

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 06 of 2018, which covers the period from 04 - 10 February.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 224.4 to 265.5 kcfs. Daily average powerhouse forebay elevation ranged from 72.0' to 73.0' msl. Daily average project tailwater ranged from 19.0' to 20.6' msl. Secchi disk measurements ranged from 4.0' to 6.0'. Daily average water temperature ranged from 41° to 42°F.
- b. Daily average spill ranged from 0.5 to 68.8 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
10	1040 on 18 Dec	---	5YR Overhaul
11	0736 on 08 Jan	---	FGE Work / Turbine Integrity Inspection
12	1632 on 04 Feb	1704 on 04 Feb	T11 Trip
13	1632 on 04 Feb	1655 on 04 Feb	T11 Trip
14	1632 on 04 Feb	1656 on 04 Feb	T11 Trip
16	0206 on 07 Feb	1613 on 09 Feb	Planned Outage, Thrust Collar Inspection
17	0927 on 07 Feb	1619 on 09 Feb	Planned Outage, Fish Unit Dredging
18	0927 on 07 Feb	1622 on 09 Feb	Planned Outage, Fish Unit Dredging

- d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder.
 - (1) F1 went out of service at 0928 on 07 Feb until 1644 on 09 Feb for a planned outage (fish unit dredging).
 - (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
2/4	0.7	-
2/5	0.3	-
2/6	0.2	-
2/7	-	-
2/8	-	-
2/9	0.2'	-
2/10	0.4'	-

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 5,7-8 February.
- 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				
2/5,7-8	SDE/SUE	Differential < 1.0'	Single Fish Unit Ops	NA
2/5,7-8	NDE/NUE	Differential < 1.0'	Single Fish Unit Ops	NA
2/7	Weir 37/38	Differential > 1.1'	Unknown	NA

(2) 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.

(3) PH2 diffuser B4 was discovered to have its stem bent on 24 May 2017. 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.

c. 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.

d. Juvenile Fishways.

(1) The ITS remains in service.

(2) The hydro-cannon is out of service.

(3) The B2CC is out of service.

(a) The B2CC was opened from 1300-1702 on 05 February in conjunction with forced spill.

(4) The DSM is out of service.

(5) STSs have been removed for winter maintenance.

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

f. Avian Monitoring. Bird counts are recorded between 01 April and 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.

6. CONSTRUCTION:

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

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

7. 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.
- c. A teletype sent on 24 January requests starting 29 January through 04 February (0600 through 1800 daily), the Bonneville pool operate a maximum forebay of 73.0' soft constraint and 73.5' hard constraint and operate within the full operating range outside the work hours outlined herein. The purpose of this work is to accomidate shoreline restoration work along the waterfront at the Port of Skamania near Stevenson, WA.
- d. A teletype sent on 06 February requests BPA make best efforts not to spill at Bonneville from 0800 to 1400 on 07 February for a hydrosurvey of the spillway.
- e. A teletype sent on 09 Feburary requests from 0900-2100 on 12-18 February daily, avoid spill if at all possible to accomidate rock removal operations.
- f. A teletype sent on 09 February updates the previous teletype from 0500-2100 instead of the previously stated 0900-2100.
- g. A teletype sent on 10 February updates the previous teletype from 12-18 February to 13-18 February.

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