

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 50** of 2019, which covers the period from **08-14 December**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 116.9 to 127.2 kcfs. Daily average powerhouse forebay elevation ranged from 73.8' to 75.0' msl. Daily average project tailwater ranged from 11.5' to 11.6' msl. Secchi disk measurements remained at 7.0'. Daily average water temperature ranged from 44°F to 45°F.

b. Daily average spill ranged from 0.0 to 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	0001 on 09 Dec	1647 on 11 Dec	P.O., Annual & OWS Mods

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	0001 on 02 Dec	1732 on 09 Dec	P.O., Annual Maintenance	7 days, 17 hours, 31 minutes
F2	1049 on 09 Dec	1053 on 09 Dec	RS	4 minutes
F2	1057 on 09 Dec	1706 on 09 Dec	RS	6 hours, 9 minutes
F2	0621 on 10 Dec	1606 on 10 Dec	RS	9 hours, 45 minutes
F1	1024 on 10 Dec	1032 on 10 Dec	RS	8 minutes
F2	1608 on 10 Dec	1508 on 11 Dec	RS	23 hours
F1	1511 on 11 Dec	1143 on 12 Dec	RS	20 hours, 32 minutes
F1	1105 on 14 Dec	1126 on 14 Dec	RS	21 minutes

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
12/08	---	0.4'
12/09	0.1'	0.2'
12/10	0.2'	---
12/11	---	0.2'
12/12	0.1'	0.1'
12/13	0.1'	0.2'
12/14	0.3'	0.3'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV6-9 was closed for cleaning from 0709 to 0723 on 09 December.

b. STS/VBS Inspections. Nothing to report.

c. Dewatering and Fish Salvages.

- Table 4. Fish Removal from Dewaterings and Salvages.

Date	Location	Fish Salvaged	Release Site
09 Dec	A-Branch diffuser pools to tailwater	2 Chinook Salmon, 1 Steelhead Trout	Upstream of Nav Lock
10 Dec	UMT	6 Steelhead Trout, 2 Chinook Salmon, ~15 juvenile salmonids, ~10 resident fish (Cyprinids and Centracids)	Upstream of Nav Lock
10 Dec	Cascades Island ladder to FG6-5	1 Steelhead Trout, 1 Chinook Salmon, 2 juvenile salmonids	Upstream of Nav Lock
10 Dec	Cascades Island AWS	2 Smallmouth Bass, 18 juvenile salmonids, 4 Cyprinids, 1 Steelhead Trout	Upstream of Nav Lock

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 09, 11, & 12 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 upstream UMT bulkhead and auxiliary water supply (FV5-9) were placed on sill at ~1400 on 09 December to facilitate taking the Cascades Island fishway to orifice flows (up til FG6-5). This work was done to facilitate PSMFC ladder access for future PIT readers at Cascades Island. See [MOC 19BON62 CI ladder dewatering for PIT work](#).
- (2) The Bradford Island fishway went out of service and to orifice flows at ~1400 on 28 November for the 2019/20 IWW period.
- (3) The AFF remains out of service.
- (4) Sensor calibration did not occur this reporting week.
- (5) 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 remains in service.
- (5) STSs are currently installed. STSs are schedule to be removed starting the week of 16 December.

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. Nighttime construction on the new PH2 Oil Water Separator began 14 October.

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

8. TELETYPES 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.

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