



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

4 December 2013

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 48 of 2013, which covers the period from 24 through 30 November 2013.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 124.0 to 130.2 kcfs. Daily average project tailwater ranged from 11.5' to 11.9' msl. Daily average powerhouse forebay elevation ranged from 73.7' to 74.8' msl. Daily average water temperatures ranged from 46°F to 48°F. Secchi disk measurements ranged from 7.0' or greater.

b. Spill Bays 01 and 18 provide attraction flow for Cascades Island and B-branch, respectively. They are open 6" during daylight hours. Daily spill ranged from 1.0 to 1.1 kcfs this reporting week.

c. Unit Operation. Powerhouse Two became the priority powerhouse on 1 November.

(1) Unit 4 went out of service at 0830 on 15 October 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 17 went out of service at 0704 on 21 October for digital governor install and 4 year overhaul maintenance.

(4) 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. FU2 went out of service at 0700 on 15 October for digital governor installation and servo repairs.

2. ACTIVITIES:

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

(1) FV1-1 was closed for cleaning from 1830 on 24 November to 0400 on 25 November and 0658 to 0707 on 25 November.

(2) FV3-7 was closed for cleaning from 1800 on 24 November to 0400 on 25 November, 1410 to 1445 on 25 November, 1535 to 1544 on 25 November

(3) FV 3-9 was closed for cleaning from 1830 on 24 November to 0400 on 25 November, 0728 to 0732 on 25 November, 0811 to 0818 on 26 November, and 0725 to 0734 on 27 November.

(4) FV6-9 was closed for cleaning from 1830 on 24 November to 0400 on 25 November, and 1054 to 1115 on 25 November.

b. STS/VBS inspections. Table 2. 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	30 Oct	N/A	STS installed
13-15	31 Oct	N/A	STS installed
16-18	01 Nov	N/A	STS installed

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

2. RESEARCH: Normandeau – Fish Counting. Video counting continues.

3. FISHWAYS:

a. Project biologists inspected 24 through 27 and 29 through 30 November.

b. Fish Passage Plan Observations.

(1) Table 3. FPP Out of Criteria items.

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Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND (BI)				
11/21, 22	PH1CC	South ent diff < 1.0'	See 4.b.(3)	None
11/17-18, 22-23	A-branch	Staff gauge > 1.1'	Suspected conduit leak	None
11/24	FV1-1 TR	Differential >0.5'	Debris Accumulation	Cleaned/floated
11/27	PH1	Unit Priority	U10 not in service	Ops adjusted
11/24	BI Picket Leads	Differential >0.3'	Debris Accumulation	Cleaned
11/24-25	FV3-7	Differential >0.5'	Debris Accumulation	Cleaned/floated
11/24	FV3-9	Differential >0.5'	Debris Accumulation	Cleaned/floated
11/24	BI Exit	Debris Accumulation	Debris Accumulation	Cleaned
CASCADES ISLAND (CI) – Nothing to report				
11/24	UMT	Differential <1.0'	FV6-9	Cleaned/floated
WASHINGTON SHORE (WS)				
11/24,25,27,29	PH2CC	Entrance diffs < 1.0'	High diff on FU1	Cleaned/floated
11/30	PH2	Unit Priority	U12 not in service	Ops adjusted
11/24-25	Weir 37	Water depth < 1.0'	Valve open	Closed
11/24	WA Exit	Debris Accumulation	Debris Accumulation	Cleaned
11/24	FV6-9 TR	Differential >0.5'	Debris Accumulation	Cleaned/floated
11/25	WA Picket Leads	Differential >0.3'	Debris Accumulation	Cleaned

(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 diffuser motor can be performed. The next possible time period will be 2014/15 winter maintenance.

