

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 51 of 2017, which covers the period from 17-23 December.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 126.8 to 153 kcfs. Daily average powerhouse forebay elevation ranged from 73.2' to 74.4' msl. Daily average project tailwater ranged from 12.2' to 14' msl. Secchi disk measurements stayed at 7.0'+. Daily average water temperature ranged from 42° to 43°F.
- b. Daily average spill ranged from 0.5 to 1.1 kcfs.
- c. Unit Operation. PH2 remains the priority powerhouse. Main unit drawdowns are measured every Monday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
01	1701 on 21 Dec	1338 on 26 Dec	Metering issues
11	1152 on 18 Dec	1451 on 18 Dec	STS Removal
12	1454 on 18 Dec	1700 on 18 Dec	STS Removal
15	0649 on 19 Dec	0917 on 19 Dec	STS Removal
16	0920 on 19 Dec	1139 on 19 Dec	STS Removal
17	1147 on 19 Dec	1507 on 19 Dec	STS Removal
18	0930 on 21 Aug	---	Exciter trip

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

(1) F2 went out of service at 0014 on 11 Dec for two year overhaul maintenance.

- e. Table 2. Fish unit drawdowns, in feet.

Date	F1	F2
12/17	0.3'	-
12/18	0.4'	-
12/19	0.8'	-
12/20	0.4'	-
12/21	0.1'	-
12/22	0.6'	-
12/23	1.7'	-

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

(1) FV6-9 was closed from 0740 until 0750 on 21 December for cleaning.

b. STS/VBS inspections. Nothing to report.

c. Dewatering and Fish Salvages.

(1) Unit 10 was dewatered on 19 Dec. Project biologists salvaged ~120 shad, ~105 juvenile salmonids, 2 juvenile smallmouth bass and 1 juvenile pumpkinseed from the scroll case and draft tube. At least half of the juvenile salmonids were observed to be smolts.

3. RESEARCH:

a. Normandeau – Fish counting. Daytime video counting (0400 to 2000) began on 01 December.

4. FISHWAYS:

a. Project biologists inspected 18, 20 and 21 December.

b. Fish passage plan observations.

(1) Table 3. FPP out of criteria items.

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND - Nothing to report				
CASCADES ISLAND - Nothing to report				
WASHINGTON SHORE – Nothing to report				

(1) Bonneville had the majority of its avian lines broken due to ice storms during the 2016/17 winter. Avian lines will be replaced after the spillway rock removal is completed and weather allows.

(2) PH2 diffuser B4 was discovered to have its stem bent on 24 May. This likely occurred while trying to close and the valve is believed to be open. It should be closed at tailwaters above 31.0' and below 11.0' msl.

b. Adult Fishways.

(1) The AFF was dewatered on 15 November.

(2) Sensor calibration did not occur this reporting week (applicable waterways are dewatered for winter maintenance).

- (3) SLEDs are installed at Cascades Island and PH2 entrances. PH1 and B-branch entrances were removed on 22 Nov in preparation for the Bradford Island fishway dewatering.

c. Juvenile Fishways.

- (1) The ITS remains in service.
- (2) The hydro-cannon is operated 01 March through 01 November.
- (3) The B2CC is out of service.
- (4) The DSM remains in service.
- (5) STSs have been removed for winter maintenance.

d. Lamprey Fishways. All LPSs are out of service for the season.

e. Avian Monitoring. Bird counts are recorded between 01 April and 31 October.

2. 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.

3. CONSTRUCTION:

a. Contractors are still in the process of hard wiring the counter at the Cascade Island LPS exit and lamprey passage system upgrades at Bradford Island.

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

5. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 31 August sets wintertime (01 September 2017 through 31 March 2018) spill priority lists and spill caps for lack of load conditions.

b. A teletype sent on 20 December states that effective 1300 on 21 December until further notice, the Bonneville dam minimum tailwater elevation is 11.8 feet during all hours. The intent is to ensure sufficient tailwater elevation to protect chum redds in the Ives/Pierce Island area during egg incubation.

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