



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
BONNEVILLE LOCK AND DAM PROJECT
PO BOX 150
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CENWP-OD-B
2014

10 September

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 36 of 2014, which covers the period from 31 August – 06 September 2014.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 100.3 to 139.3 kcfs. Daily average project tailwater ranged from 9.4' to 12.6' msl. Daily average powerhouse forebay elevation ranged from 72.9' to 75.5' msl. Daily average water temperatures ranged from 70° to 72°F. Secchi disk measurements ranged from 6.0' to 7.0' or greater.

b. Spill Bays 01 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Summer spill ended on 31 August. Daily spill ranged from 1.3 to 97.5 kcfs this week.

(1) Due to a failed hoist brake, spill bay 17 was manually placed on sill at 0818 on 02 September.

c. Unit Operation. Powerhouse Two is the priority powerhouse. Split flow operations per FPP section 2.1.1.1 were implemented on 03 September. Main unit drawdowns are measured every Tuesday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
1	0853 on 04 Sep	1003 on 04 Sep	Unit 2 testing (Bank 1/2)
2	0854 on 07 Jul	1300 on 04 Sep	5-yr overhaul, bank 1/2 annual
5	1021 on 02 Sep	---	Annual maint & wicket bushings
11	0900 on 09 Sep 2012	---	High thrust bearing temps
13	1014 on 03 Sept	---	4-year overhaul
17	0101 on 01 Sep	1407 on 02 Sep	Water in turbine bearing

d. 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
8/31	0.3	0.3
9/01	0.3	0.4
9/02	0.2	0.3
9/03	0.1	0.2
9/04	0.3	0.5
9/05	0.3	0.6
9/06	0.3	0.7

2. ACTIVITIES:

a. Auxiliary Water System Closures. The following closures occurred this week:

(1) FV3-9 was closed for cleaning from 1351 to 1415 on 03 September.

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

c. Dewatering and Fish Salvage. The following dewatering or salvage activities occurred this week:

(1) On 03 September, Unit 05 was dewatered for maintenance. No fish were present.

(2) On 04 September, Project Biologists recovered 3 White Sturgeon, 1 bullhead, 1 stickleback, and 1 sculpin from the Unit 13 draft tube.

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
8/31	2	6	0
9/01	0	7	0
9/02	0	5	0
9/03	0	6	0
9/04	8	14	0
9/05	8	3	0
9/06	0	2	0

b. CRITFC – AFF. For the first time since 13 August, high temperature (>70°F) sampling protocols resumed on 02 September, when river temperatures fell below 72°F.

c. NOAA Fisheries. An impedance counter is currently being tested at the WA Shore AWS LPS. Lamprey trapping at the AFF in conjunction with University of Idaho resumed on 02 September when river temperatures fell below 72°F. Lamprey structure design testing in the FERL is on hold until river temperatures fall below 70°C.

d. Normandeau – Fish Counting. Visual counting continues.

e. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. No research fish were collected this week. The fallbacks were recorded crossing the separator bars this reporting week: two salmon. The high temperature (>70°F) sampling protocol continues; sampling will take place every other day (0700-0700) until the daily average descends to 69.5°F. Truck releases of out-migrants from the Snake River began on 18 August. More details can be found on the [FPC web page](#).

f. 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.

g. University of Idaho – AFF. USACE-funded adult salmonid sampling resumed on 05 September when river temperatures dropped below 70°F for the first time since 28 July. The UI portion of lamprey tagging concluded on 02 September for the season.

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

4. FISHWAYS:

a. Project biologists inspected 31 August – 06 September.

b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
SPILLWAY				
9/1	Bay 17	Spill pattern	Unable to operate in auto	Parts on order
BRADFORD ISLAND – Nothing to report				
CASCADES ISLAND – Nothing to report				
WASHINGTON SHORE				
8/31	UMT	Water level < 0.9'	Unknown	None

