

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 09** of 2021, which covers the period from **21 to 27 February 2021**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 142.4 to 178.1 kcfs. Daily average powerhouse forebay elevation ranged from 73.7' to 75.1' msl. Daily average project tailwater ranged from 13.8' to 15.6' msl. Secchi disk measurements ranged from 4.0' to 7.0'. Daily average water temperature ranged from 38 to 39°F.

b. Daily average spill ranged from 0 to 1.2 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
18	1250 on 30 Nov	---	P.O., 4 Yr Overhaul
17	0633 on 22 Feb	1009 on 22 Feb	P.O., STS Install
16	1010 on 22 Feb	1244 on 22 Feb	P.O., STS Install
14	0700 on 23 Feb	1008 on 23 Feb	P.O., STS Install
13	1003 on 23 Feb	---	P.O., STS Install/F.O. Due to Oil Leak and Spill on Start Up
12	1246 on 23 Feb	1312 on Feb 23	P.O., STS Install, Install Did Not Occur Due to U13 Oil Leak
12	0808 on 24 Feb	1201 on 24 Feb	P.O., STS Install
11	1214 on 24 Feb	1504 on 24 Feb	P.O., STS Install
14	0804 on 25 Feb	1142 on 25 Feb	F.O., STS Motor Ground in B Slot

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 2020	0926 on 25 Feb 2021	2 yr overhaul/WA Shore Fishway outage	86 days, 3 hrs, 16 mins

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
02/26	---	0.2'
02/27	---	0.4'

2. MAINTENANCE ACTIVITIES:

- a. Auxiliary Water System Closures.
 - FV 1-1 was closed for cleaning from 1525 to 1550 on 25 Feb.
- b. STS/VBS Inspections. STS installation was complete 24 February.
- c. Dewatering and Fish Salvages. Nothing to report.

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. Pacific States Marine Fisheries Commission: Work was finished in the Washington shore fishway to replace 4 old PIT tag readers with 4 new and updated PIT tag readers. Work was also complete in the Cascades Island Fishway to install PIT tag readers at the count station and in the UMT.

4. FISHWAYS:

- a. Project biologists inspected 22-25 February.
- b. Fish passage plan observations.
 - Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
PH1				
02/22-25	PH1 ITS	S. End Gate Inoperable and Chain Gates 1a & 1b Closed	S. End Gate Inoperable, 1a and 1b Closed for Safety Reasons	W.O.
Bradford Island				
02/22-25	A-Branch	FG3-4 Partially Open	FG3-4 mechanically bound partially open	W.O.
02/23,25	A-Branch	Weir Staff Gauge >1.1'	NA	NA
02/22-24	B-Branch	Entrance/TW Differential <1.0	Sensor Calibration Issue	W.O.
Cascades Island – Nothing to report.				
Washington Shore – Nothing to report.				

c. Adult Fishways.

- (1) The Cascades Island Fishway was watered up and returned to service 25 February.
- (2) The Washington Shore Fishway was watered up and returned to service 25 February.
- (3) The AFF was taken out of service for the winter on 25 Nov.
- (4) Sensor calibration occurred on 23 February.

(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 has returned to service.

(3) The B2CC remains out of service for the winter season.

(4) The DSM remains in service.

(5) STS installation was complete 24 February.

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:

a. Pacific States Marine Fisheries Commission: Work was finished in the Washington shore fishway to replace 4 old PIT tag readers with 4 new and updated PIT tag readers. Work was also complete in the Cascades Island Fishway to install PIT tag readers at the count station and in the UMT.

b. The Main Dam was tagged out for rock removal work below the spillway with the HME Construction dredge and barge from 0700 on 22 February to 1411 on 24 February.

7. HAZMAT, SPILLS AND CLEANUP: Nothing to report

8. TELETYPES CURRENTLY INEFFECT:

- A teletype was sent out 30 December stating effective 1 January 2021 at 0001 hours, until further notice, the Bonneville Dam minimum tailwater elevation is 11.8 feet during all hours. The intent of this teletype is to provide sufficient tailwater elevation to protect the chum redds in the Ives/Pierce Island area during the

egg incubation period. This teletype replaces the previous CBT message: BONR 1220190926. Please see teletype BONR 1229201520 for more details.

- A teletype was sent out on 19 February stating that the entire Bonneville Dam Spillway, including bays 1 and 18 and the B2CC would be tagged out and not available for spill from 0700 on 22 February to 1700 on 25 February to support rock removal work in the Bonneville spillway. More details of this teletype can be found on CBT message: BONR 0219210802.

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