

## MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 53 of 2017, which covers the period from 31 December 2017 – 06 January 2018.

**1. OPERATION SUMMARY:**

- a. Daily average river flows ranged from 167.2 to 193.1 kcfs. Daily average powerhouse forebay elevation ranged from 73.2' to 74.9' msl. Daily average project tailwater ranged from 15.1' to 16.4' msl. Secchi disk measurements ranged from 3.0' to 7.0'. Daily average water temperature ranged from 39° to 41°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.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
03	0652 on 03 Jan	1122 on 03 Jan	Governor Repair
10	1040 on 18 Dec	---	5 year overhaul
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) F1 was put into reserve service from 1545 to 1646 on 01 Jan (2.5' drawdown) and from 1819 to 2240 on 03 Jan (4.0' drawdown) to float trash.
- (2) F2 went out of service at 0014 on 11 Dec for two year maintenance overhaul.
- e. Table 2. Fish unit drawdowns, in feet.

Date	F1	F2
12/31	1.6'	-
01/01	0.2'	-
01/02	0.6'	-
01/03	4.0'	-
01/04	0.1'	-
01/05	0.7'	-
01/06	0.9'	-

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

**4. FISHWAYS:**

- a. Project biologists inspected 2 & 3 January.
- b. Fish passage plan observations.  
(1) Table 3. FPP out of criteria items.

Date	Location	FPP Items	Cause	Response
1/4	BON	No Inspection	Staffing	NA
<b>BRADFORD ISLAND - Nothing to report</b>				
<b>CASCADES ISLAND - Nothing to report</b>				
<b>WASHINGTON SHORE</b>				
1/2,3	PH2	Fishway entrance diffs < 1'	Single fish unit ops	NA

- (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 out of service.
- (3) The B2CC is out of service.
- (4) The DSM is out of 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 in 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' during all hours. The intent is to ensure sufficient tailwater elevation to protect Chum Salmon redds in the Ives/Pierce Island complex during egg incubation.

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