

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 52 of 2015, which covers the period from 20-26 December 2015.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 112 to 142.8 kcfs. Daily average powerhouse forebay elevation ranged from 72.8' to 74.5' msl. Daily average project tailwater ranged from 13.5' to 16.9' msl. Secchi disk measurements ranged from 5.0' to 7.0' or greater all week. Daily average water temperature ranged from 44° to 45°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
9	1053 on 17 Nov	---	5 year overhaul, bank 9/10 maint
10	1015 on 16 Nov	---	Annual maintenance and air gap
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: 2118 on 22 Dec to 0419 on 23 Dec F2: N/A
 1851 on 25 Dec to 0013 on 26 Dec

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

Date	F1	F2
12/20	0.6'	--
12/21	1.7'	--
12/22	8.5'	--
12/23	0.3'	--
12/24	0.1'	--
12/25	3.2'	--
12/26	0.3'	--

2. ACTIVITIES:

- a. Auxiliary Water System Closures
None
- b. STS/VBS inspections
No STS's are in.
- c. Dewatering and Fish Salvages
On 12 December project biologists salvaged 5 steelhead from the Bradford Island Junction Pool.

3. RESEARCH:

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

4. FISHWAYS:

- a. Project biologists inspected 21-23 December.
- b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND- Dewatered				
CASCADES ISLAND				
WASHINGTON SHORE				

(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 22 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 remains closed.
- (4) The DSM was taken out of service on 23 December.

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 21 December states that effective Tuesday, December 22 from 1000 to 1400 hours operate Bonneville Dam tailwater as low as possible, down to a minimum of 12.5' for Chum redd surveys.

c. A teletype sent on 22 December updated previous Chum tailwater operations. Effective 0001 on 23 December until further notice operate BON tailwater at a minimum of 12.5'. For at least four hours each day maintain a minimum tailwater elevation of 15' in order to "re-wet" chum redds. The four hours each day do not need to be consecutive, not to exceed 24 hours between re-wetting operations. This operation is to protect Chum Redds below BON at the Ives/Pierce Island complex.

d. A teletype sent on 22 December states that effective Tuesday, December 22 from 1000 to 1400 hours operate Bonneville Dam tailwater as low as 58,000 cfs, as long as a minimum goal of 3.0 feet at the Vancouver gage is met. A hard constraint is flow equal to or greater than 77,000 cfs at the Columbia and Willamette River confluence.

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