



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

25 March 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 12 of 2014, which covers the period from 16 – 22 March 2014

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 247.0 to 273.3 kcfs. Daily average project tailwater ranged from 20.1' to 21.3' msl. Daily average powerhouse forebay elevation ranged from 72.5' to 74.5' msl. Daily average water temperatures ranged from 43°F to 44°F this week. Secchi disk measurements ranged from 1.5' to 3.0'.

b. Spill Bays 01 and 18 are open 6" during daylight hours to provide attraction flow for Cascades Island and B-branch, respectively. Daily spill ranged from 27.0 to 69.7 kcfs this reporting week.

(1) Spill bay 17 experienced a hoist brake failure on 11 March. The gate is currently on sill.

(2) Spill gate 1 was on sill on 17 March for a gate inspection.

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

(1) Unit Outages. Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
6	1046 on 17 March	NA	5 yr overhaul
7	1256 on 17 March	1424 on 17 March	Raking trash
10	1507 on 17 March	1621 on 17 March	Raking trash
11	0900 on 09 Sept 2012	NA	High thrust bearing temps
12	2003 on 10 March	0917 on 11 March	STS power failure
15	0716 on 05 March	NA	Digital Governor & Maintenance

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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. FU1 was out of service from 0001 on 10 February until 1641 on 20 March for digital governor installation and servo repairs.

## 2. ACTIVITIES:

a. Auxiliary Water System Closures. FV 3-7 was closed for cleaning from 0958 until 1034 on 19 March.

b. STS/VBS inspections. Table 2. STS and VBS inspection.

<i>Unit</i>	<i>Date</i>	<i>Comments</i>
11	---	Unit 11 remains out of service
12-18	---	STSs installed

c. Dewatering and Fish Salvage. The following dewaterings or fish salvages occurred this reporting week: Unit 6 was dewatered on 18 March and no fish were found in either the scroll case or the draft tube.

## 3. RESEARCH:

a. Battelle/PNNL – Surgical Training. Surgical training at the SMF commenced on 10 March, in preparation for survival studies at upstream dams.

b. CRITFC – Sea Lion Hazing. Boat-based hazing began on 10 March.

c. Fisheries Field Unit – Kelt Video Monitoring. Video recording of the separator bars began on 04 March.

d. Fisheries Field Unit – Sea Lion Observations. Observations commenced on 09 January and will continue until the end of May. Weekly pinniped reports can be found at: [http://www.nwd-wc.usace.army.mil/tmt/documents/fish/2014/sea\\_lion\\_hazing\\_2014.html](http://www.nwd-wc.usace.army.mil/tmt/documents/fish/2014/sea_lion_hazing_2014.html).

e. Normandeau – Fish Counting. Video counting continues. Visual counting is scheduled to begin on 01 April.

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f. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring commenced on 04 March. No research fish were collected this week. Fallbacks recorded crossing the separator bars this reporting week: 15 steelhead and 1 salmon.

g. University of Idaho – Lamprey. Hydraulic testing in the AFF experimental flume was conducted from 18 until 21 March.

h. USDA - Sea Lion Hazing. Land based hazing began on 01 March.

#### 4. FISHWAYS:

a. Project biologists inspected 16 – 22 March.

b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
<b>SPILLWAY</b>				
3/16-22	SW Bay 17	Spill pattern	Hoist brake failure – on sill	In repair
3/18	SW Bay 1	On sill – no attraction flow	Gate inspection	None
<b>BRADFORD ISLAND (BI)</b>				
3/19-20	NCCH	Differential <1.0	N/A	None
3/16-17,19	SCCH	Differential <1.0	SCCH sensor error	TR in place
3/17-18,20-22	A-Branch	Water Level > 1.1'	N/A	None
3-18	B-Branch	Ent diff > 2.0'	B-Branch TW sensor error	TR in place
<b>CASCADES ISLAND (CI)</b>				
3/19	UMT staff gauge	Water level < 1.0'	Unknown	None
<b>WASHINGTON SHORE (WS)</b>				
3/16-18	DSM	Orifice 11C-N closed	Unknown	TR in place
3/16-20	SDE, SUE, NDE	Diff and/or subm low	F1 OOS	None

(2) PH2CC diffuser A2 is stuck closed, and the gate to B3 has been removed for repairs. Diffusers B7 and B8 have been closed until repairs to their diffuser motors can be performed. The next possible time period will be 2014/15 winter maintenance.

