

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

COORDINATION TITLE - 19BON46 Fish Unit Outage for Trash Rack Replacement and PH2 AWS Inspection.

COORDINATION DATE – 22 August 2019.

PROJECT - Bonneville Dam.

RESPONSE DATE – August FPOM Meeting or 15 August 2019.

Description of the problem

Bonneville has a set of trash tracks for the fish units that needs to be swapped out to continue scheduled maintenance. FU2 will be swapped out with a recently repaired set. The set to be removed will be repaired and placed in FU1 once repairs are complete. Additionally the Project would like to inspect the PH2 AWS with a ROV while the fish units are down to inspect for sand/silt accumulation which was identified during the summer ROV inspection on 31 July 2019. This will give the Project a baseline for how much sediment has built up since the extensive removal during the IWW period winter 2018-19. 22 August is the only date Dive Safety is available to ROV the AWS before fall Chinook are in abundance and the Project’s ROV is unavailable (out for repairs and servicing). This inspection will require a Fish Unit clearance for opening up the AWS to the ROV.

Type of outage required

Impact on facility operation (FPP deviations) - During the scheduled outage both fish units will be unavailable similar to ladder conditions that occur during a fishway ROV inspection. Should additional power or flow be required, an additional PH2 unit could be brought into service.

Impact on forebay/tailwater operation – No impact to forebay or tailwater operations.

Impact on spill – No impacts to spill.

Dates of impacts/repairs – 22 August 2019

Length of time for repairs – Up to ten hours (0700 until 1700).

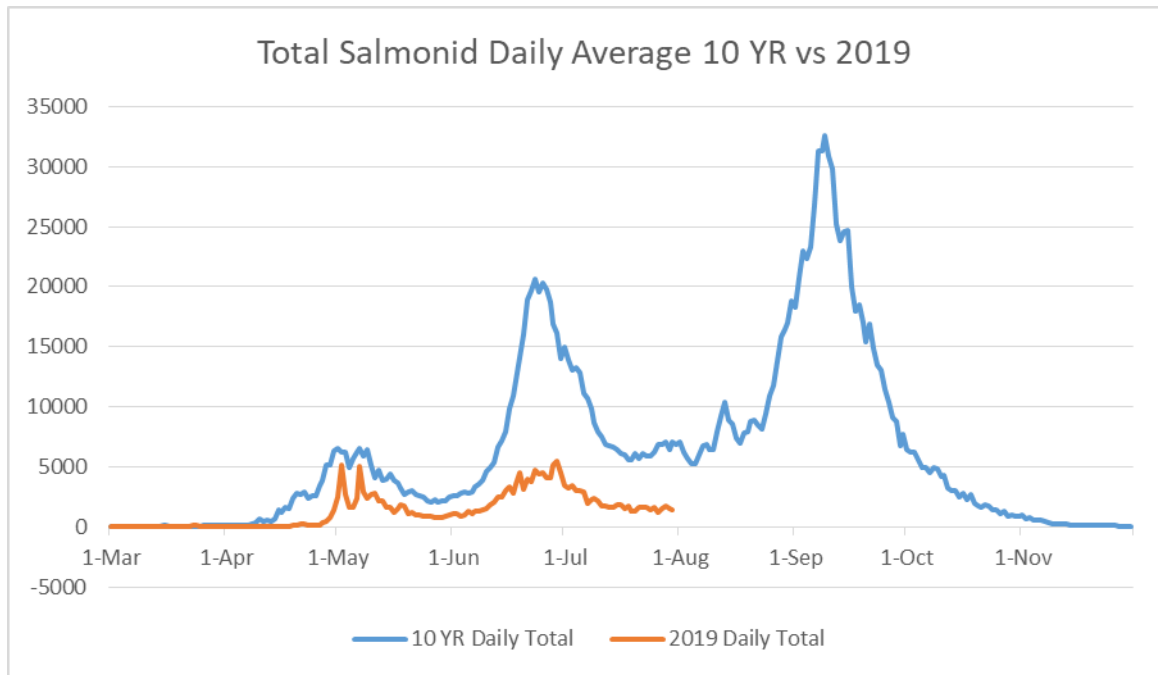
Analysis of potential impacts to fish

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.

