

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 12 of 2020, which covers the period from 15 - 21 March.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 127.3 to 131.1 kcfs. Daily average powerhouse forebay elevation ranged from 72.7' to 75.3' msl. Daily average project tailwater ranged from 11.5' to 11.6' msl. Secchi disk measurements ranged from 4.0' to 6.0'. Daily average water temperature ranged from 41° to 44°F.

b. Daily average spill remained 1.3 kcfs.

c. Unit Operation. PH1 was the priority powerhouse from 2230 on 15 March through 1421 on 18 March due to the F2 Headgate Oil Leak. 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
11	0959 on 18 Mar	1117 on 18 Mar	P.O., Trash Raking
12	1307 on 18 Mar	1342 on 18 Mar	P.O., Trash Raking
14	0740 on 24 Feb	---	P.O., 4 year overhaul
15	0015 on 16 Mar	1635 on 16 Mar	P.O., Thrust Collar Insp.
18	2147 on 17 Mar	0705 on 18 Mar	F.O., Gov. Alarm Trip: PLC fault

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	2106 on 15 Mar	2101 on 16 Mar	F2 Headgate Oil Leak	23 hrs, 55 mins
F2	2106 on 15 Mar	---	F2 Headgate Oil Leak	---

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
3/15	0.9'	0.3'
3/16	0.2'	---
3/17	0.4'	---
3/18	0.2'	---
3/19	---	---
3/20	0.2'	---
3/21	0.3'	---

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 video (0400 to 2000) began on 01 March. Fish counts can be viewed [here](#).
- b. PSMFC – Smolt Monitoring: Sample collections at the SMF began at 0700 on 02 March. Debris at the PDS and fish/debris separator was light to moderate consisting mostly of sticks. Kelt observations will be monitored by direct observation from Smolt Monitoring personnel and video recording by Fisheries Field Unit and SMP at least until the Kelt Trigger is reached. Seven steelhead fallbacks were observed this week. Year-to-date total is 21. The kelt trigger for B2CC operation was reached at 12:15 on 20 March when two fish were observed on two consecutive days. No fish collections for research purposes were conducted this week. More details can be found on the [FPC web page](#).
- c. USDA - Pinniped hazing: Deck-based hazing began 01 March.
- d. CRITFC - Pinniped hazing: Hazing by boat began 01 March. Suspended indefinitely 20 March for social distancing purposes.

4. FISHWAYS:

- a. Project biologists inspected 15,17,19-21 March.
- b. Fish passage plan observations.

- Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
3/16,18	Bonn	No Inspection	Short Staffed	NA
Bradford Island – Nothing to report				
3/17,19-21	A-Branch	Staff Gauge Diff. > 1.1'	Unknown	NA
3/15,19-20	PH1CC	S. Ent. Diff. < 1.0'	Unknown	NA
3/20	PH1CC	N. Ent. Diff. > 2.0'	Unknown	NA
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 remains in service.
- (2) The AFF remains out of service.
- (3) Sensor calibration occurred on 20 Mar.
- (4) 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 returned to service on 20 March.
- (4) The DSM remains in service.
- (5) STSs are installed.

e. Lamprey Fishways.

