



**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

30 July 2013

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 30 of 2013, which covers the period from 21 through 27 July 2013

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 153.8 to 196.9 kcfs. Daily average project tailwater ranged from 14.1' to 16.6' msl. Daily average powerhouse forebay elevation ranged from 74.2' to 75.5' msl. Daily average water temperatures ranged from 70°F to 71°F. Secchi disk measurements ranged from 5.5' 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 86.9 to 87.4 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 9 was out of service from 1355 until 1448 on 23 July for trip testing.

(3) Unit 10 was out of service from 1355 until 1448 on 23 July for trip testing.

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

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

(6) Unit 16 was out of service from 2053 until 2127 on 22 July for a clogged oil filter.

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.

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(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.

(1) 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. The following fish recoveries occurred this reporting week:

(1) On 23 July, Project Biologists recovered 10 White Sturgeon, 1 Bullhead, and 1 Pacific Lamprey from the Unit 12 draft tube. All fishes were returned to the tailrace in good condition.

(2) On 24 July, Project Biologists recovered 8 White Sturgeon and 3 Pacific Lamprey from the Unit 01 draft tube. All fishes were returned to the tailrace in good condition.

**3. RESEARCH:**

a. CRITFC. Annual Chinook, Coho, sockeye, and steelhead sampling in the AFF continues. Modified trapping procedures under FPP App. G, Section 4 began on 26 July after daily average river temperatures reached 70°F. This restriction was lifted on 29 July.

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b. NOAA – Lamprey. LPS count network installed. HD-PIT tagging is currently being conducted by University of Idaho for NOAA until NOAA staff can be on site.

c. Normandeau – Fish Counting. Visual counting continues. Nighttime video counts commenced on 15 June.

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. 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 one fish (0.5%) observed with GBT symptoms. Fallbacks recorded crossing the separator bars this week: one salmon. 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.

f. Trapping in the AFF ceased on 25 July in anticipation of daily average river temperatures reaching 70°F. Trapping resumed on 29 July.

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

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

i. Nez Perce – Lamprey. Collection of 238 lamprey for translocation studies concluded on 16 July.

#### **4. FISHWAYS:**

a. Project biologists inspected 21 through 27 July.

b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
<b>BRADFORD ISLAND (BI)</b>				
7/23	PH1CC	Entrance diff > 2.0	PLC being calibrated	Ops adjusted
<b>CASCADES ISLAND (CI) – Nothing to report</b>				
<b>WASHINGTON SHORE (WS) – Nothing to report</b>				

(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. New temperature probes have been ordered and will be installed upon delivery.

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

e. Adult Fishways.

(1) Calibration was checked on 27 July.

(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.

f. On 01 June nighttime lamprey operations commenced at PH2 fishway entrances.

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g. 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.
- (3) DSM2 remains in service.
- (4) The hydrocannon remains in service.
- (5) The B2CC remains open.
- (6) All avian arrays are installed

h. 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.

**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.

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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 12 July updates the spill priority list and spill caps for fish passage season starting 15 May until further notice based on observed TDG data.

d. A teletype sent on 16 July requests that Bonneville forebay be maintained no lower than 74.5' as a hard constraint from 1000 to 1700 on 20 and 21 July for outrigger races near Stevenson.

e. 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.

f. A teletype sent on 18 July requests that Bonneville pool operate within a 1.5' band as a hard constraint from 0600 on 22 July to 1800 on 25 July for treaty fishing.

g. A teletype sent on 24 July updated the previous teletype stating that effective 24 and 25 July from 0700 to 1700, operate PH2 units in AGC (automatic generation control) in order to complete maintenance work on units 15 and 16. Outside these dates and times continue to operate PH2 on local control to implement operations described in a previous teletype (see 7.B, above).

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