



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

16 November 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 46 of 2014, which covers the period from 09 – 15 November 2014

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 128.2 to 146.8 kcfs. Daily average project tailwater ranged from 12.3' to 12.6' msl. Daily average powerhouse forebay elevation ranged from 73.1' to 74.0' msl. Daily average water temperatures ranged from 52° to 58°F. Secchi disk measurements ranged from 5.0' to 7.0' or higher.

b. Spill Bay 1 is open 6" during daylight hours to provide attraction flow for Cascades Island. Spill bay 18 is closed due to ongoing work at Bradford Island (see [14BON08](#)). Daily spill remained at 0.5 kcfs this week.

(1) Due to a failed hoist brake, spill bay 17 has been operated manually since 11 March. It is scheduled to return to service by the end of November.

c. Unit Operation. Powerhouse Two is 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	0759 on 10 Nov	0712 on 13 Nov	Oil level low
10	1318 on 10 Nov	1342 on 10 Nov	Bank 9/10 down
11	0900 on 09 Sep 2012	---	High thrust bearing temps
12	1204 on 15 Nov	1422 on 15 Nov	STS removal
13	1014 on 03 Sep	1538 on 14 Nov	4-year overhaul
13	0940 on 15 Nov	1202 on 15 Nov	STS removal
14	0701 on 15 Nov	0938 on 15 Nov	STS removal
15	0649 on 12 Nov	0820 on 12 Nov	BPA maint - line #4 outage
15	1418 on 14 Nov	1715 on 14 Nov	STS removal
16	0651 on 12 Nov	0816 on 12 Nov	BPA maint - line #4 outage
16	1428 on 13 Nov	1549 on 13 Nov	STS removal – screens still in
16	1139 on 14 Nov	1414 on 14 Nov	STS removal
17	0653 on 12 Nov	0817 on 12 Nov	BPA maint - line #4 outage
17	1217 on 13 Nov	1434 on 13 Nov	STS removal

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18	0659 on 12 Nov	0816 on 12 Nov	BPA maint - line #4 outage
18	0926 on 13 Nov	1219 on 13 Nov	STS removal

d. Unit 11 is estimated to return to service December 2014.

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 daily.

(1) The fish units have been placed on standby intermittently during the day this week, between trash rack raking, due to large amounts of debris loading and consequent high differentials.

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

Date	F1	F2
11/9	0.4	0.4
11/10	0.8	0.6
11/11	20.0	12.0
11/12	5.2	4.5
11/13	12.0	15.8
11/14	5.5	3.6
11/15	0.3	0.7

2. ACTIVITIES:

a. Auxiliary Water System Closures.

(1) FV3-9 went OOS at 0653 on 08 November for the BI bridge repair work.

(2) FV1-1, 3-7, 4-3, & 4-4 went OOS at 0715 on 08 November for the BI bridge repair work.

(3) FV6-9 was closed for cleaning from 1515 to 1540 on 12 November and from 0502 to 0718 on 13 November.

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

c. Dewatering and Fish Salvage.

(1) On 10 November, the Bradford Island adult ladder was dewatered. A-branch was dewatered to tailwater and B-branch was left at orifice flow from FG3-18 down. Project Biologists recovered approximately 20 salmonids, 100 sturgeon, and a dozen lamprey and all fish were returned to the river in good condition.

3. RESEARCH:

a. Normandeau – Fish Counting. Video monitoring continues.

b. University of Idaho – NDE LFS. DIDSON and ACDV work at the NDE lamprey flume and fish entrance is scheduled for 18 – 20 November.

4. FISHWAYS:

a. Project biologists inspected 09 – 15 November.

b. Fish Passage Plan Observations.

(1) Table 4. FPP Out of Criteria items.

Date	Location	FPP Items	Cause	Response
11/10		No inspection by bio	Dewatering / fish salvage	None
BRADFORD ISLAND – Nothing to report				
CASCADES ISLAND				
11/11	UMT	Water level < 0.9'	Unknown	None
WASHINGTON SHORE				
11/11,13	Weir 38	Water level < 0.9'	Unknown	None
11/13	SUE, SDE	Entrance diff < 1.0'	Fish units on standby due to debris	FU trash raking when possible

(2) 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.

(3) 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.

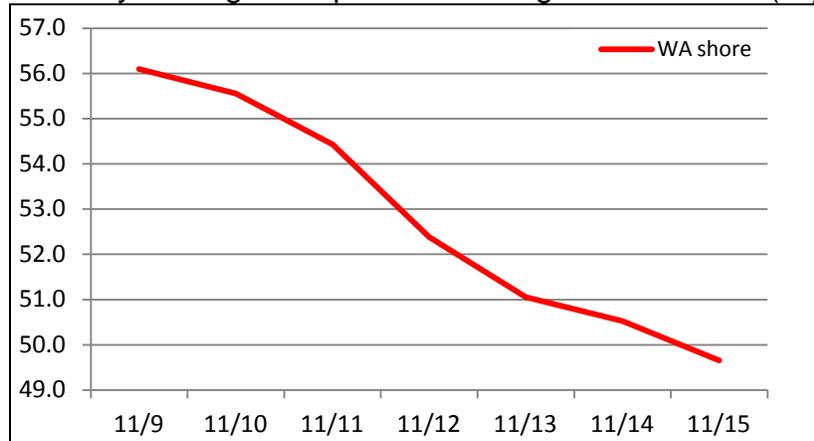
c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November.

(1) Table 5. Daily Average Temperature in Degree Fahrenheit (°F).

Fishways	
Date	WA shore
11/9	56.1
11/10	55.6
11/11	54.4
11/12	52.4

11/13	51.1
11/14	50.5
11/15	49.7

(2) Chart 3. Daily Average Temperature in Degree Fahrenheit (°F).



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

e. Adult Fishways.

(1) The Bradford Island ladders were dewatered to tailwater on 10 November for BI bridge repair work and the FV3-7 conduit inspection. See [14BON08](#).

(2) Calibration was not checked this week.

(3) 11 of 12 floating orifice gates (FOGs) are installed; one gate is out for maintenance. FOG SLEDs are installed.

(4) All SLEDs are removed.

f. Juvenile Fishways.

(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 went out of service for the winter at 1336 on 11 November.

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(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 for ~2 weeks starting 10 Nov for a FV3-7 conduit inspection. Construction is scheduled to be done on 26 November.

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

d. 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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