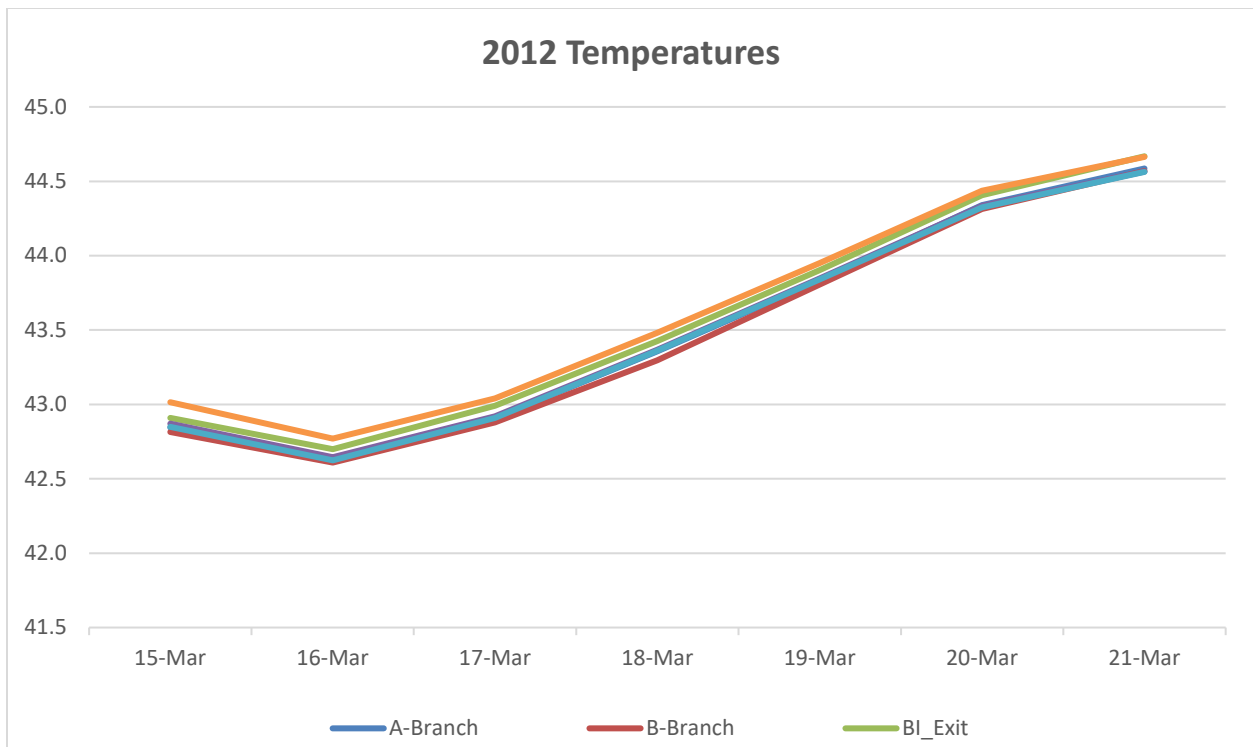
- (1) All Lamprey Passage Structures remain out of service.
- (2) The Bradford Island Wetted Wall (BIWW) remains out of service.
- (3) The PH2 Lamprey Flume Structure (LFS) remains out of service.
- (4) The AFF Lamprey trap remains out of service.

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.

Date	A-Branch	B-Branch	BI_Exit	WA_Entrance	WA_Exit	SMF
15-Mar	42.8	42.8	42.9	42.9	42.9	43.0
16-Mar	42.6	42.6	42.7	42.6	42.6	42.8
17-Mar	42.9	42.9	43.0	42.9	42.9	43.0
18-Mar	43.4	43.3	43.4	43.4	43.4	43.5
19-Mar	43.8	43.8	43.9	43.8	43.8	44.0
20-Mar	44.3	44.3	44.4	44.3	44.3	44.4
21-Mar	44.6	44.6	44.7	44.6	44.6	44.7



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: Fish unit 2 headgate oil leak was observed on 15 March (MFR 20BON08). Both fish units were forced out of service to determine the source of the leak. F1 returned to service on 16 March while F2 remains out of service for repair and oil cleanup efforts.

8. TELETYPE CURRENTLY IN EFFECT:

- 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).
- A teletype sent on 17 March stated effective 25 March from 1200 to 1700, close spillbay 18. Spillbays 2-17 will also be out of service during this time. The purpose is to create hydrological conditions suitable for a hydro-survey occurring in the tailrace. Following the operation, spill is to be resumed as described in the 2020 FPP.

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