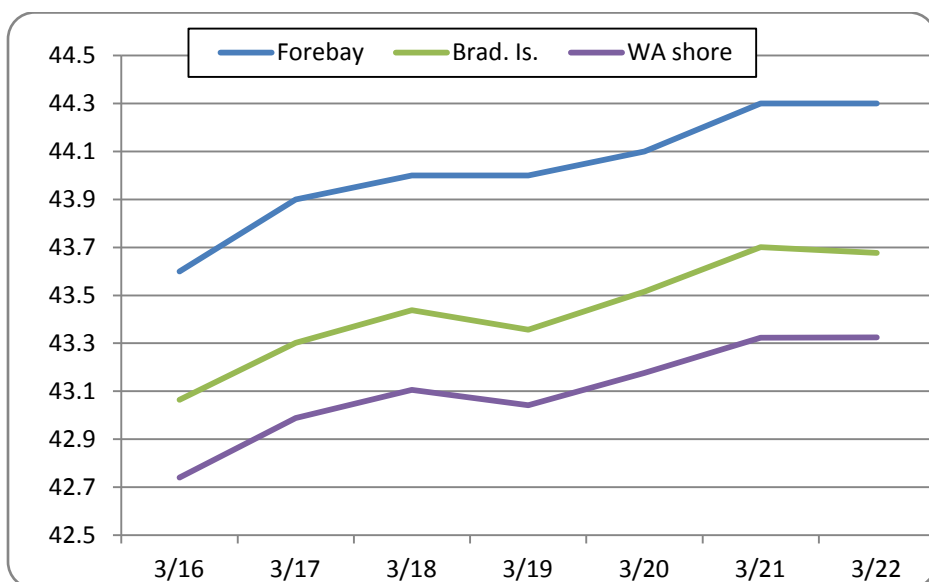
c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. Forebay temperatures are found [online](#).

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

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Date	Forebay	Bradford Is.	WA shore
3/16	43.6	43.1	42.7
3/17	43.9	43.3	43.0
3/18	44.0	43.4	43.1
3/19	44.0	43.4	43.0
3/20	44.1	43.5	43.2
3/21	44.3	43.7	43.3
3/22	44.3	43.7	43.3

(2) 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 19 March.

(2) 10 of 12 floating orifice gates (FOGs) are installed. Two gates remain out for maintenance. Stab plates for all FOGs are installed, and the NUE was closed when FU1 was out of service.

(3) SLEDs are currently installed at all fishway entrances.

f. Juvenile Fishways.

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(1) The south end gate of the Ice and Trash Sluiceway (ITS) remains removed for ongoing repairs. Plating has been placed over the bottom of the guide slot to minimize fish impacts. The ITS will need to be closed for reinstallation once repairs are complete.

(2) The DSM remains in service.

(3) The hydro-cannon remains in service.

(4) The B2CC was opened for the season at 0917 on 17 March.

(5) The B2CC avian array was removed on 09-10 October to facilitate the WA Shore LFS repairs. Prior to the anticipated install on 04 March, the anchor line was found to be broken. The B2CC array will be reinstalled after spill ends for the season. The PH1, PH2, and spillway avian arrays remain intact.

g. Lamprey Fishways. All LPSs remain dewatered.

**5. CONSTRUCTION:** WA Shore LPS/LFS Installation. Repairs and modifications to the LPS continue.

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

**7. TELETYPES CURRENTLY IN EFFECT:**

a. A teletype sent on 20 March states that, on 24 March from 0700 until 1730 hours, a lower tailwater is requested at aid contractors working from Cascades Island to install water quality sensors.

b. A teletype sent on 20 March states that, on 21 March from 0600 until 1800 hours, close all bays 2-17 and continue spill from bays 1 and 18 at 6" for ladder attraction flow. Contractors will mobilize a floating platform in the spillway trailrace near Cascades Island to install water quality gauges.

c. A teletype sent on 17 March states that, effective 17 March at 0800 hours, through 31 August at 2400, operate the B2CC continuously for 24 hours/day, 7 days/week.

d. A teletype sent on 15 January states that effective immediately operate Unit 04 in a last-on/first-off basis due to required maintenance.

e. A teletype sent on 18 December updated tailwater operations for Chum Salmon spawning and egg incubation. Starting 1800 on 24 December, maintain tailwater at

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11.5' as a hard constraint. This modifies the previous teletype requiring a minimum tailwater elevation of 11.6' and additional tailwater operations described within.

JERRY A. CARROLL  
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