

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

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 51 of 2015, which covers the period from 13-19 December 2015.

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 145.7 to 166.5 kcfs. Daily average powerhouse forebay elevation ranged from 72.2' to 73.6' msl. Daily average project tailwater ranged from 15.9' to 17.6' msl. Secchi disk measurements ranged from 3.0' to 7.0' or greater all week. Daily average water temperature ranged from 43 to 44°F.

b. Spill bay 1 is open 0.5' during daytime hours to provide attraction flow to the Cascades Island fish ladder. Daily average spill was 0.5 kcfs.

(1) Spill bay 18 was closed at 1830 on 04 December in preparation for the Bradford Island (B-Branch) winter maintenance dewatering.

c. Unit Operation. Powerhouse two remains the priority powerhouse. Main unit draw downs are measured every Monday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
2	1015 on 07 Dec	1512 on 07 Dec	Rake trash
3	1512 on 07 Dec	1627 on 07 Dec	Rake trash
3	0730 on 08 Dec	1243 on 08 Dec	Rake Trash
4	1243 on 08 Dec	1630 on 08 Dec	Rake Trash
4	0900 on 09 Dec	1100 on 09 Dec	Rake Trash
8	1100 on 09 Dec	1617 on 09 Dec	Rake Trash
9	1053 on 17 Nov	---	5 year overhaul, bank 9/10 maint
10	1015 on 16 Nov	---	Annual maintenance and air gap
11	1915 on 09 Dec	1541 on 10 Dec	Rake Trash
18	1546 on 10 Dec	1641 on 10 Dec	Rake Trash
F2	0001 on 15 Dec	---	2 year overhaul

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

(1) F2 was taken out of service for a 2 year overhaul at 0001 on 15 Dec. At 0707 Powerhouse 2 went to single fish unit ops, and the NUE gate was closed.

(2) The fish units were placed on standby to float trash, or to allow trash to be raked on units 17 and 18 without causing debris to be pulled to the fish units, during the following times:

F1: 2359 on 15 Dec to 0441 on 16 Dec    F2: N/A

(3) Table 2. Fish unit drawdowns, in feet.

Date	F1	F2
12/13	0.2	0.3
12/14	.2	.2
12/15	3	--
12/16	.6	--
12/17	7.2	--
12/18	.5	--
12/19	.6	--

## 2. ACTIVITIES:

### a. Auxiliary Water System Closures.

(1) FV 6-9 0902 to 0908 on 14 Dec, 1000 to 1016 on 18 Dec.

### b. STS/VBS inspections.

No STS's are in.

c. Dewatering and Fish Salvages – No dewaterings or fish salvages occurred this reporting week.

## 3. RESEARCH:

a. Normandeau – Fish Counting. Visual counting ended and video counting began on 01 December.

## 4. FISHWAYS:

a. Project biologists inspected 14-17 December.

b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
<b>BRADFORD ISLAND- Dewatered</b>				
<b>CASCADES ISLAND</b>				
<b>WASHINGTON SHORE</b>				
12/15	PH 2	Entrance Differs <1'	F2 Out of Service	Go to single unit ops

- (2) WG-1, one of the south PH1CC entrances, experienced a gate failure on 17 November 2014. Divers recovered the gate's picking beam on 04 August 2015. Repairs are ongoing. The gate is estimated to return to service during the 2015/16 winter maint.
- (3) A-branch diffuser FG3-3 is mechanically bound. Repairs are not possible until A-branch is dewatered below tailwater during the 2015/16 winter maintenance period.
- (4) B-branch gate 4N, adjacent to the fish entrance, had a bad motor. It was removed on 27 July and has been repaired. It's waiting reinstallation during the 2015/16 winter maintenance. 4N is closed and 4S is open in its place. Both gates should be open below tailwaters of 9.0 msl.
- (5) PH2CC diffuser A2 was unable to be repaired during winter maintenance 2014/15 and remains closed. It should be open when tailwater is above 13.0 msl. The gate for diffuser B5 was removed for repairs and therefore cannot be closed. It should be closed below tailwaters of 12.0 msl.

c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. Forebay temperatures can be found [online](#).

d. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

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

f. Adult Fishways.

(1) Fishway instrument calibration was checked on 17 Dec.

(2) 11 of 12 floating orifice gates (FOGs) are installed; one gate is out for maintenance. FOG Stab plates are installed. Powerhouse 2 adult fishway is currently configured for a single fish unit operation in accordance with Table BONN 12 in the FPP.

- (3) SLEDs were installed in the PH2 entrances on 26 October. The PH1 SLEDs are removed.

g. Juvenile Fishways.

- (1) The ITS remains open.
- (2) The hydro-cannon went out of service on 01 November.

(3) The B2CC was open from approximately 0600 to 1800 13-15 December in accordance to [teletype b](#). It was closed at approximately 1800 15 December with the annual closure of STS operations.

- (4) The DSM remains in service.

h. Lamprey Fishways.

- (1) All LPSs remain out of service.

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

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

**7. TELETYPES CURRENTLY IN EFFECT:**

a. A teletype sent on 30 March updates the spill caps and lack of load conditions to be used from 0000 on 01 April until further notice.

b. A teletype sent on 24 November states that effective immediately until no later than 15 December, operate the B2CC during daytime hours as defined in Table BON-5 in the FPP, to provide an alternate fallback route for fish since PH2 STSs are pulled.

c. A teletype sent on 12 December updated previous Chum tailwater operations. Effective 0600 on 7 November until further notice operate BON tailwater in the range of 11.5 – 12.5'. If necessary due to outflows, tailwater may be operated up to 13.0' at any time, returning to the target range whenever possible. Then if necessary, tailwater may be operated in the following order: up to 16.5 feet during nighttime hours (1700-0600) with highest elevations concentrated around 2400, then up to 18.5' from the hours 1700 – 0600, then in the range of 13.0 – 16.5' during daytime hours (0600 – 1700) and up to the maximum within ramp rate limits at night. This operation is for Chum spawning below BON at the Ives/Pierce Island complex.

d. A teletype sent on 14 December states that effective Tuesday, December 15 from 1000 to 1400 hours operate Bonneville Dam tailwater within a range of 13 to 14' with a target of 13.5' for Chum redd surveys.

e. A teletype sent on 16 December states that effective Thursday, December 17 from 0700 to 1200 hours operate Bonneville Dam tailwater as low as possible, down to a minimum of 12.5' for Chum spawning surveys.

f. A teletype sent on 17 December states cancels the above mentioned (16 Dec) Chum spawning survey teletype.

JERRY A. CARROLL  
Operations Manager  
Bonneville Project