

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 01 of 2016, which covers the period from 27 December 2015 through 02 January 2016.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 129.9 to 151.1 kcfs. Daily average powerhouse forebay elevation ranged from 72.8' to 74.4' msl. Daily average project tailwater ranged from 13.3' to 13.9' msl. Secchi disk measurements ranged from 4.0' to 7.0'. Daily average water temperature ranged from 40° 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
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: 2159 on 28 Dec to 0443 on 29 Dec. F2: N/A
 2018 on 31 Dec to 0328 on 01 Jan.
 2133 on 02 Jan.

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

Date	F1	F2
12/27	0.7'	--
12/28	2.2'	--
12/29	0.2'	--
12/30	0.2'	--
12/31	2.5'	--
01/01	0.9'	--
01/02	6.0'	--

2. ACTIVITIES:

- a. Auxiliary Water System Closures
None.
- b. STS/VBS inspections
All STS/VBS are removed.
- c. Dewatering and Fish Salvages
No dewaterings or 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 28-30 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 30 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 BON 12 in the FPP.
- (3) SLEDs were installed in the PH2 entrances on 26 October 2015. 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 2015.

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 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.

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