



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

23 October 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 42 of 2014, which covers the period from 12 – 18 October 2014

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 84.6 to 108.4 kcfs. Daily average project tailwater ranged from 8.7' to 10.0' msl. Daily average powerhouse forebay elevation ranged from 74.1' to 75.3' msl. Daily average water temperatures ranged from 64° to 66°F. Secchi disk measurements remained at 7.0' or greater 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 1.1 to 1.2 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 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
12	0600 on 16 Oct	1423 on 16 Oct	ROV inspection of U11 trash racks
13	1014 on 03 Sep	---	4-year overhaul
14	0001 on 14 Oct	1929 on 16 Oct	Annual maintenance

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
10/12	0.2	0.3
10/13	0.4	0.4
10/14	0.2	0.2
10/15	0.4	0.4
10/16	0.2	0.2
10/17	0.4	0.5
10/18	0.4	0.3

**2. ACTIVITIES:**

a. Auxiliary Water System Closures.

(1) FV3-7 was closed for cleaning from 0805 to 0835 on 15 October.

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

c. Dewatering and Fish Salvage. On 14 October, project biologists assisted in a dewatering at Willamette Falls Locks. Once complete, biologists verified that all salmonids were flushed downstream to tailwater.

**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
10/12	17	13	0
10/13	6	2	0
10/14	28	2	0
10/15	20	61	0
10/16	21	49	0
10/17	25	35	0
10/18	12	37	0

b. CRITFC – AFF. Adult salmonid sampling concluded on 17 October.

c. NOAA Fisheries. Lamprey trapping at the AFF concluded on 03 October. Trapping at Cascade Island continues. Lamprey structure design testing in the FERL continues.

CENWP-OD-B

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 42 of 2014, which covers the period from 12 – 18 October 2014

- d. Normandeau – Fish Counting. Visual counting continues.
- e. ODFW – AFF. Adult Coho sampling for an alternative gear study concluded on 17 October.
- f. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. No research fish were collected this week. Fallbacks recorded crossing the separator bars this reporting week: 5 steelhead, 26 salmon and 1 unknown salmonid. Truck releases of out-migrants from the Snake River continue. More details can be found on the [FPC web page](#).
- g. USFWS - Fish Health. Sampling in the AFF concluded on 17 October. Prior to this, shad and lamprey mortalities were being held for inclusion in the National Wild Fish Health Survey. CRITFC is also testing saved lamprey mortalities for contaminants in conjunction with USFWS.
- h. University of Idaho – AFF. USACE-funded adult salmonid sampling concluded on 15 October.
- i. University of Idaho – NDE LFS. DIDSON and ACDV work at the NDE lamprey flume and fish entrance is scheduled for November.
- j. WDFW Tule Counts. Tule and Up-river Bright enumeration began 19 August.

#### 4. FISHWAYS:

- a. Project biologists inspected 12 – 18 October.
- b. Fish Passage Plan Observations.
  - (1) Table 4. FPP Out of Criteria items.

Date	Location	FPP Items	Cause	Response
		BRADFORD ISLAND – Nothing to report		
		CASCADES ISLAND – Nothing to report		
		WASHINGTON SHORE – Nothing to report		

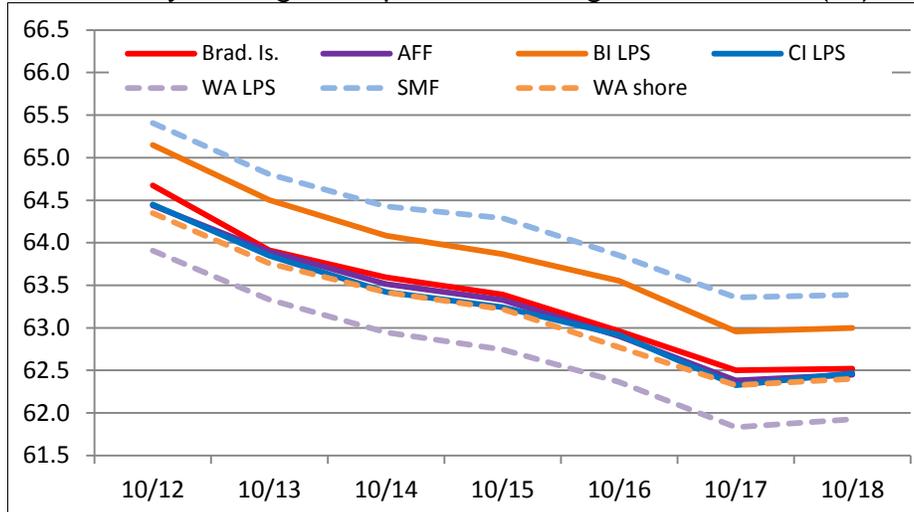
(2) PH2CC diffusers A2 and B4 are stuck closed, and the gate to B3 has been removed for repairs. Diffusers B7 and B8 have been closed until repairs to their diffuser motors can be performed. Repairs are planned for the winter maintenance period, scheduled to begin on 01 December.

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

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

Date	Fishways				Lamprey systems		
	Brad. Is.	AFF	SMF	WA shore	BI LPS	CI LPS	WA LPS
10/12	64.7	64.4	65.4	64.3	65.1	64.4	63.9
10/13	63.9	63.9	64.8	63.8	64.5	63.8	63.3
10/14	63.6	63.5	64.4	63.4	64.1	63.4	62.9
10/15	63.4	63.3	64.3	63.2	63.9	63.2	62.7
10/16	63.0	62.9	63.9	62.8	63.6	62.9	62.4
10/17	62.5	62.4	63.4	62.3	63.0	62.3	61.8
10/18	62.5	62.5	63.4	62.4	63.0	62.5	61.9

(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 16 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.

CENWP-OD-B

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 42 of 2014, which covers the period from 12 – 18 October 2014

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.

(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, CI LPS, and WA Shore AWS LPS remain in service.

**5. CONSTRUCTION:**

a. 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 09 October requests that BON forebay operate within a 1.5' band, hard constraint, from 0600 on 13 October through 1800 on 16 October, for treaty fisheries.

CENWP-OD-B

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 42 of 2014, which covers the period from 12 – 18 October 2014

c. A teletype sent on 16 October requests that from 0700 to 1700 on 24 October, BON forebay operate within a band of 70.0' to 71.5', hard constraint. To achieve this operation, forebay elevations may operate as low as 70.0' from 0700 on 23 October to 1700 on 25 October. The normal minimum forebay elevation is 71.5'. This operation is to allow BON crews the ability to grease the lower spillway gate dogs.

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