

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

**SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 10 of 2021, which covers the period from 28 February to 06 March 2021.**

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 127.2 to 141.0 kcfs. Daily average powerhouse forebay elevation ranged from 73.6' to 74.7' msl. Daily average project tailwater ranged from 12.1' to 13.1' msl. Secchi disk measurements ranged from 6.0' to 7.0'. Daily average water temperature ranged from 38 to 40°F.

b. Daily average spill ranged from 1.2 to 1.3 kcfs.

c. Unit Operation. PH2 returned to being the priority powerhouse on 02 March. 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
13	1003 on 23 Feb	---	P.O., STS Install/F.O. Due to Oil Leak and Spill on Start Up
3	1143 on 01 Mar	1400 on 01 Mar	P.O., Trash Raking
15	1312 on 01 Mar	---	P.O., FGE Work
7	0700 on 02 Mar	1200 on 02 Mar	P.O., NOVA Station Service Work
8	0700 on 02 Mar	1200 on 02 Mar	P.O., NOVA Station Service Work
9	0700 on 02 Mar	1200 on 02 Mar	P.O., NOVA Station Service Work
10	0700 on 02 Mar	1200 on 02 Mar	P.O., NOVA Station Service Work
1	0800 on 04 Mar	0846 on 04 Mar	F.O., XJ 2.1 Work
2	0800 on 04 Mar	0846 on 04 Mar	F.O., XJ 2.1 Work

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	1201 on 03 Mar	2 yr overhaul/WA Shore Fishway outage	92 days, 5 hrs, 51 mins

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
02/28	---	0.4'
03/01	---	0.4'
03/02	---	0.3'
03/03	0.1'	0.3'
03/04	0.1'	0.3'
03/05	0.1'	0.4'
03/06	0.2'	0.4'

## 2. MAINTENANCE ACTIVITIES:

### a. Auxiliary Water System Closures.

- FV 1-1 was closed for cleaning from 0656 to 0721 on 02 March.
- FV 3-7 and 3-9 was put in manual for cleaning from 0728 to 1200 02 March.
- B1 OWS was switched to manual and bypassed to the lagoon from 1833 to 2015 on 02 March.

### b. STS/VBS Inspections. Nothing to report.

### c. Dewatering and Fish Salvages.

- On 01 March, Fish Biologists assisted in fish recovery from U18 tail logs. 43 sculpin, 2 smallmouth bass, and 1 pike minnow were recovered in good condition and released downstream.
- On 03 March, Fish Biologists entered the U15 scroll case and draft tube for fish salvage operations. No fish were recovered in either location. 4 dead shad were observed in the scroll case and 1 dead shad was observed in the draft tube.

### d. Nav Lock 2: Nav Lock 2 went out of service for annual maintenance at 0600 on 06 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: New PIT antenna installation work in the WA shore fishway and Cascades Island Fishway was completed.

### d. 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 3 steelhead. No fish collections for research purposes were conducted this week. More details can be found on the [FPC web page](#).

### e. Northbank: FGE (Fish Guidance Efficiency) work began on U15.

## 4. FISHWAYS:

### a. Project biologists inspected 01 – 06 March.

b. Fish passage plan observations.

• Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
PH1				
03/1-6	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				
03/1-6	A-Branch	FG3-4 Partially Open	FG3-4 mechanically bound partially open	W.O.
03/01,03-06	A-Branch	Weir Staff Gauge >1.1'	NA	NA
03/01-02	PH1CC	S. Ent. Diff. < 1.0'	Unknown	NA
Cascades Island – Nothing to report.				
03/01	CI	UMT Staff Gauge <1.0	Unknown	NA
03/01,03	CI Entrance	Entrance/TW Diff <1.0	Unknown	NA
Washington Shore – Nothing to report.				
03/02-03	WA Shore SUE and SDE	Entrance/TW Diff <1.0	Single Fish Unit Operations	NA

c. Adult Fishways.

- (1) The Cascades Island Fishway remains in service.
- (2) The Washington Shore Fishway remains in service.
- (3) The AFF was taken out of service for the winter on 25 Nov.
- (4) Sensor calibration occurred on 02 March. A new sensor was placed at the B-Branch Entrance this week, replacing a failing sensor.
- (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 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.

