

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

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 49 of 2017, which covers the period from 03-09 December.

**1. OPERATION SUMMARY:**

- a. Daily average river flows ranged from 141.8 to 164.7 kcfs. Daily average powerhouse forebay elevation ranged from 72.7' to 73.9' msl. Daily average project tailwater ranged from 12.9' to 14.0' msl. Secchi disk measurements ranged from 6.0' to 7.0'. Daily average water temperature ranged from 46° to 48°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
01	0001 on 04 Dec	---	Contractor, annual maintenance
02	0001 on 04 Dec	---	Contractor, annual maintenance
13	0002 on 06 Dec	0044 on 06 Dec	*Outage not scheduled with BPA
13	0737 on 06 Dec	1406 on 09 Dec	FGE / thrust collar inspection
15	0659 on 04 Dec	---	Planned outage, annual / EAL testing
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 went out of service from 1915 on 03 Dec to 0436 on 08 Dec for annual maintenance. F1 went into reserve service from 0633 to 0713 on 08 Dec for thrust bearing high oil temperature.
  - (2) F2 went into reserve service from 1827 to 2208 on 06 Dec (8.4' drawdown), 1929 to 2153 on 07 Dec (14.4' drawdown), and 0007 to 0622 on 08 Dec (4.2' drawdown) to float trash.

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

Date	F1	F2
12/3	-	0.5'
12/4	-	0.1'
12/5	-	0.5'
12/6	-	8.4'
12/7	-	14.4'
12/8	0.4'	0.5'
12/9	0.2'	0.3'

**2. MAINTENANCE ACTIVITIES:**

a. Auxiliary Water System Closures.

(1) FV6-9 was closed from 1516 to 1530 on 08 and from 1137 to 1143 on 09 Dec for trash rack cleaning.

b. STS/VBS inspections.

Unit	Date	Run Hours	Comments
11	12/5	669	Ok
12	12/5	674	Ok
13	12/5	674	Ok
14	12/5	*	*hour meter has failed and awaiting repair
15	12/5	668	Ok
16	12/5	3672	Ok
17	12/5	291	Ok
18	12/5	0	OOS

c. Dewatering and Fish Salvages. A fish salvage was conducted in the Unit 15 draft tube on 05 December. No fish were found.

**3. RESEARCH:**

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

**4. FISHWAYS:**

a. Project biologists inspected 5-7 December.

- b. Fish passage plan observations.
  - (1) Table 3. FPP out of criteria items.

Date	Location	FPP Items	Cause	Response
<b>BRADFORD ISLAND - Nothing to report</b>				
<b>CASCADES ISLAND - Nothing to report</b>				
<b>WASHINGTON SHORE - Nothing to report</b>				

- (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. It likely occurred while trying to close and is believed to be open. It should be closed at tailwaters above 31.0' and below 11.0' msl.
- (3) The NDE cannot open past 5' putting the entrance into FPP violation for submergence (>13.0'). It is believed to be full of sand. The NDE gate will have to be removed at a future date and the sand removed in order for this entrance be in compliance.

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 entreances. PH1 and B-branch enterances were removed on 22 Nov in preparations 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.

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 the process of hard wiring the counter at the Cascade Island LPS.

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

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

- a. A teletype updated on 21 June provides spill caps and lack of load spill conditions to be used from 0000 on 01 April until further notice.
- b. A teletype sent on 02 November outlines operations for Chum spawning. Effective 0600 on 07 November until further notice, as project outflows increase, operate the Bonneville tailrace at all hours in the range of 11.5' to 13.0'. Then if necessary to increase project outflow, tailwater may be operated up to 16.5' from 1700 to 0600, while concentrating the highest elevations around 2400. Then, if necessary operate up to 18.5' from 1700 to 0600. Then, if increasing river flows preclude the ability to manage the tailwater within the steps above, operate to provide a tailwater in the range of 13.0' to 16.5' during daytime hours (0600 to 1700) and up to the maximum within project 24-ramp rate limits during nighttime hours (1700-0600). The goal of this operations is to improve conditions at the Ives/Piece island complex for Chum Salmon spawning.
- c. A teletype sent on 28 November states that on 04 December from 0900 until 1500, operate the forebay above 73.5' and above as a soft constraint, for a hydrographic survey on the Wind River in Skamania County, WA.

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