

**MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)**

**SUBJECT:** Bonneville Project, Fishway and Fish Activities for **Week 12** of 2021, which covers the period from **14 to 20 March 2021**.

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 127.6 to 132.1 kcfs. Daily average powerhouse forebay elevation ranged from 73.6' to 74.6' msl. Daily average project tailwater ranged from 12.0' to 12.1' msl. Secchi disk measurements ranged from 6.0' to 7.0'. Daily average water temperature ranged from 42 to 43°F.

b. Daily average spill ranged from 1.3 to 1.5 kcfs.

c. Unit Operation. PH2 remains the priority powerhouse. Main unit drawdowns are measured every Monday and more frequently as needed.

- Table 1. Main Unit Outages.

Unit	OOS	RTS	Reason
13	1003 on 23 Feb	---	P.O., STS Install/F.O. Due to Oil Leak and Spill on Start Up
15	1312 on 01 Mar	---	P.O., FGE Work
16	0701 on 15 Mar	---	P.O., 4 Yr Overhaul
6	0658 on 17 Mar	1213 on 17 Mar	P.O., Cooling Water Valve Maint

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. Nothing to report

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
03/14	0.5'	0.8'
03/15	0.6'	0.9'
03/16	0.4'	0.7'
03/17	0.5'	1.0'
03/18	0.5'	0.9'
03/19	0.6'	1.0'
03/20	0.4'	1.0'

**2. MAINTENANCE ACTIVITIES:**

a. Auxiliary Water System Closures.

- FV 1-1 was closed for cleaning from 1320 to 1415 on 18 March.
- B2CC was open from 0638 to 1510 on 18 March for trash raking operations.

b. STS/VBS Inspections. Nothing to report.

- c. Dewatering and Fish Salvages.
  - On 16 March, fish biologists entered the Unit 16 scroll case and draft tube. No fish were observed in the scroll case, but 5 sculpin and 6 juvenile non-salmonid species were recovered in good condition from the draft tube. All fish were released in the forebay.
- d. Nav Lock 2: Nav Lock 2 went out of service for an annual maintenance at 0600 on 06 March and was marked ready to restore service at 1620 on 17 March.

**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 - Smolt Monitoring: Sample collections at the SMF began at 0700 on 02 March. Debris at the primary dewatering structure (PDS) and fish/debris separated was light consisting mostly of sticks. Kelt observations will be monitored by direct observation from the Smolt Monitoring personnel and video recording by Fisheries Field Unit and SMP at least until the Kelt Trigger (20 total including two on two consecutive days) is reached. Fallbacks observed this week included 6 steelhead; bringing the year-to-date total to 13. No fish collections for research purposes were conducted this week. More details can be found on the [FPC web page](#).
- d. Northbank: FGE (Fish Guidance Efficiency) work continued on U15.
- e. USDA - Pinniped hazing: Deck-based hazing began 08 March

**4. FISHWAYS:**

- a. Project biologists inspected 14– 20 March.
- b. Fish passage plan observations.

- Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
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PH1				
03/14-20	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				
03/14-20	A-Branch	FG3-4 Partially Open	FG3-4 mechanically bound partially open	W.O.
03/14-20	A-Branch	Weir Staff Gauge >1.1'	NA	NA
03/14-17	PH1CC	S. Ent. Diff. <1.0'	Unknown	NA
Cascades Island – Nothing to report.				
03/20	CI/UMT Junction	UMT Staff Gauge diff >0.9	Unknown	NA
Washington Shore				
03/10	WA Shore SUE and SDE	Entrance/TW Diff <1.0	Single Fish Unit Operations	NA

- On 23 February, Unit 13 went down for a planned outage to install STS's. Upon startup an oil leak was found causing a forced outage. U13 is still out of service until further notice.

c. Adult Fishways.

- (1) The AFF was taken out of service for the winter on 25 Nov.
- (2) Sensor calibration occurred on 15 March.
- (3) 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 for the winter season.
- (4) The DSM remains in service.
- (5) STS's remain in service.

e. Lamprey Fishways.

