



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

26 November 2013

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 47 of 2013, which covers the period from 17 through 23 November 2013

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 112.9 to 140.6 kcfs. Daily average project tailwater ranged from 11.4' to 12.5' msl. Daily average powerhouse forebay elevation ranged from 74.1' to 75.1' msl. Daily average water temperatures ranged from 49°F to 52°F. Secchi disk measurements ranged from 6.0' to 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 consistently averaged 1.0 kcfs this reporting week.

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

(1) Unit 1 was out of service from 1000 until 1047 on 21 November for auxiliary bus trip testing.

(2) Unit 2 was out of service from 1000 until 1047 on 21 November for auxiliary bus trip testing.

(3) Unit 3 was out of service from 1526 on 22 November until 0815 on 23 November for a potential transformer exciter failure.

(4) Unit 4 went out of service at 0830 on 15 October for a 5 year overhaul.

(5) Unit 9 was out of service from 1054 until 1100 on 21 November for auxiliary bus trip testing.

(6) Unit 10 was out of service from 1054 until 1100 on 21 November for auxiliary bus trip testing.

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

(8) Unit 13 was out of service from 1008 until 1024 on 19 November for WECC trip testing.

(9) Unit 15 was out of service from 1033 until 1048 on 19 November for WECC trip testing.

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

(7) 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 0727 to 0800 on 21 November.

(2) FV3-7 was closed for cleaning from 0805 until 0838 on 18 November.

(3) FV 3-9 was closed for cleaning from 0721 until 0726 on 18 November, and from 0849 until 0925 on 21 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.

- d. **RESEARCH:** Normandeau – Fish Counting. Video counting continues.

3. FISHWAYS:

- a. Project biologists inspected 17 through 23 November.
- b. Fish Passage Plan Observations.

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

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
CASCADES ISLAND (CI) – Nothing to report				
WASHINGTON SHORE (WS)				
11/23	PH2CC	All ent diff < 1.0'	High diff on FU1	Cleaned/floated FU1 ASAP
11/23	PH2CC	SCCH velocity < 1.5 fps	High diff on FU1	Cleaned/floated FU1 ASAP

(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.

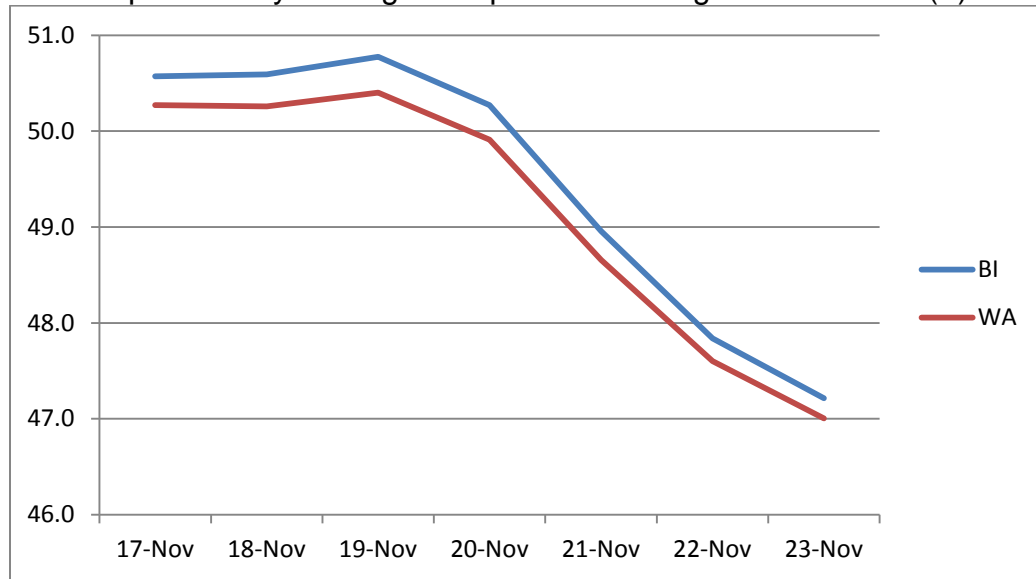
- c. Fishway Temperatures. Temperatures are normally taken from 01 March through 30 November.

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

Date	Daily Averages	
	Brad Is	WA shore
17-Nov	50.6	50.3
18-Nov	50.6	50.3
19-Nov	50.8	50.4
20-Nov	50.3	49.9
21-Nov	49.0	48.7

22-Nov	47.8	47.6
23-Nov	47.2	47.0

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 23 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.

(5) The Bradford Island fish exit was closed for cleaning from 0849 until 0925 on 21 November.

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.

(2) 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 requires 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. A teletype sent on 19 November requests that from 1200 to 1400 hours on 23 November, the BON forebay be maintained at or above elevation 74.0' as a hard constraint, and above 74.5' as a soft constraint. The purpose of this operation is to provide sufficient water depth to refloat a stranded kite boarding launch dock at Hood River, OR.

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Bonneville Project