

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 50** of 2020, which covers the period from **06-12 December**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 131.0 to 140.2 kcfs. Daily average powerhouse forebay elevation ranged from 73.1' to 74.0' msl. Daily average project tailwater ranged from 11.9' to 12.5' msl. Secchi disk measurements ranged from 6.0' to 7.0'. Daily average water temperature ranged from 45-46°F.

b. Daily average spill remained at 0.5 kcfs.

c. Unit Operation. PH1 will remain the priority powerhouse until the end of February 2021 due to winter maintenance in PH2, Cascades Island fishway, and Washington Shore fishway. Main unit drawdowns are measured every Monday and more frequently as needed.

- Table 1. Main Unit Outages.

Unit	OOS	RTS	Reason
15	0002 on 08 Dec	1239 on 08 Dec	P.O., Quarterly Thrust Collar Inspection
1	0700 on 30 Nov	---	Station service work
2	0700 on 30 Nov	---	Station service work
18	1250 on 30 Nov	---	4 yr overhaul

d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder.

Fish Unit Outages. Fish Units are periodically placed into reserve service (RS) to float trash when debris differentials become excessive and trash raking is not possible.

- Table 2. Fish Unit Outages.

Unit	OOS	RTS	Reason	Duration
F1	0610 on 01 Dec	---	2 yr overhaul/WA Shore Fishway outage	---
F2	0610 on 01 Dec	---	2 yr overhaul/WA Shore Fishway outage	---

- Table 3. Fish Unit Drawdowns, in Feet. Nothing to report.

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV 1-1 was closed for cleaning from 0756 to 0834 on 07 December.
- FV 3-9 was closed for cleaning from 0845 to 0930 on 07 December.
- FV 1-1 was closed for cleaning from 1046 to 1053 on 08 December.
- FV 3-9 was closed for cleaning from 1055 to 1130 on 08 December.
- Cascades Island diffusers and entrance gate were placed out of service at 1011 on 10 December to repair the diffusers during winter maintenance work activities.
- FV 1-1 was closed for cleaning from 1234 to 1320 on 10 December.
- FV 3-7 and 3-9 were closed for cleaning from 1320 to 1335 on 10 December.

b. STS/VBS Inspections. Nothing to report.

C. Dewatering and Fish Salvages.

- At 1300 on 07 December, Project Fishery Biologists fished the Cascades Island Ladder down to tailwater. 6 adult lamprey, 2 sculpin, and 1 jack Coho were recovered and released above the nav lock. All fish were in good condition, but the salmonid was spawned out.
- At 1540 on 07 December, Project Fisheries Biologists fished the Washington shore fish ladder in the serpentine weirs for the second time. 1 jack salmonid, 4 juvenile salmonids, 2 bass, and approximately 150 other fish including suckers, pikeminnow, and peamouth were recovered in good condition and were released above the nav lock.
- At 1500 on 08 December, diffuser pits FG6-5, FG6-6, and FG6-7 were dewatered for winter maintenance and fished by Project Fisheries Biologists. 5 juvenile salmonids, 10 adult lamprey, 8 juvenile lamprey, 10 bullhead, 5 bass, 7 sunfish, and a mix of 25 suckers, peamouth, and stickleback were recovered in good condition and released above the nav lock.
- At 0900 on 10 December, the Washington Shore Collection Channel was dewatered for winter maintenance and fished by Project Fisheries Biologists, ODFW Biologists, and other Corps employees. 3 adult steelhead, approximately 20 shad, 1 smallmouth bass, and 1 mountain whitefish were recovered and released above the nav lock. The fish were all in good condition.

3. RESEARCH:

- a. Four Peaks Environmental - Fish counting contract: Daytime video counting (0400 to 2000) began on 01 December. Fish counts can be viewed [here](#).
- b. USFWS – Lamprey Metamorphosis Study: Juvenile lamprey researchers are onsite and the work is underway.
- c. State Agency Pinniped Trapping- Sea lion trapping has concluded for the year.
- d. ODFW- ODFW fish biologists continue to accompany USACE Project Biologists for fish salvage operations in CI Fishway and WA Shore Fishway to collect data from any sturgeon collected.

4. FISHWAYS:

- a. Project biologists inspected 07-09 December.
- b. Fish passage plan observations.

• Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island				
12/07-09	PH1CC	S. Ent. Diff. < 1.0'	Possible Equipment Calibration issues	NA
12/06-09	B-Branch	S. Ent. Gate Open	Entrance gate stuck open	W.O.
12/08-12	B-Branch	FG3-23 Open	FG3-23 stuck open	W.O.
Cascades Island – Nothing to report.				
Washington Shore – Nothing to report.				

C. Adult Fishways.

- (1) The Cascades Island Fishway went out of service and into orifice flow on 01 December.

- (2) The Washington Shore Fishway went out of service and into orifice flow on 01 December.
- (3) The AFF was taken out of service for the winter on 25 Nov.
- (4) Sensor calibration did not occur this week due to personnel shortage.
- (5) SLEDs are installed at all locations.

d. Juvenile Fishways.

- (1) The ITS remains in service (auto-chain gates 3B, 6C, & 10B only).
- (2) The hydro-cannon remains in service.
- (3) The B2CC remains out of service.
- (4) The DSM remains in service.
- (5) STSs are installed.

e. Lamprey Fishways.

- (1) LPSs remain out of service.
- (2) The Bradford Island Wetted Wall (BIWW) remains out of service.
- (3) The PH2 Lamprey Flume Structure (LFS) remains out of service.
- (4) The AFF lamprey trap remains out of service.
- (5) The CI Lamprey trap remains out of service.

f. Avian Monitoring. Avian counts are recorded 01 April – 31 October.

5. WATER QUALITY MONITORING:

- a. Fishway Temperatures. Temperature logs are no longer being taken this year, data collection will begin again 01 March, 2021.
- b. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

6. CONSTRUCTION: Nothing to report.

7. HAZMAT, SPILLS AND CLEANUP: Nothing to report.

8. TELETYPE CURRENTLY IN EFFECT:

- A teletype was sent out on 21 October that became effective starting 01 November at 0600 and remains in effect until further notice. The Bonneville Dam must operate at all hours with a project outflow to provide a tailwater with the elevation in the range of 11.5-13 feet. If necessary, to increase project outflow, the tailwater may be operated up to 16.5 feet during nighttime hours (1700-0600) with the highest concentrations around 2400. If necessary, after that, tailwaters may be operated to up to 18.5 feet elevation

during nighttime hours to increase project outflow. Then, if the increasing river flow precludes the ability to manage the tailwater in the previous steps, Bonneville Dam may operate at 13.0-16.5 feet during daytime hours (0600-1700) and up to the maximum within project 24-hour ramp rate limits during nighttime hours (1700-0600). The reason for this operation is to improve the conditions at the Ives/Pierce Island Complex for Chum Salmon spawning.

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