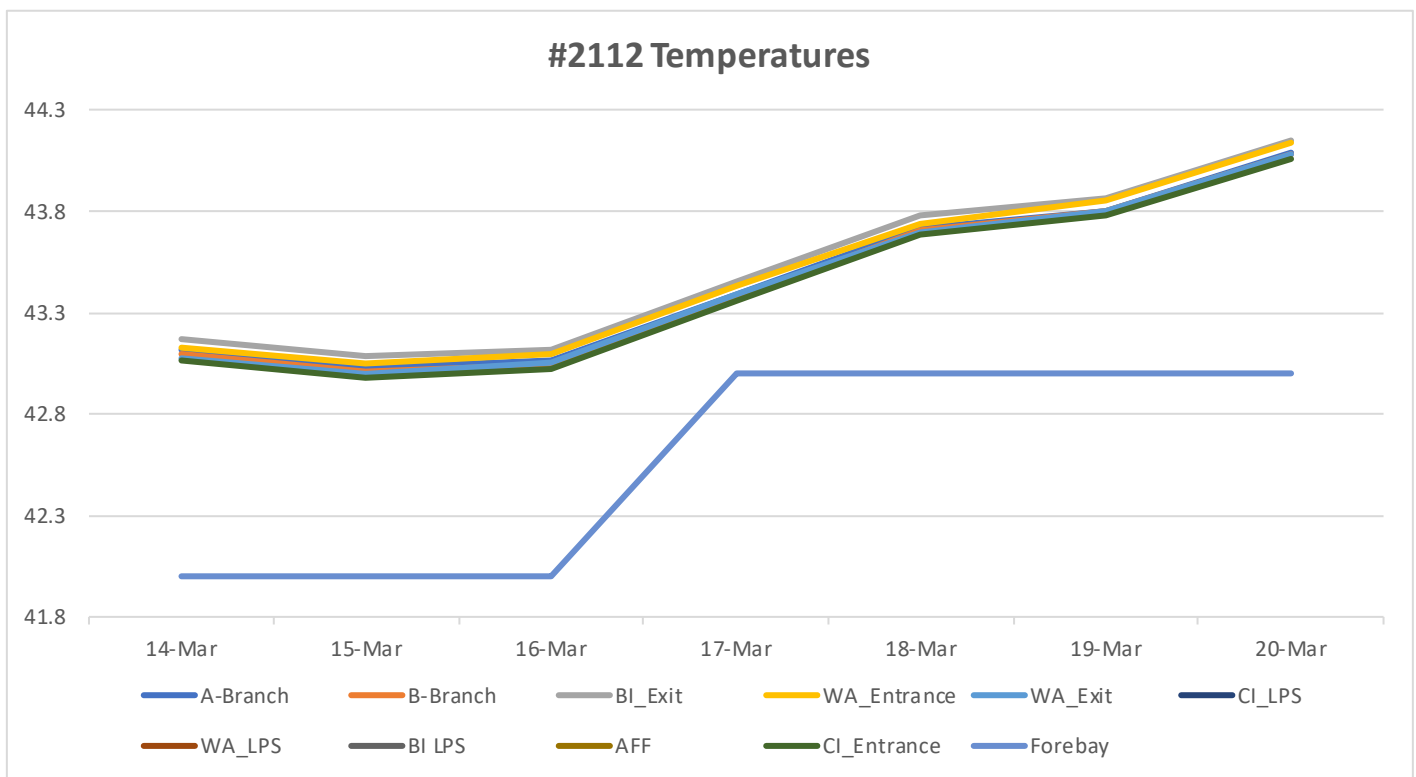
- (1) LPSs remain out of service.
- (2) The Bradford Island Wetted Wall (BIWW) remains out of service.
- (3) The PH2 Lamprey Flume Structure (LFS) remains out of service.
- (4) The AFF lamprey trap remains out of service.
- (5) The CI Lamprey trap remains out of service.

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

**5. WATER QUALITY MONITORING:**

a. Fishway Temperatures. Temperature logs began on 28 February and will continue through 30 November.

Date	A-Branch	B-Branch	BI_Exit	WA_Entrance	CI_Entrance	WA_Exit	CI_LPS	WA_LPS	BI_LPS	AFF	SMF	Forebay
14-Mar	43.1	43.1	43.2	43.1	43.1	43.1	---	---	---	---		42
15-Mar	43.0	43.0	43.1	43.0	43.0	43.0	---	---	---	---		42
16-Mar	43.1	43.0	43.1	43.1	43.0	43.1	---	---	---	---		42
17-Mar	43.4	43.4	43.5	43.4	43.4	43.4	---	---	---	---		43
18-Mar	43.7	43.7	43.8	43.7	43.7	43.7	---	---	---	---		43
19-Mar	43.8	43.8	43.9	43.8	43.8	43.8	---	---	---	---		43
20-Mar	44.1	44.1	44.1	44.1	44.1	44.1	---	---	---	---		43



b. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

**6. CONSTRUCTION:**

a. Northbank: FGE (Fish Guidance Efficiency) work continues on U15.

b. USACE: Work continues to upgrade to the Washington Shore LPS pumps.

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

**8. TELETYPES CURRENTLY IN EFFECT:**

- 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 02 March stating the Bonneville Dam forebay is to remain above 74.5 feet from 09-11 March, with a soft constraint. This operation is to support a hydrosurvey in shallow waters near the Hood River Bridge. Please see CBT message BONR 0302210804 for more details.

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