



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

05 October 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 40 of 2014, which covers the period from 28 September – 04 October 2014.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 77.4 to 102.2 kcfs. Daily average project tailwater ranged from 7.8' to 9.4' msl. Daily average powerhouse forebay elevation ranged from 74.7' to 75.4' msl. Daily average water temperatures ranged from 65° to 68°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 remained at 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. Split flow operations ended on 28 September. 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	2056 on 21 Sep	1339 on 01 Oct	T11 bi-annual maintenance
13	1014 on 03 Sept	---	4-year overhaul
14	2056 on 21 Sep	1341 on 01 Oct	T11 bi-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
9/28	0.2	0.2
9/29	0.1	0.0
9/30	0.2	0.3
10/1	0.0	0.1
10/2	0.1	0.2
10/3	0.2	0.3
10/4	0.2	0.4

2. ACTIVITIES:

- a. Auxiliary Water System Closures. No closures occurred this week.
- b. STS/VBS inspections. No inspections occurred this week.
- c. Dewatering and Fish Salvage. No dewaterings 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
9/28	1	0	0
9/29	1	5	0
9/30	2	24	0
10/1	10	33	0
10/2	9	15	0
10/3	---	---	---
10/4	3	8	0

- b. CRITFC – AFF. Adult salmonid sampling continues.
- c. NOAA Fisheries. Lamprey trapping at the AFF and Cascade Island continues. The biological portion of lamprey structure design testing in the FERL concluded on 03 October. Flow testing continues.
- d. Normandeau – Fish Counting. Visual counting continues.

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e. ODFW – AFF. Adult Coho sampling for an alternative gear study began on 30 September.

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: 25 salmon. Truck releases of out-migrants from the Snake River began on 18 August. More details can be found on the [FPC web page](#).

g. USFWS - Fish Health. When possible, shad and lamprey mortalities are being held for inclusion in the National Wild Fish Health Survey. CRITFC is also testing lamprey mortalities for contaminants in conjunction with USFWS.

h. University of Idaho – AFF. USACE-funded adult salmonid sampling continues.

i. WDFW Tule Counts. Tule and Up-river Bright enumeration began 19 August.

4. FISHWAYS:

a. Project biologists inspected 28 September – 04 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				
10/2-3	Weir 37	Water level < 0.9'	Unknown	None
9/28-10/4	PH2CC	Diffuser B4 stuck closed	Unknown	See below

(2) PH2CC diffuser A2 is 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. The next possible time period will be 2014/15 winter maintenance.

(3) PH2CC diffuser B4 failed to open on 28 September. Repairs will occur during winter maintenance, scheduled to begin on 01 December 2014.

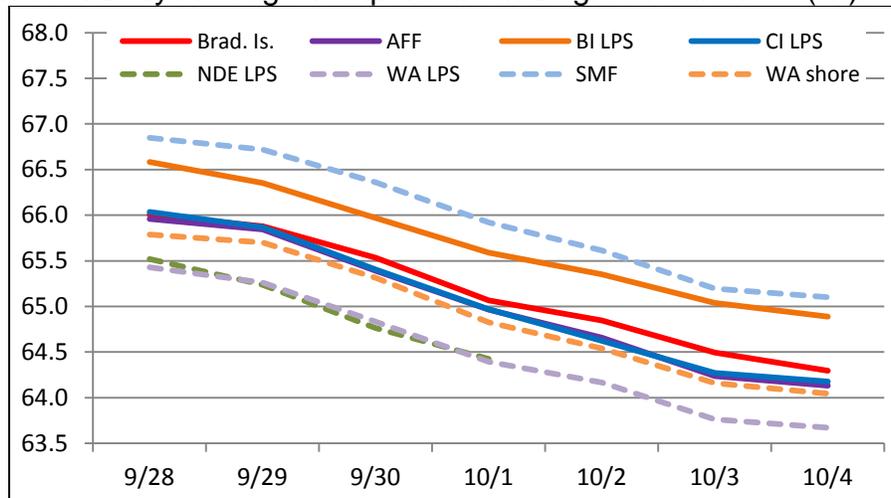
c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. Forebay temperatures through 23 September can be found [online](#).

(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	NDE LPS*
9/28	66.0	66.0	66.8	65.8	66.6	66.0	65.4	65.5
9/29	65.9	65.8	66.7	65.7	66.4	65.9	65.3	65.2
9/30	65.5	65.4	66.4	65.3	66.0	65.4	64.8	64.8
10/1	65.1	65.0	65.9	64.8	65.6	65.0	64.4	64.4
10/2	64.8	64.7	65.6	64.5	65.4	64.6	64.2	OOS
10/3	64.5	64.2	65.2	64.2	65.0	64.3	63.8	---
10/4	64.3	64.1	65.1	64.0	64.9	64.2	63.7	---

*The NDE LPS was shut down for the season on 02 October.

(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 01 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

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impacts. Reinstallation is tentatively scheduled for November; it will require the ITS to be closed for three weeks.

- (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 by mid-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 23 September requests that BON forebay operate within a 1.5' band, hard constraint, from 0600 on 29 September through 1800 on 03 October, for treaty fisheries.

c. A teletype sent on 29 September updates a previous teletype requesting that on 30 September, BON tailwater be kept as low as possible while meeting daily minimum flow requirements. The hours for this operation are now from 0800 to 1700. This teletype is for a contractor to access and reinforce two TDG sensor pipes on the shore of the spillway. Treaty fishing requirements take precedence.

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d. A teletype sent on 02 October requests that BON forebay operate within a 1.5' band, hard constraint, from 0600 on 06 October through 1800 on 10 October, for treaty fisheries.

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