



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, PORTLAND DISTRICT  
BONNEVILLE LOCK AND DAM PROJECT  
PO BOX 150  
CASCADE LOCKS OR 97014-0150

CENWP-OD-B

12 November 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 45 of 2014, which covers the period from 02 – 08 November 2014.

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 114.2 to 128.5 kcfs. Daily average project tailwater ranged from 11.7' to 12.3' msl. Daily average powerhouse forebay elevation ranged from 74.1' to 74.9' msl. Daily average water temperatures ranged from 59° to 60°F. Secchi disk measurements were 7.0' or higher all week.

b. Spill Bays 1 and 18 are open 6" during daylight hours to provide attraction flow for Cascades Island and B-branch, respectively. Daily spill ranged from 0.6' to 1.1 kcfs.

(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.

(2) From 03 – 08 November, spill bay 18 was closed and spill bay 02 was open 6" to limit fish attraction to the Bradford Island ladder (see [teletype c](#), below). On 08 November, bays 02 and 18 were both closed. Bay 01 remains open 6".

c. Unit Operation. Powerhouse Two is the priority powerhouse. Main unit draw downs are measured every Tuesday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
11	0900 on 09 Sep 2012	---	High thrust bearing temps
13	1014 on 03 Sep	---	4-year overhaul

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

Date	F1	F2
11/2	2.6'	0.9'
11/3	0.5'	0.5'
11/4	0.5'	0.6'
11/5	0.8'	0.5'
11/6	0.4'	0.4'
11/7	0.6'	0.3'
11/8	1.5'	0.8'

**2. ACTIVITIES:**

a. Auxiliary Water System Closures.

(1) FV3-9 was closed for cleaning from 0706 – 0716 on 03 November, 0733 – 0737 on 05 November, 0701 – 0709 on 06 November and 1243 – 1249 on 07 November.

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

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

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

c. Dewatering and Fish Salvage.

(1) On 07 November, Project Biologists recovered ~ 60 sculpin spp. from the unit 13 tail logs. All fish were returned to the tailrace in good condition.

**3. RESEARCH:**

a. Normandeau – Fish Counting. Video monitoring commenced on 01 November from the hours of 0400-2000 daily.

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 02-08 November.

b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
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<b>BRADFORD ISLAND</b>				
11/5	A-branch	Weir water level > 1.1'	FV3-7 conduit leak (?)	Inspection scheduled
11/5	PH1CC	S-Diff <1.0'	Unknown	None
11/7	WG-64	Submergence > 8.4'	Unknown	None
<b>CASCADES ISLAND</b>				
11/2	CI entrance	Differential <1.0'	Unknown	None
<b>WASHINGTON SHORE – Nothing to report</b>				

(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.

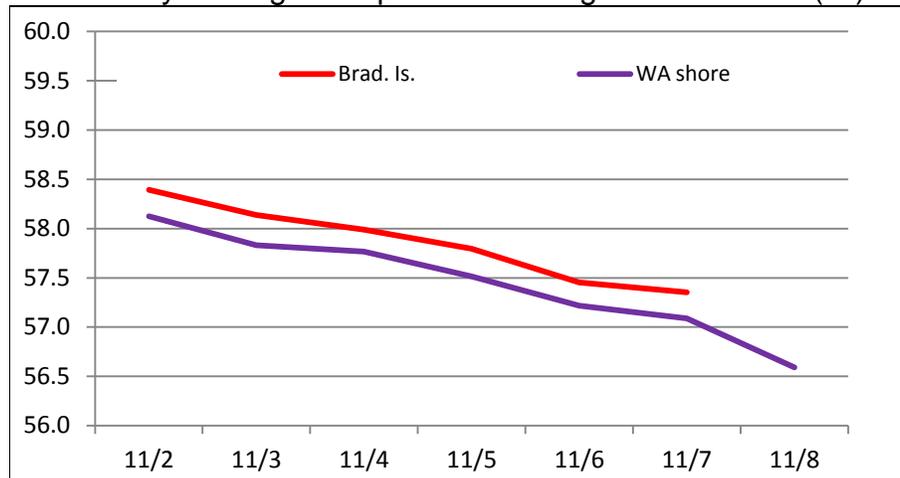
(3) A-branch diffuser FG3-3 is mechanically bound. Repairs may not be possible until A-branch is dewatered past tailwater, during the 2015/16 winter maintenance period.

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

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

Date	Fishways	
	Brad. Is.	WA shore
11/2	58.4	58.1
11/3	58.1	57.8
11/4	58.0	57.8
11/5	57.8	57.5
11/6	57.5	57.2
11/7	57.4	57.1
11/8	<i>Orifice flow</i>	56.6

(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) Bradford Island went to orifice flow at 0700 on 08 November to prepare for BI bridge repair work and the FV3-7 conduit inspection. See [14BON08](#).

(2) Calibration was checked on 05 November.

(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 remains in service.

(4) The B2CC remains closed.

g. Lamprey Fishways.

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(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. Heavy construction will be concentrated at night due to fish passage concerns. The ladder will be dewatered for ~2 weeks beginning 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 the week of 10 November. During that time the lock will need to be shut down for two days.

**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 31 October states that effective 0600 on 03 November until Bradford Island fish ladder operates at orifice flow (~8 November), pass adult attraction spill via bays 1 and 2. Spill at bay 2 will terminate when Bradford ladder goes to orifice flow. This operation is to attract fish to the Cascades Island fish ladder during the Bradford ladder bridge repairs.

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 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.

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