



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

7 August 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 31 of 2014, which covers the period from 27 July – 02 August 2014

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 165.2 to 204.6 kcfs. Daily average project tailwater ranged from 14.7' to 17.0' msl. Daily average powerhouse forebay elevation ranged from 74.8' to 75.4' msl. Daily average water temperatures ranged from 69° to 70 °F. Secchi disk measurements remained at 7.0' or greater all week.

b. Spill Bays 01 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Summer spill operations congruent with FPP section 2.2.3 took effect on 16 June. Daily spill ranged from 90.5 to 100.6 kcfs this week.

c. Unit Operation. Split flow powerhouse operations went into effect on 23 June and ceased on 9 July. Main unit drawdowns are measured every Tuesday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
1	0037 on 21 Jul	1623 on 31 Jul	Bank 1/2 annual
2	0854 on 07 Jul	---	5-yr overhaul, bank 1/2 annual
11	0900 on 09 Sep 2012	---	High thrust bearing temps

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
7/27	0.3	0.6
7/28	0.5	0.4
7/29	0.3	0.6
7/30	0.5	0.3
7/31	0.3	0.4
8/01	0.5	0.4
8/02	0.1	0.1

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. The following dewatering or salvage activities occurred this week:

(1) On 29 July, Project Biologists recovered 20 American Shad, 1 bass, and 1 sculpin from Nav Lock tainter valve #4.

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. Tailrace Counts of Foraging Piscivorous Birds.

Date	Gulls	Cormorants	Terns
7/27	0	3	0
7/28	11	0	0
7/29	0	0	0
7/30	0	2	0
7/31	0	0	0
8/01	2	1	0
8/02	0	0	0

- b. CRITFC – AFF. Sampling continues.
- 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 continues. Lamprey structure design testing in the FERL continues.

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. Fallbacks recorded crossing the separator bars this reporting week: 1 steelhead, 4 salmon, and no unknown salmonids. Results of this week’s Gas Bubble Trauma (GBT) examinations: 200 subyearling Chinook examined, with no GBT symptoms observed. Higher temperature sampling protocols were initiated for the second time this season on 30 July (sample end-date of 31 July) when water temperatures ascended to 70°F. Modified higher temperature sampling will take place every other day (0700-0700) until the daily average descends to 69.5°F. More details can be found on the [FPC web page](#).

f. University of Idaho – AFF. USACE-funded adult salmonid sampling halted on 28 July until temperatures fall below 70°F. Lamprey trapping and tagging at the AFF in conjunction with NOAA continues. IR camera monitoring in the Bradford Island serpentine section began on 16 July.

g. USDA - Avian Hazing. Avian hazing concluded on 31 July.

h. 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.

4. FISHWAYS:

a. Project biologists inspected 27 July – 02 August.

b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
7/28	PH1CC	N-Diff < 1.0'	Unknown	None
7/27-28	A-branch	Water level > 1.1'	Unknown	None
CASCADES ISLAND – Nothing to report				
WASHINGTON SHORE – Nothing to report				

(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.

CENWP-OD-B

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 31 of 2014, which covers the period from 27 July – 02 August 2014

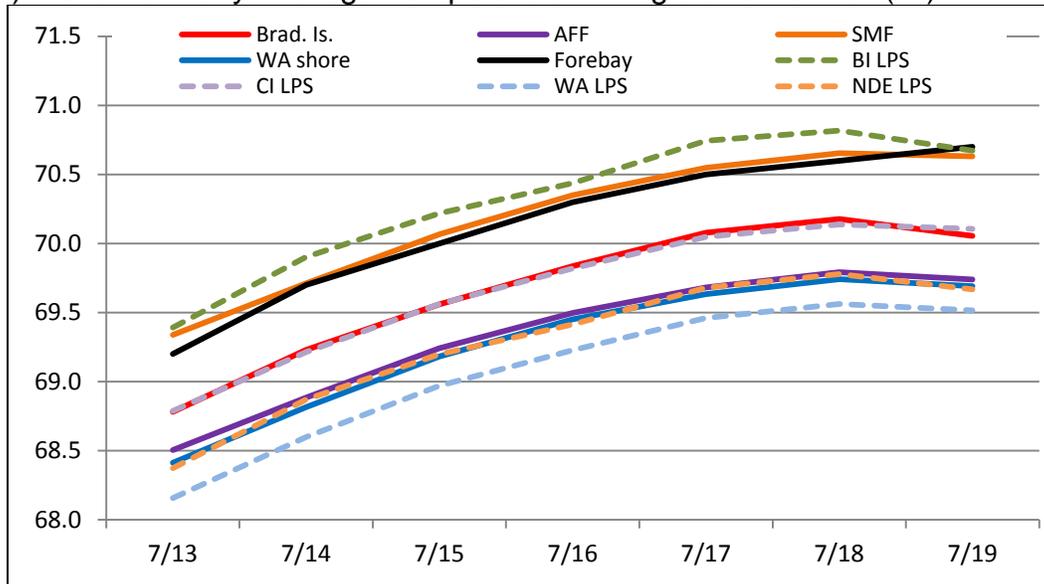
(3) Spill bay 17 experienced a hoist brake failure on 11 March. The gate is currently dogged off at 2.9 ft.

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
7/13	68.8	68.5	69.3	68.4	69.2	69.4	68.8	68.2	68.4
7/14	69.2	68.9	69.7	68.8	69.7	69.9	69.2	68.6	68.9
7/15	69.6	69.2	70.1	69.2	70	70.2	69.6	69.0	69.2
7/16	69.8	69.5	70.3	69.5	70.3	70.4	69.8	69.2	69.4
7/17	70.1	69.7	70.5	69.6	70.5	70.7	70.0	69.5	69.7
7/18	70.2	69.8	70.7	69.7	70.6	70.8	70.1	69.6	69.8
7/19	70.1	69.7	70.6	69.7	70.7	70.7	70.1	69.5	69.7

(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 02 August.

CENWP-OD-B

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 31 of 2014, which covers the period from 27 July – 02 August 2014

(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 was out of service 29 and 30 July to repair a broken pipe.

(4) The B2CC remains open.

(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: Nothing to report.

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 requests BON forebay be maintained from 74.5' to 76.5' hard constraint and from 75.5' to 76.5' soft constraint from 1400 – 2000 on 08 August and from 1500 – 2200 on 09 August so that sailboats can be placed and removed from the water. The request may be cancelled at 1500 on 08 August if high winds occur.

CENWP-OD-B

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 31 of 2014, which covers the period from 27 July – 02 August 2014

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

e. A teletype sent on 18 July requests that the BON pool operate within a 1.5' band, hard constraint, from 0600 on 21 July until 1800 on 25 July for treaty fisheries. A similar teletype sent on 24 July requests the same operation from 0600 on 28 July until 1800 on 31 July.

f. A teletype sent on 18 July requests that from 1100 – 1800 daily, BON forebay be maintained no lower than 74.0' on 25 July and 74.5' on 26 – 27 July, soft constraint, for a kite boarding event.

g. A teletype sent on 24 July requests that the BON forebay be maintained at 74.0-76.5', hard constraint; and 75.0-76.5', soft constraint for the berthing of keel boats at Stevenson from 1600 on 01 August until 1100 on 02 August, and from 1600 on 02 August until 1100 on 03 August.

JERRY A. CARROLL
Operations Manager
Bonneville Project