

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 51** of 2019, which covers the period from **15 - 21 December**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 114.6 to 139.0 kcfs. Daily average powerhouse forebay elevation ranged from 74.1' to 75.2' msl. Daily average project tailwater ranged from 11.5' to 12.3' msl. Secchi disk measurements ranged from 6.0' to 7.0'. Daily average water temperature ranged from 42°F to 44°F.

b. Daily average spill remained at 0.5 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
18	0818 on 16 Dec	1151 on 16 Dec	P.O., STS Removal
17	1154 on 16 Dec	1705 on 16 Dec	P.O., STS Removal
16	0627 on 17 Dec	0926 on 17 Dec	P.O., STS Removal
15	0921 on 17 Dec	1127 on 17 Dec	P.O., STS Removal
14	1126 on 17 Dec	1554 on 17 Dec	P.O., STS Removal
13	0813 on 18 Dec	1126 on 18 Dec	P.O., STS Removal
12	1119 on 18 Dec	1358 on 18 Dec	P.O., STS Removal
11	1406 on 18 Dec	1644 on 18 Dec	P.O., STS Removal

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
F2	0010 on 15 Dec	---	P.O., 2-YR Overhaul	---

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
12/15	0.1'	---
12/16	---	---
12/17	---	---
12/18	0.3'	---
12/19	---	---
12/20	---	---
12/21	---	---

2. MAINTENANCE ACTIVITIES:

- a. Auxiliary Water System Closures. Nothing to report.
- b. STS/VBS Inspections. Nothing to report.
- c. Dewatering and Fish Salvages. Nothing to report.

3. RESEARCH:

- a. Four Peaks Environmental - Fish counting contract: Daytime visual counting (0500 to 2100) began on 01 April and concluded on 30 November. Daytime video (0400-2000 PST) commenced on 01 December. Fish counts can be viewed [here](#).

4. FISHWAYS:

- a. Project biologists inspected 16, 17, & 18 December.
- b. Fish passage plan observations.

- Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
		Bradford Island – Nothing to report		
		Cascades Island – Nothing to report		
		Washington Shore – Nothing to report		

- On 01 May 2018, FG6-11 (Cascades Island) was found broken partially open. The diffuser shaft had broken away from the motor. Due to the subsidence issues at Cascades Island, repairs cannot occur until crane support is allowed in the vicinity. FG6-11 should be open at tailwaters $\geq 14.0'$.
- On 18 August 2018, FG6-12 (Cascades Island) was found to be mechanically bound in the open position. FG6-12 should only be open with tailwaters ranging from 11.0'-33.0'. Due to the subsidence issues at Cascades Island, repairs cannot occur until crane support is allowed in the vicinity.
- On 27 March 2019, FG6-18 (Cascades Island) was found to be mechanically bound in the closed position. FG6-18 should be open with tailwaters $> 12.0'$. Due to the subsidence issues at Cascades Island, repairs cannot occur until crane support is allowed in the vicinity.

c. Adult Fishways.

- (1) The Bradford Island fishway went out of service and to orifice flow on 28 November for the 2019/20 IWW period.
- (2) The AFF remains out of service.
- (3) Sensor calibration occurred on 19 December.
- (4) SLEDs are installed at all Cascades Island and PH2 entrances.

d. Juvenile Fishways.

- (1) The ITS remains in service (auto-chain gates 3B, 6C, & 10B only).
- (2) The hydro-cannon remains out of service.
- (3) The B2CC remains out of service.
- (4) The DSM went out of service at 0850 on 19 December.
- (5) STSs were removed this reporting week.

e. Lamprey Fishways.

- (1) All Lamprey Passage Structures 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.

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

5. WATER QUALITY MONITORING:

- a. Fishway Temperatures. Temperatures are taken from 01 March - 30 November.
- b. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

6. CONSTRUCTION:

- a. Construction on the new PH2 Oil Water Separator began 14 October.

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

8. TELETYPE CURRENTLY IN EFFECT:

- a. A teletype sent on 30 October states effective 04 November at 0600 until further notice, operate the Bonneville tailwater for Chum Salmon spawning operations. Please see teletype for more details.
- b. A teletype sent on 20 December updated the Chum Salmon spawning operations. Effective 24 December at 1200 until further notice, maintain Bonneville tailwater elevation at a minimum of 11.3' at all hours. The official tailwater staff gauge is located 50' upstream of Tanner Creek (Oregon side).

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