Date	10 YR CHN	10 YR COHO	10 YR STT	10 YR SOC
22-Aug	3,506	360	4,607	3

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

We are currently well below the ten year average for all species of salmonids.



- Estimated exposure to impact by species and age class (i.e., number or percentage of run exposed to an impact by the action).

Minimal impact to all species. The PH2 fishway will continue to be in service, however attraction flows will be close to 0.0' at all entrances during the duration of the outage. Cascades Island, B-Branch and PH1 routes of passage will continue to be in criteria.

- 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.).

Some degree of passage delay is to be expected with no attraction flows to all PH2 entrances. Predation could increase with PH2 remaining the priority powerhouse but with no attraction flow to fishway entrances.

Summary statement - expected impacts on:

Downstream migrants – No impact is expected. Fish unit operations have minimal impacts on out-migrating juveniles. Adult fishways are not the primary route of passage for out-migrating juveniles.

Upstream migrants (including Bull Trout) – Some degree of increased delay and potentially an increase in predation could occur due to expected entrance differentials of 0.0'.

Lamprey – Minimal to no impacts are expected. The majority of adult migrating lamprey will have already passed the Project in late August. The majority of adult lamprey migrate at night; this work will occur from ~0700-1700. Reduced entrance differentials may actually benefit adult lamprey in successfully entering PH2 fishway entrances during the outage.

Comments from agencies- Discussion from the 190808 FPOM meeting -

6.10. 19BON46 MOC Fish Unit Outage and AWS Inspection –The work is supposed to take half a day even though the MOC is requesting 2 days. Conder asked why they can't do this work during the in-water work period. The WA Shore ladder is not going this winter. Derugin said that they need figure out how much sand builds up in the spring and it gets highly turbid during the winter. The priority will switch to PH1. The ROV would start first thing in the morning. Derugin recommended closing the weirs part way to help with differentials. Mackey asked if they can start in the afternoon. Starting in the morning ensures that they can finish in one day. Conder said that there is no reason why this has to be done now. Maintenance rehabbed trash racks and need time to rehab the new ones before winter. Mackey wants to know how many trash racks are done and how many need to be done. Derugin said that the winter ROV is useless due to the limited visibility. Conder suggested doing only the ROV to save time but the project is trying to double up on work. Lorz is okay with the work. Conder is tentatively okay but wants the AFF to stop trapping during this time even if the temperatures decrease. **FPOM is tentatively okay with this action as long as the AFF is not trapping.**

Final coordination results – FPOM tentatively concurred with this action as long as the AFF is not trapping during this time.

After Action update

The AFF was not sampled on 22 August as requested. The ROV inspection occurred from ~0830-1030. "PH2 - We were able to get eyes on pretty much everything. Both monoliths are clean and have no issues. There is quite a bit of sand built up on the south end near unit 11. Diffuser C1-2 had some as high as ~3'. There were a few areas further upstream that had sufficient build up underneath the diffuser grating as well but the worst areas were on the south end in my opinion. All the diffuser shafts were intact and looking good below the water surface. Diffuser C-8 had the bottom plate blown off but I was immediate next to the shaft. This is quite common from previous inspections. All the grating along the collection channel and junction pool looks pretty good. No raises or broken brackets. We were unable to fly the ROV into the "triangle of death" out of flows too high for Todd's ROV. We got some good coverage with the sonar though and believe the grating to be in good condition back there as well." - Project Biologist Summer ROV Report.

F2 was taken out of service from 0630 until 1345 on 22 August to accommodate the ROV inspection and trash rake exchange. The old trash rakes were successfully taken out and the recently rehabbed spare was put in its place.

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

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