



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

5 September 2013

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 35 of 2013, which covers the period from 25 through 31 August 2013

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 119.8 to 140.2 kcfs. Daily average project tailwater ranged from 11.1' to 12.4' msl. Daily average powerhouse forebay elevation ranged from 74.7' to 75.5' msl. Daily average water temperatures ranged from 72°F to 73°F. Secchi disk measurements ranged from 7.0' to greater than 7.0'.

b. Spill Bays 01 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 75.5 to 91.4 kcfs.

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

(1) Unit 01 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.

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 on Tuesdays and more frequently as needed.

(1) Fish Unit 1 was placed on standby from 0818 until 0832 on 28 August for SJ1 testing.

(2) Fish Unit 2 was placed on standby from 1456 until 1618 on 27 August for SJ2 testing.

2. ACTIVITIES:

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

- (1) FV1-1 was closed for cleaning from 1623 to 1633 on 28 August.
- (2) FV3-9 was closed for cleaning from 1611 to 1617 on 28 August.

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 23 September

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 5 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 continued this week due to water temperatures above 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. GBT monitoring concluded this week. No fallbacks were recorded crossing the separator bars this reporting week. Truck releases of summer out-migrants originating from Snake River dams began on 18 August.

e. University of Idaho – AFF. USACE funded adult salmonid sampling continues. Trapping in the AFF ceased on 5 August when daily average river temperatures reached 70°F.

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

4. FISHWAYS:

a. Project biologists inspected 25 through 31 August.

b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND (BI)				
8/27, 29, 30	PH1CC	S. Entrance diff < 1.0'	A-branch diffusers OOC	Scheduled to be repaired
CASCADES ISLAND (CI) – Nothing to report				
WASHINGTON SHORE (WS) – Nothing to report				

(2) 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.

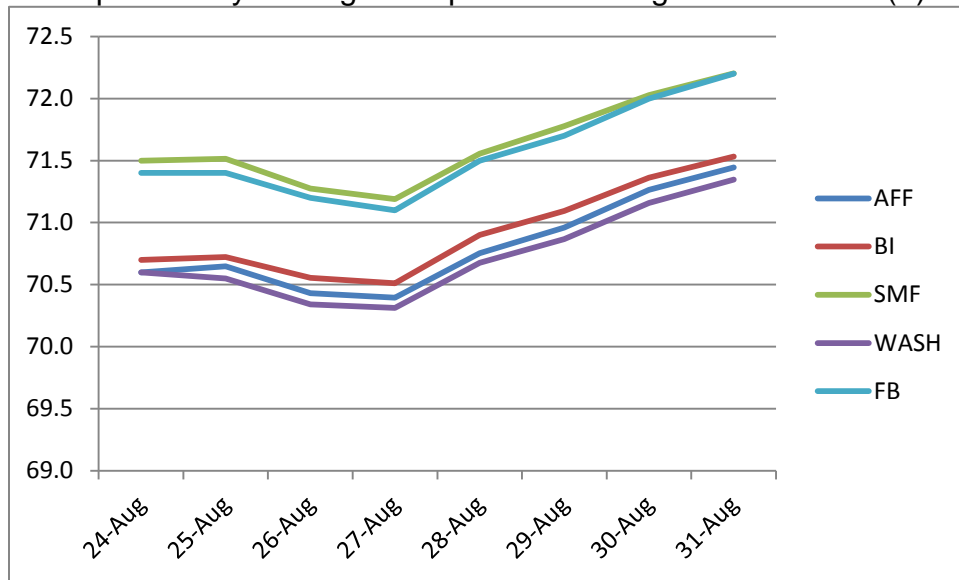
(3) A-branch diffuser FG3-3 and 3-6 are partially open in manual. FG3-5 is closed in manual. Repairs will occur when the Bradford Island ladder is dewatered. The next possible time period will be 2013/14 winter maintenance.

(4) PH2CC diffuser A2 is stuck closed. Diffuser B7 has been closed until repairs to the limit torque can be performed. The next possible time period will be 2014/15 winter maintenance.

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
8/25	70.551	70.723	70.647	71.515
8/26	70.342	70.556	70.431	71.275
8/27	70.312	70.512	70.396	71.189
8/28	70.677	70.901	70.753	71.556
8/29	70.868	71.094	70.959	71.777
8/30	71.158	71.361	71.265	72.027
8/31	71.346	71.533	71.445	72.202

Graph1. 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 31 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) Gates 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.

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(5) The B2CC remains open.

(6) 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 was taken out of service on 30 August. University of ID personnel observed the low water alarm indication on the upwelling box and contacted Project Fisheries. After investigation by Operations and electrical crews it was determined that the water supply pump had faulted and potentially burnt out. Due to the fact that no water could be supplied without deploying a back up pump, the butterfly valve was closed to prevent lamprey from being falsely attracted up the LFS.

(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 October/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.

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 23 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.

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d. A teletype sent on 15 August requests that for the periods specified within, which contain dates ranging from 19 August to 7 September, operate Bonneville pool within a 1.5' band as a hard constraint for treaty fishing.

e. A teletype sent on 23 August requests that outflows be maintained as low and constant as possible from 0600 – 1200 on 2 September, with flows not exceeding 150 kcfs, for a cross-channel swim at Hood River, Oregon. RCC will be notified if swimmers leave the water earlier than 1200 hrs.

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