

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)  
 SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 05 of 2019, which covers the period from 27 January-02 February.

### 1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 126.2 to 151.9 kcfs. Daily average powerhouse forebay elevation ranged from 74.1' to 75.4' msl. Daily average project tailwater ranged from 11.8' to 13.2' msl. Secchi disk measurements remained at 7.0'. Daily average water temperature ranged from 40°F to 41°F.
- b. Daily average spill ranged from 1.0 kcfs to 1.1 kcfs.
- c. Unit Operation. PH1 remains the priority powerhouse. Main unit drawdowns are measured every Monday and more frequently as needed.

(1) Table 1. Main Unit Outages.

Unit	OOS Date	RTS Date	Reason
0	0840 on 08 Nov	---	Bad Turbine Bearings
1	0028 on 03 Dec	---	5 Year Overhaul
3	0856 on 28 Jan	1048 on 28 Jan	BPA Relay Maintenance
4	0853 on 28 Jan	1050 on 28 Jan	BPA Relay Maintenance
5	0900 on 30 Jan	1024 on 30 Jan	BPA Relay Maintenance
6	0901 on 30 Jan	1025 on 30 Jan	BPA Relay Maintenance
7	0859 on 30 Jan	1027 on 30 Jan	BPA Relay Maintenance
8	0853 on 30 Jan	1028 on 30 Jan	BPA Relay Maintenance
10	0001 on 28 Jan	1611 on 31 Jan	Annual
15	0001 on 28 Jan	1510 on 28 Jan	Thrust Collar Inspection
18	0001 on 28 Jan	0749 on 01 Feb	Annual

- d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder.

(1) 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 Date	RTS Date	Reason
F2	0835 on 01 Dec	---	Winter Maint.
F1	0936 on 01 Dec	---	Winter Maint.

- e. Table 3. Fish unit drawdowns, in feet. Nothing to report.

**2. MAINTENANCE ACTIVITIES:**

a. Auxiliary Water System Closures.

- (1) FV3-7 was closed from 1016 to 1136 on 30 Jan for trash rack cleaning
- (2) FV3-9 was closed from 1016 to 1136 on 30 Jan for trash rack cleaning
- (3) FV1-1 was closed from 1320 to 1400 on 30 Jan for ROV inspection

b. STS/VBS Inspections. Nothing to report.

c. Dewatering and Fish Salvages. Nothing to report.

**3. RESEARCH:**

a. Normandeau – Fish counting.

- (1) Daytime video (0400 to 2000) began on 01 December. Fish counts can be viewed [here](#).

**4. FISHWAYS:**

a. Project biologists inspected from 28-30 January.

b. Fish passage plan observations.

(1) Table 4. FPP out of criteria items.

Date	Location	FPP Violation	Cause	Response
<b>Bradford Island</b>				
1/28-30	A-Branch	Differential > 1.1'	Unknown	NA
<b>Cascades Island – Nothing to report.</b>				
<b>Washington Shore - Dewatered!</b>				

- (2) Bonneville had the majority of its avian lines broken due to ice storms during the 2016/17 winter and PH2 lines are still awaiting reinstallation.
- (3) On 01 May 2018, FG6-11 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.
- (4) On 18 August 2018, FG6-12 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.

- (5) On 13 September 2018, FG6-14 was manually closed, due to issues surrounding FG6-11 and FG6-12 (see above). Through trial and error this was found to help facilitate FPP entrance differential criteria and alleviate “boiling” from adjacent diffusers within the Cascades Island fishway. FG6-14 should be open during tailwaters of 9.0’-28.0’.
- (6) On 30 Jan, Spillway and Corner Collector (B2CC) avian lines were removed to facilitate rock removal from the Spillway apron

c. Adult Fishways.

- (1) The AFF was taken out of service on 07 November.
- (2) Sensor calibration did not occur this week.
- (3) SLEDs are installed at Bradford and Cascades Island entrances.
  - (a) PH2 SLEDs were removed on 03 December.

d. Juvenile Fishways.

- (1) The ITS was taken out of service on 30 December due to lower gate failure.
- (2) The hydro-cannon remains offline.
- (3) The B2CC is operating from 0900 – 1500 daily per teletype sent on 15 Jan.
- (4) The DSM was taken out of service on 19 December.
- (5) STSs were removed between 17-19 December.

e. Lamprey Fishways. All lamprey passages systems remain offline.

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

**5. WATER QUALITY MONITORING:**

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

**5. CONSTRUCTION:** Nothing to report.

**6. HAZMAT, SPILLS AND CLEANUP:** On 02 Feb, an oil sheen was reported in the

tailrace of PH2. Bonneville personnel, including the Environmental Compliance Coordinator, responded and are assessing the situation.

## **7. TELETYPES CURRENTLY IN EFFECT:**

- a. A teletype sent on 30 August outlines the wintertime spill priority list and wintertime spill caps for all Columbia Basin projects and BPA.
- b. A teletype sent on 21 December updates the Chum Salmon spawning tailwater requirements until further notice.
- c. A teletype sent on 15 January states effective 16 January until further notice to operate the B2 Corner Collector (B2CC) from 0900 -1500 daily. The goal of this operation is to provide a surface bypass route for Steelhead kelts which the PH1 ITS is unavailable.
- d. A teletype sent on 01 February requests to operate forebay above a minimum of 75.0 feet from 04-07 February to support construction activities for the BNSF railroad bridge replacement at the mouth of the Wind River.
- e. A teletype sent on 01 February states effective immediately until further notice to operate powerhouse 2 with the following unit priority: 11, 12, 13, 14, 15, 16, 17, 18. Continue operating powerhouse 1 in the order defined in the 2018 Fish Passage Plan (FPP) Table BON-13 that was revised 06/14/2018. The purpose of this operation is to prioritize units near the powerhouse 2 corner collector (B2CC), which is operating due to the outage of the ITS.

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