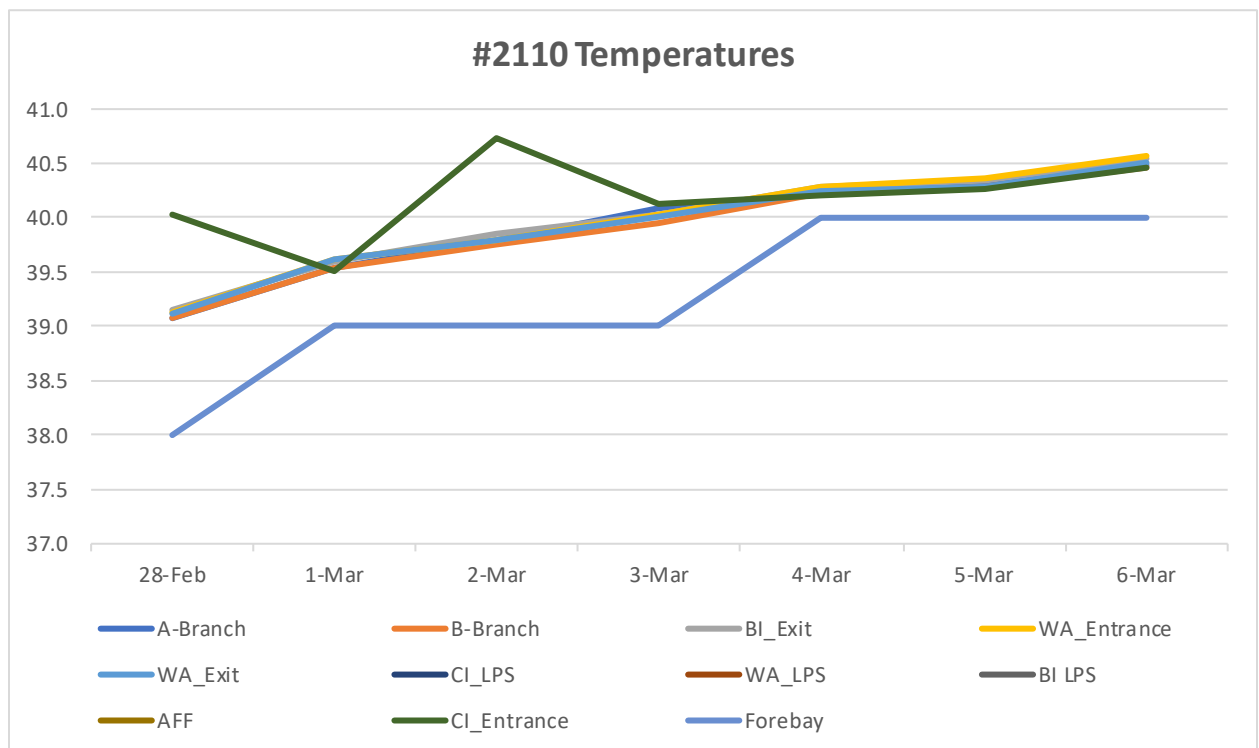
(5) The CI Lamprey trap remains out of service.

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
28-Feb	39.1	39.1	39.2	39.1	40.0	39.1	---	---	---	---	---	38
1-Mar	39.5	39.5	39.6	39.6	39.5	39.6	---	---	---	---	---	39
2-Mar	39.8	39.8	39.9	39.8	40.7	39.8	---	---	---	---	---	39
3-Mar	40.1	39.9	40.0	40.0	40.1	40.0	---	---	---	---	---	39
4-Mar	40.2	40.2	40.3	40.3	40.2	40.2	---	---	---	---	---	40
5-Mar	40.3	40.3	40.3	40.4	40.3	40.3	---	---	---	---	---	40
6-Mar	40.5	40.5	40.5	40.6	40.5	40.5	---	---	---	---	---	40



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

**6. CONSTRUCTION:**

a. Pacific States Marine Fisheries Commission: New PIT antenna installation work in the WA shore fishway and Cascades Island Fishway was completed.

- b. Northbank: FGE (Fish Guidance Efficiency) work began on U15.
- c. USACE: Work began to upgrade 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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