



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

02 November 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 44 of 2014, which covers the period from 26 October – 01 November 2014.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 83.2 to 120.5 kcfs. Daily average project tailwater ranged from 9.5' to 11.8' msl. Daily average powerhouse forebay elevation ranged from 74.2' to 75.8' msl. Daily average water temperatures remained at 61°F all week. Secchi disk measurements ranged from 6.0' to 7.0' or greater.

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 0.9 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.

c. Unit Operation. Powerhouse Two is the priority powerhouse. Main unit drawdowns 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 drawdowns, in feet.

Date	F1	F2
10/26	0.2	0.4
10/27	0.5	0.7
10/28	3.2	2.8
10/29	0.3	0.4
10/30	0.6	0.8
10/31	0.5	0.5
11/1	0.5	0.8

2. ACTIVITIES:

a. Auxiliary Water System Closures.

(1) FV3-9 was closed for cleaning from 0828 to 0832 on 27 October.

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

c. Dewatering and Fish Salvage. No dewatering or fish salvages occurred this week.

3. RESEARCH:

a. Avian Monitoring. Bird numbers are recorded 7 days a week between the dates of 01 April and 31 October.

(1) Table 3. Counts of tailrace foraging piscivorous birds.

Date	Gulls	Cormorants	Terns
10/26	145	15	0
10/27	60	2	0
10/28	56	48	0
10/29	43	24	0
10/30	32	26	0
10/31	37	33	0

b. NOAA Fisheries. Lamprey trapping at Cascade Island concluded on 29 October. Lamprey structure design testing in the FERL continues.

c. Normandeau – Fish Counting. Visual counting concluded on 31 October; video monitoring began.

d. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring concluded at 0700 on 31 October. No research fish were collected this week.

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Fallbacks recorded crossing the separator bars this reporting week: 17 steelhead, 92 salmon and 9 unknown salmonids. Truck releases of out-migrants from the Snake River concluded as well. More details can be found on the [FPC web page](#).

e. University of Idaho – AFF. Hydraulic testing in the AFF test flume structure occurred 27 – 31 October.

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

g. WDFW Tule Counts. Tule and Up-river Bright enumeration concluded on 31 October.

4. FISHWAYS:

a. Project biologists inspected 26 October – 01 November.

b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
All week	A-branch	FG3-3 closed	Bound motor	See below
10/28-11/1	A-branch	Weir water level > 1.1'	FV3-7 conduit leak (?)	Inspection scheduled
CASCADES ISLAND – Nothing to report				
WASHINGTON SHORE				
10/29	Weir 38	Weir staff gauge < 0.9'	Unknown	None

(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	Lamprey systems
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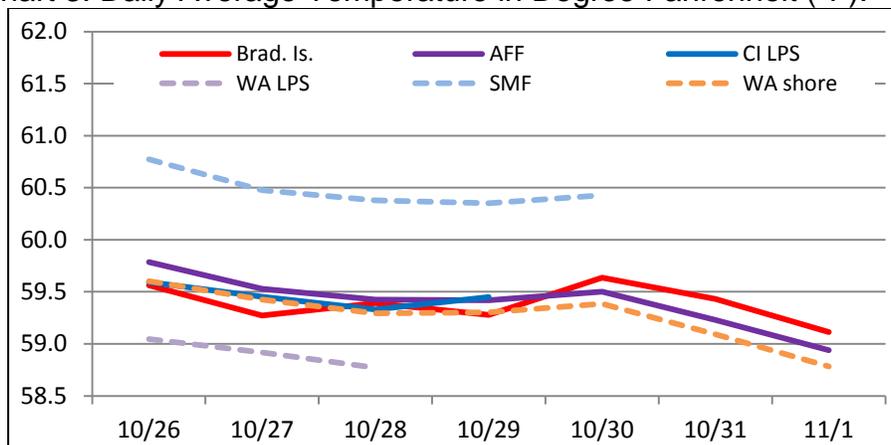
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Date	Brad. Is.	AFF	SMF*	WA shore	CI LPS*	WA LPS*
10/26	59.6	59.8	60.8	59.6	59.6	59.0
10/27	59.3	59.5	60.5	59.4	59.5	58.9
10/28	59.4	59.4	60.4	59.3	59.3	58.8
10/29	59.3	59.4	60.4	59.3	59.4	OOS
10/30	59.6	59.5	60.4	59.4	OOS	---
10/31	59.4	59.2	OOS	59.1	---	---
11/1	59.1	58.9	---	58.8	---	---

* The WA AWS LPS and CI LPS were shut down for the season on 29 and 30 October, respectively. The SMF concluded sampling on 31 Oct and was dewatered for the season.

(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) Calibration was checked on 29 October.

(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.

(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.

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(3) The hydro-cannon remains in service.

(4) The B2CC remains closed.

(5) The PH1, PH2, and spillway avian arrays remain intact. The B2CC avian array was removed on 09 – 10 October 2013 to facilitate the WA Shore LFS repairs. The anchor line was replaced on 27 March. BON is planning to reinstall the array in October.

g. Lamprey Fishways.

(1) The NDE LFS/LPS was dewatered on 02 October. The butterfly valve is closed.

(2) The BI LPS was dewatered on 20 October.

(3) The WA Shore AWS LPS was dewatered on 29 October

(4) The CI LPS was dewatered on 30 October.

5. CONSTRUCTION:

a. Repairs to the bridge spanning the upper Bradford Island fish ladder are scheduled for 03 – 26 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.

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 22 October requests that from 0900 to 1300 on 31 October, BON forebay be maintained at 75.0' – 76.5' hard constraint, 75.5' – 76.5' soft constraint. This operation is for the Hood River Yacht Club to take boats in and out of the water.

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c. 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.

d. 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.

JERRY A. CARROLL
Operations Manager
Bonneville Project