances with reduced spill bay attraction water. We expect that most fish will follow routes to the priority powerhouse. Delayed fish may be exposed to an increase in sea lion and avian predation. Sea Lion abundance for this time is typically less than 20 Steller Sea Lions, no California Sea Lions.

Impacts to upstream migrants (Lamprey)

These spill bay outages will occur toward the end of the adult lamprey migration period. All ladder entrances and LPS systems should be operating at the time of the spill bay outages. The loss of attraction flow provided by spill bays 1 and 18 will impact lamprey that would use this flow to find these ladder entrances. However, this impact to lamprey is small, as most adults have already passed Bonneville at this time. Based on the average between 1999-2022, 95% of the adult lamprey run has passed by 28 August (retrieved from DART, 2023).

Comments from agencies-

Final coordination results-

Please email or call with questions or concerns.
 Thank you,