



**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

8 August 2013

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 31 of 2013, which covers the period from 28 July through 3 August 2013

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 148.3 to 179.4 kcfs. Daily average project tailwater ranged from 13.3' to 15.3' msl. Daily average powerhouse forebay elevation ranged from 74.4' to 75.5' msl. Daily average water temperatures remained at 71°F. Secchi disk measurements ranged from 6.0' to greater than 7.0'.

b. Spill Bays 1 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 86.7 to 89.6 kcfs. Summer spill operations congruent with FPP section 2.2.3 took effect on 16 June.

c. Unit Operation. Powerhouse Two is the priority powerhouse.

(1) Unit 1 went out of service at 0946 on 23 July for a 5 year overhaul.

(2) Unit 11 went out of service at 0900 on 09 September 2012 for high thrust bearing temperatures.

(3) Unit 12 went out of service at 0713 on 22 July for digital governor installation.

(4) Unit 14 was out of service from 1202 to 1504 on 1 August for a maintenance outage.

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.

(1) Gatewell drawdowns are measured on Tuesdays and more frequently as needed.

**2. ACTIVITIES:**

- a. Auxiliary Water System Closures. No AWS closures occurred this reporting week.
- b. STS/VBS inspections. Table 3. STS and VBS inspection.

<i>Unit</i>	<i>Date</i>	<i>Run Hours</i>	<i>Comments</i>
11	N/A	OOS	Unit 11 remains out of service
12-18	N/A	N/A	Inspection scheduled for 19 August

- c. Dewatering and Fish Salvage. No dewatering or fish salvage activities occurred this reporting week.

**3. RESEARCH:**

- a. CRITFC. Annual Chinook, Coho, sockeye, and steelhead sampling in the AFF continues. Modified trapping procedures under FPP App. G, Section 4 occurred on 2 August and were lifted on 3 August.

- b. NOAA – Lamprey. LPS count network installed. HD-PIT tagging continues from the AFF traps.

- c. Normandeau – Fish Counting. Visual counting continues.

- d. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. Higher temperature sampling protocols were initiated on 25 July (sample end-date of 26 July) when water temperatures reached 70°F. Modified sampling during higher temperatures means Index/Condition sampling will take place every other day until the daily average descends to 69.5°F. Normal sampling operations resumed on 31 July, but modified sampling was reinstated on 2 August when temperatures climbed to 70°F. Sample and bypass mode will occur on alternating 24 hour periods (0700-0700). No research fish were collected. This week 200 subyearling Chinook were examined with two fish (1.0%) observed with GBT symptoms. No fallbacks were recorded crossing the separator bars this week. Fallback observations are available at the FPC website: <http://www.fpc.org/adultsalmon/bonkeltcounts.htm>.

- e. University of Idaho – AFF. USACE funded adult salmonid sampling continues. Trapping in the AFF ceased on 2 August when daily average river temperatures reached 70°F. Trapping resumed on 3 August.

- f. University of Idaho – Lamprey. HD-PIT and JSATs tagging continues from the AFF traps.

- g. USDA - Avian Hazing. Land-based hazing continues.

**4. FISHWAYS:**

- a. Project biologists inspected 28 July through 3 August.

- b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
<b>BRADFORD ISLAND (BI)</b>				
7/31-8/3	A-branch	Water level > 1.1'	Unknown	None
8/1	WG-64	Submergence > 8.4'	Maintaining differentials	TR on FV1-1 sensor
<b>CASCADES ISLAND (CI) – Nothing to report</b>				
<b>WASHINGTON SHORE (WS) – Nothing to report</b>				
8/1-8/3	PH2CC	Velocity meter OOS	Weight detached	TR in place

(2) A-branch diffuser FG3-3 is partially open and FG3-6 is closed. Repairs will occur when the Bradford Island ladder is dewatered. The next possible time period will be 2013/14 winter maintenance.

(3) PH1CC diffuser FG2-19 is partially open. Repairs will occur when the PH1CC is dewatered. The next possible time period will be 2013/14 winter maintenance.

(4) PH2CC diffuser A2 is stuck closed and diffuser B7 is stuck halfway open. Repairs will not be possible until the next complete dewatering in winter of 2014/15.

- c. Fishway Temperatures. Temperatures are normally taken from 01 March through 30 November. Table 5. Daily Average Temperature in Degree Fahrenheit (F).

Date	WA Shore Average	BI Average	AFF Average	SMF Average
7/28	68.7	69.0	68.7	69.6
7/29	68.5	68.7	68.6	69.4
7/30	68.4	68.8	68.7	69.4
7/31	69.0	69.3	69.1	69.9
8/1	69.1	69.2	69.2	70.0
8/2	68.9	69.1	69.0	69.8
8/3	69.0	69.3	69.1	69.8

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d. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

e. Adult Fishways.

(1) Calibration was checked on 3 August.

(2) 10 of 12 floating orifice gates (FOGs) are installed. Two gates remain out for maintenance. Sea lion barriers are in place on all installed FOGs.

(3) All SLEDs are removed.

(4) All ladders remain in service. On 01 June nighttime lamprey operations commenced at PH2 fishway entrances.

f. Juvenile Fishways.

(1) Manual chaingates 1A and 1B remain open and are both set to 70' msl.

(2) Automated chaingates 3B, 6C and 10B are open and functioning in auto. DSM2 remains in service.

(3) The hydrocannon remains in service.

(4) The B2CC remains open.

(5) All avian arrays are installed.

g. Lamprey Fishways.

(1) The Bradford Island LPS remains in service.

(2) The WA shore AWS LPS remains in service.

(3) The WA shore LPS/LFS remains in service.

(4) Cascades Island LPS remains in service.

**5. CONSTRUCTION:** WA Shore LPS/LFS Installation. Flume construction is complete. Repairs and modifications to the LFS are tentatively scheduled for November 2013.

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

**7. TELETYPES CURRENTLY IN EFFECT:**

a. A teletype sent on 09 April provides the 2013 spill schedule for fish passage, effective from 0001 on April 10 through 2400 on August 31. Operations for the B2CC and turbine units, as well as lamprey operations, are also provided for this period.

b. A teletype sent on 06 June states that effective immediately until further notice, operate turbine units as directed in the FPP and within the 1% mid-range (13-15 kcfs per unit). To pass increasing flow, operate PH2 units within the mid-range of 1% peak efficiency, then operate PH1 units up to the 1% upper limit, then operate PH1 units to the best operating point (BOP), and finally PH2 units up to 16.5 kcfs per unit. Operating PH2 units within the mid-range of 1% is intended to reduce gateway turbulence and improve hydraulics for fish passage.

c. A teletype sent on 01 August updates the spill priority list and spill caps for fish passage season, which started 15 May, until further notice based on observed TDG data.

d. A teletype sent on 17 July requests that Bonneville forebay be maintained above 74.5' as a hard constraint and 75.0' as a soft constraint from 1100 to 1800 on 27 and 28 July for an amateur kite board event at Stevenson.

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