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8/31	Weir 38	Water level < 0.9'	Unknown	None
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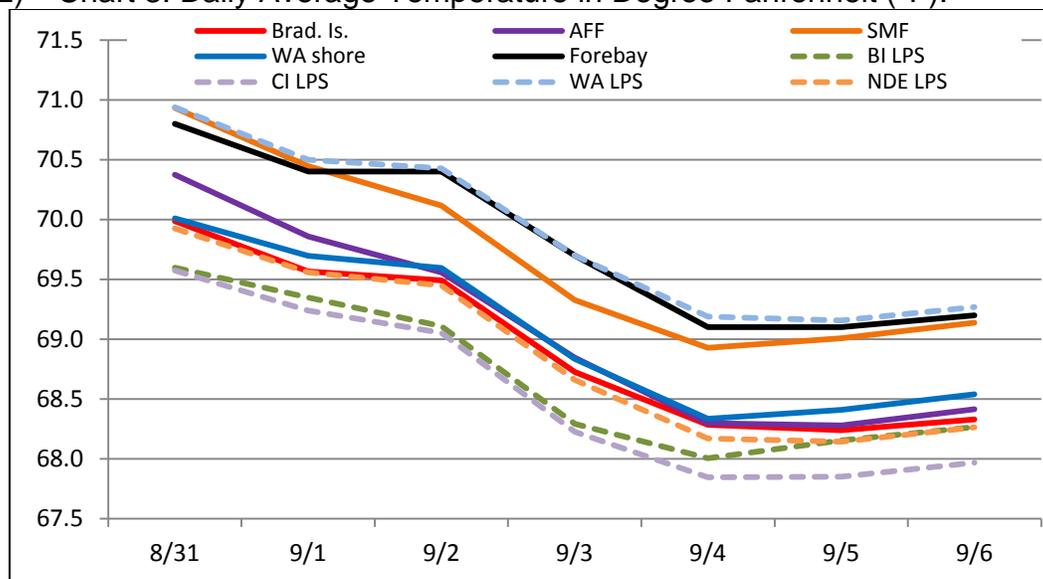
(2) PH2CC diffuser A2 is stuck closed, and the gate to B3 has been removed for repairs. Diffusers B7 and B8 have been closed until repairs to their diffuser motors can be performed. The next possible time period will be 2014/15 winter maintenance.

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

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

Date	Fishways				Forebay	Lamprey systems			
	Brad. Is.	AFF	SMF	WA shore		BI LPS	CI LPS	WA LPS	NDE LPS
8/31	70.0	70.4	70.9	70.0	70.8	69.6	69.6	70.9	69.9
9/1	69.6	69.9	70.4	69.7	70.4	69.3	69.2	70.5	69.6
9/2	69.5	69.6	70.1	69.6	70.4	69.1	69.1	70.4	69.4
9/3	68.7	68.8	69.3	68.8	69.7	68.3	68.2	69.7	68.7
9/4	68.3	68.3	68.9	68.3	69.1	68.0	67.8	69.2	68.2
9/5	68.2	68.3	69.0	68.4	69.1	68.2	67.9	69.2	68.1
9/6	68.3	68.4	69.1	68.5	69.2	68.3	68.0	69.3	68.3

(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 05 September.

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(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) remains removed for ongoing repairs. Plating has been placed over the bottom of the guide slot to minimize fish impacts. The ITS will need to be closed for reinstallation once repairs are complete.

(2) The DSM remains in service.

(3) The hydro-cannon remains in service.

(4) The B2CC closed at 0010 on 01 September.

(5) 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, and the array will be reinstalled after spill season. The PH1, PH2, and spillway avian arrays remain intact.

g. Lamprey Fishways.

(1) The BI LPS, CI LPS, NDE LPS, and WA Shore AWS LPS remain in service.

5. CONSTRUCTION:

6. HAZMAT, SPILLS AND CLEANUP: Nothing to report.

7. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 17 March states that effective 17 March at 0800 hours, operate the B2CC continuously through 31 August at 2400.

b. A teletype sent on 30 June updates the spill caps and lack of load conditions to be used from 11 June through 31 August.

c. A teletype sent on 13 June lists the BON summer spill requirements in effect from 0430 on 16 June until 2400 on 31 August.

d. A teletype sent on 12 August requests that BON forebay operate within a 1.5'

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band, hard constraint, from 18 August through 19 September for treaty fisheries. Specified times are listed within.

e. A teletype sent on 26 August requests that from 0600 to 1200 on 1 September, outflows not exceed 150 kcfs for a cross-channel swim near Hood River.

f. A teletype sent on 05 September updates operations for treaty fishing to include a higher operating band. Operate BON pool within at 1.5' band, hard constraint, from 25 August through 19 September for treaty fishing.

g. A teletype sent on 29 August provides the spill caps and lack of load conditions to be used from 1 September through 31 December.

h. A teletype sent on 04 September states that effectively immediately until further notice, operate four priority units at PH1 in order to provide additional split in flow and improve fish crowding in the WA shore ladder.

i. A teletype sent on 05 September updated the previous split flow teletype to include wording to try to split flows as evenly as possible between PH1 and PH2 with a bias toward PH2.

j. A teletype sent on 05 September requests that BON maintain a pool level between 75.0' and 76.5' during the following testing times in order to maintain better egress conditions in the TDA tailrace. TDA is conducting an adult attraction spill test from 09 – 15 September daily from 0400 – 1600 hours.

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