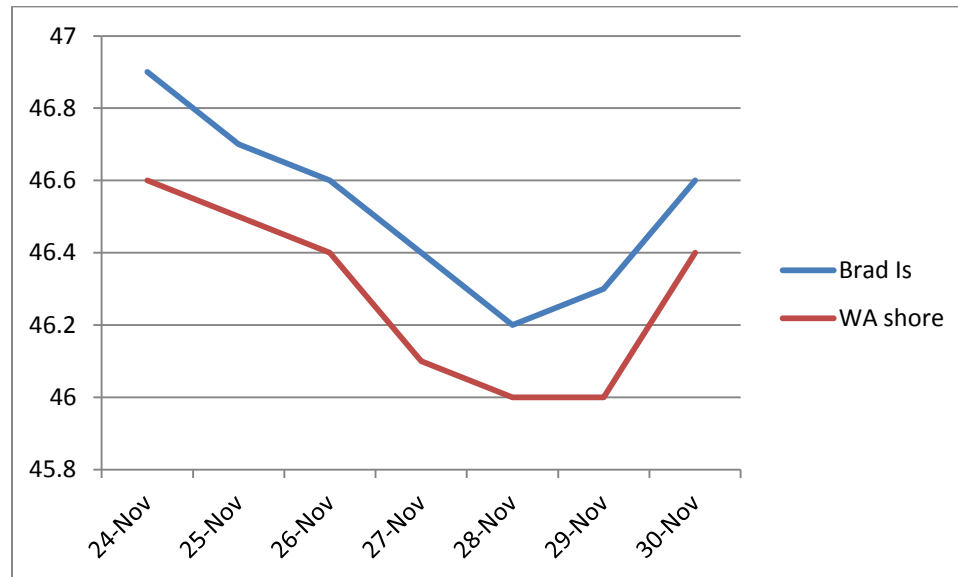
c. Fishway Temperatures. Temperatures are normally taken from 01 March through 30 November.

Table 4. Daily Average Temperature in Degree Fahrenheit (F).

Date	Daily Averages	
	Brad Is	WA shore
24-Nov	46.9	46.6
25-Nov	46.7	46.5

26-Nov	46.6	46.4
27-Nov	46.4	46.1
28-Nov	46.2	46.0
29-Nov	46.3	46.0
30-Nov	46.6	46.4

Graph 1. 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 30 November.

(2) 10 of 12 floating orifice gates (FOGs) are installed. Two gates remain out for maintenance. Stab plates for all FOGs are installed, with the NUE closed while FU2 is out of service.

(3) All SLEDs are removed.

(4) All ladders remain in service.

f. Juvenile Fishways.

(1) The intake gate for the downstream exit of the Ice and Trash Sluiceway (ITS) was discovered to be in serious disrepair on 01 September. The gate has been

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removed for repair, plating has been placed over the bottom of the guide slot, and the ITS was reopened on 25 September. The ITS will reclose briefly for reinstallation of the gate once repairs are complete.

(2) The DSM remains in service.

(3) The hydrocannon remains out of service.

(4) The B2CC remains closed.

(5) The PH2 and B2CC avian arrays were removed on 09 and 10 October to facilitate the WA Shore LFS repairs. The PH1 and Spillway arrays remain intact. The PH1 array currently has one broken line.

g. Lamprey Fishways. All LPSs remain dewatered. The butterfly valve to the WA shore LPS/LFS is closed.

5. CONSTRUCTION: WA Shore LPS/LFS Installation. Dive work to repair the LFS completed on 30 October. Repairs and modifications to the LFS/LPS continue.

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

7. TELETYPES CURRENTLY IN EFFECT:

a. Teletypes sent on 06 November outlined specific operations regarding tailwater restrictions and flow management for chum spawning and egg incubation. Hard constraints are: 1) For all hours require a minimum tailwater elevation of 11.3' and 2) For the hours of 0600-1700 maintain tailwater elevation between 11.3'-11.7', targeting 11.5'.

b. Teletype sent on 26 November request that the Bonneville minimum forebay be no lower than 73.5' as a soft constraint effective immediately and until further notice. This request is to assist with navigation due to a surveyed high spot below The Dalles downstream lock entrance. River ops regarding Bonneville tailwater requirements for Chum Salmon take precedence as do normal river ops to meet regional power demands.

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Bonneville Project