

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 08 of 2016, which covers the period from 14 to 20 February 2016.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 155.4 to 247.8 kcfs. Daily average powerhouse forebay elevation ranged from 73.5' to 74.7' msl. Daily average project tailwater ranged from 15.2' to 20' msl. Secchi disk measurements ranged from 5' to 7'. Daily average water temperature ranged from 41° to 42° 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 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
6	1002 on 16 Feb	1054 on 16 Feb	Rake Trash
7	1054 on 16 Feb	1319 on 16 Feb	Rake Trash
8	1305 on 16 Feb	1606 on 16 Feb	Rake Trash
18	0828 on 17 Feb	1036 on 17 Feb	Rake Trash
17	1040 on 17 Feb	1325 on 17 Feb	Rake Trash
12	1328 on 17 Feb	1510 on 17 Feb	Rake Trash
11	1512 on 17 Feb	1636 on 17 Feb	Rake Trash
F2	0001 on 15 Feb	1700 on 17 Feb	2 year overhaul
11	0717 on 18 Feb	1127 on 18 Feb	Rake Trash
16	1406 on 18 Feb	1607 on 18 Feb	Rake Trash
15	0702 on 19 Feb	0857 on 19 Feb	Rake Trash
14	0950 on 19 Feb	1036 on 19 Feb	Rake Trash
13	1038 on 19 Feb	1123 on 19 Feb	Rake Trash
F1	0721 on 18 Feb	---	Annual 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: 0830 to 1040 on 16 Feb.

F2: N/A

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

Date	F1	F2
02/14	0.3'	--
02/15	0.1'	--
02/16	0.8'	--
02/17	0.2'	--
02/18	--	0.2'
02/19	--	0.8'
02/20	--	0.6'

2. ACTIVITIES:

- a. Auxiliary Water System Closures
None.
- b. STS/VBS inspections
All STS/VBS are removed.
- c. Dewatering and Fish Salvages
None.

3. RESEARCH:

- a. Normandeau – Fish Counting
Visual counting ended and video counting began on 01 December.
- b. Fisheries Field Unit--Pinniped Observation
Observations began on 04 January, 2016

4. FISHWAYS:

- a. Project biologists inspected 16, 17 and 18 February.
- 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				
2/16- 2/18	PH2 entrance gates	Submergence levels < 13'	Single fish unit ops	none

- (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. The gate is repaired and will return to service in March, 2016
 - (3) A-branch diffuser FG3-3 was mechanically bound. Repairs were not possible until A-branch was dewatered below tailwater during the 2015/16 winter maintenance period. It has now been mechanically repaired and is operational.
 - (4) 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 February.
 - (2) 8 of 12 floating orifice gates (FOGs) are installed; 4 slots have bulkheads in

place. FOG sea lion bars 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.

(4) 8 SLIBs (Sea Lion Incursion Barriers) were installed on top of FOGs to prevent Sea Lions from jumping into the PH2 fishway on 11 February.

g. Juvenile Fishways.

(1) The ITS remains open.

(2) The hydro-cannon remains off.

(3) The B2CC was opened to flush debris from 1330 to 1635 on 17 Feb and 0716 to 1249 on 18 Feb.

(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 06 January updated previous Chum tailwater operations. Effective immediately until further notice operate BON tailwater at a minimum of 12.5' for all hours. This operation is to protect Chum Redds below BON at the Ives/Pierce Island complex.

c. A teletype sent on 29 January states that all 18 spillbays at Bonneville Dam will be out of service from 0600 to 1700 daily from 17 February through 25 February. These daily outages facilitate inspection of the gates.

d. A teletype sent on 01 February updates one sent on 29 January (c. above) and states that spillbay 1 will remain open one stop for attraction flow during the 17-25

February window.

- e. A teletype sent on 17 Feb states that effective 22 Feb Bonneville may close spillbay 1 for up to four hours to accommodate an ROV survey near the Cascade Island fishway entrance.

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