



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
BONNEVILLE LOCK AND DAM PROJECT
PO BOX 150
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CENWP-OD-B

09 December 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 49 of 2014, which covers the period from 30 November – 06 December 2014.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 157.1 to 174.6 kcfs. Daily average project tailwater ranged from 14.7 to 15.0 msl. Daily average powerhouse forebay elevation ranged from 73.3 to 74.4msl. Daily average water temperatures ranged from 44° to 47°F. Secchi disk measurements ranged from 5.0' to 7.0' or higher.

b. Spill Bays 01 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Spill bay 01 was closed on 01 December coinciding with the dewatering of Cascades Island for winter maintenance. Daily spill ranged from 1.0 to 23.3 kcfs this week.

(1) Due to a failed hoist brake, spill bay 17 has been operated manually since 11 March. It requires final electrical testing before being returned to service, likely late December.

c. Unit Operation. Powerhouse one became the priority powerhouse on 01 December. Main unit draw downs are measured every Monday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
08	0630 on 02 Dec	1517 on 03 Dec	CW Strainer Work
11	0900 on 09 Sep 2012	---	High thrust bearing temps
12	0630 on 02 Dec	1012 on 02 Dec	U11 tail log inspection
F1	0001 on 01 Dec 2014	---	2 year overhaul
F2	0630 on 02 Dec	1012 on 02 Dec	U11 tail log inspection

d. Unit 11 is estimated to return to service 10 January 2015.

e. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder. The units may be placed on standby, as necessary, during nighttime hours to float debris. Gatewell drawdowns are measured

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daily.

(1) Table 2. Fish unit draw downs, in feet.

Date	F1	F2
11/30	13.5'	9.5'

2. ACTIVITIES:

a. Auxiliary Water System Closures.

- (1) FV3-9 was closed from 0217 until 2254 to float trash on 30 November.
- (2) FV3-9 was closed from 0906 until 1100 for cleaning on 01 December.
- (3) FV3-9 was closed from 2110 until 2254 to float trash on 01 December.
- (4) FV3-9 was closed from 2335 on 01 Dec until 0210 on 02 Dec to float trash.
- (5) FV3-9 was closed from 0753 until 0800 for cleaning on 02 December.
- (6) FV3-9 was closed from 1010 until 1023 for cleaning on 03 December.
- (7) FV6-9 was closed at 2255 to float trash.
- (8) Fv5-3, 5-4, 5-9 were all closed at 0052 on 01 December in conjunction with the Cascades Island going to orifice flows.
- (9) FV1-1 was closed from 0815 until 0855 for cleaning on 01 December.
- (10) FV1-1 was closed from 0749 until 0756 for cleaning on 03 December.
- (11) FV3-7 was closed from 0906 until 1100 for cleaning on 01 December.

b. STS/VBS inspections. No inspections occurred this week.

c. Dewatering and Fish Salvage.

- (1) On 03 December project biologists and personnel salvaged ~20 salmonids, 1 lamprey and 3 sturgeon from the UMT and Cascades Island ladder.

3. RESEARCH:

a. Normandeau – Fish Counting. Video monitoring continues.

4. FISHWAYS:

a. Project biologists inspected 30 November, 01-02 December, and 04 December.

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b. Fish passage plan observations.

(1) Table 4. FPP out of criteria items.

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
11/30, 12/1	SCCH	S-Diff <1.0'	WG-01	See 4.2
11/30	A-branch	Differential >1.1'	Unknown	NA
12/2	WG-02	Submergence <8.0'	WG-01	Raised to improve diff
12/2,4	WG-64	Submergence >8.4'	Unknown	NA
CASCADES ISLAND – Nothing to report				
WASHINGTON SHORE – Nothing to report				

(2) WG-1, one of the entrances on the south side of PH1CC, experienced a gate failure on 17 November. The gate fell and the picking beam fell into the water. A response is being evaluated.

(3) PH2CC diffusers A2 and B4 are stuck closed, and the gate to B3 has been removed for repairs. Diffusers B7 and B8 have been closed until repairs to their diffuser motors can be performed. Repairs are planned for the winter maintenance period, scheduled to begin on 01 December.

(4) A-branch diffuser FG3-3 is mechanically bound. Repairs may not be possible until A-branch is dewatered past tailwater, during the 2015/16 winter maintenance period.

c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. No temperatures were taken this reporting week.

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

e. Adult Fishways.

(1) No calibration occurred this reporting week.

(2) 11 of 12 floating orifice gates (FOGs) are installed; one gate is out for maintenance. FOG SLEDs are installed.

(3) All SLEDs are removed.

f. Juvenile Fishways.

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(1) The south end gate of the Ice and Trash Sluiceway (ITS) was removed for repairs. Plating has been placed over the bottom of the guide slot to minimize fish impacts. Reinstallation dates are currently being coordinated.

(2) The DSM remains in service.

(3) The hydro-cannon remains out of service.

(4) The B2CC was opened at 1200 on 13 November. See [teletype d](#), below.

g. Lamprey Fishways.

(1) All LPSs remain out of service.

5. CONSTRUCTION:

a. Repairs to the bridge spanning the upper Bradford Island fish ladder commenced on 03 November. The ladder will be dewatered 10 – 24 Nov for a FV3-7 conduit inspection. Construction is completed on 04 December.

b. Navigational lock mooring dolphin. Installation by a contractor is currently scheduled for January. During that time the lock will need to be briefly shut down.

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

7. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 29 August provides the spill caps and lack of load conditions to be used from 1 September through 31 December.

b. A teletype sent on 29 October states that effective 0600 on 01 November until further notice, operate BON tailwater as follows to improve Chum spawning conditions. At all hours, operate tailwater from 11.5' – 12.5'. If necessary, tailwater may be operated up to 13.0' at any time, returning to original range when possible. A nighttime tailwater of 16.5' concentrating at 2400 hours is possible, moving to 18.5' if necessary. If outflows demand, operate tailwater at 13.0' – 16.5' during daytime and up to the maximum within ramp rate limits during nighttime.

c. A teletype sent on 24 November provides updated hours for chum spawning operations (above).

d. A teletype sent on 10 November states that in order to keep the latest tailwater range for Chum spawning, effective 01 November until spawning is declared complete

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or no later than 2400 on 15 January (whichever first), BON Project outflows may be decreased to as low as 58 kcfs as long as at least a minimum stage of 3.0 at the Vancouver gauge is met. This change has been incorporated into the BON Water Control Manual.

e. A teletype sent on 12 November states that effective immediately until further notice, BON is authorized to remove STSs from PH2 turbine units due to high debris loading. The B2CC will be opened prior to operating any unscreened units.

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Bonneville Project