



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

19 March 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 11 of 2014, which covers the period from 09 – 15 March 2014

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 257.2 to 303.0 kcfs. Daily average project tailwater ranged from 21.4' to 23.7' msl. Daily average powerhouse forebay elevation ranged from 72.3' to 73.3' msl. Daily average water temperatures ranged from 40°F to 42°F this week. Secchi disk measurements ranged from 2.0' to 3.5'.

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 20.5 to 68.4 kcfs this reporting week.

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

(2) Spill bay 18 was closed for inspection from 0631 to 1630 on 14 March.

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

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

Unit	OOS Date	RTS Date	Reason
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

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

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 11 of 2014, which covers the period from 09 – 15 March 2014

on Tuesdays and more frequently as needed. FU1 went out of service at 0001 on 10 February for digital governor installation and servo repairs.

## 2. ACTIVITIES:

### a. Auxiliary Water System Closures.

(1) FV1-1 was closed for cleaning from 0709 to 0720 on 15 March.

(2) FV 3-7 was closed for cleaning from 1007 to 1043 on 11 March and 1501 and 1539 on 15 March.

(3) FV 3-9 was closed for cleaning from 0727 to 0731 on 10 March and 0727 to 0738 on 15 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. No dewaterings or fish salvages occurred this reporting week.

## 3. RESEARCH:

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

b. 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: 14 steelhead, 3 salmon, and two unknown salmonids.

c. 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).

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

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 11 of 2014, which covers the period from 09 – 15 March 2014

- e. USDA - Sea Lion Hazing. Land based hazing began on 01 March.
- f. CRITFC – Sea Lion Hazing. Boat-based hazing began on 10 March.
- g. Battelle/PNNL – Surgical Training. Surgical training at the SMF commenced on 10 March, in preparation for survival studies at upstream dams.

**4. FISHWAYS:**

- a. Project biologists inspected 09 – 15 March.
  - b. Fish Passage Plan Observations.
- (1) Table 3. FPP Out of Criteria items.

Date	Location	FPP Items	Cause	Response
<b>SPILLWAY</b>				
3/12-15	SW Bay 17	Spill pattern	Hoist brake failure – on sill	In repair
<b>BRADFORD ISLAND (BI)</b>				
3/11-13	NCCH	Differential <1.0	N/A	None
3/11-13	SCCH	Differential <1.0	SCCH sensor error	TR in place
3/11-15	A-Branch	Water Level > 1.1'	N/A	None
<b>CASCADES ISLAND (CI) – Nothing to report</b>				
<b>WASHINGTON SHORE (WS)</b>				
3/9-15	DSM	Orifice 11C-N closed	Unknown	TR in place
3/9-15	SDE, SUE, NDE	Gate subm < 13'	In manual to increase diff'ls	None

(2) PH2CC diffuser A2 is stuck closed, and the gate to A3 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.

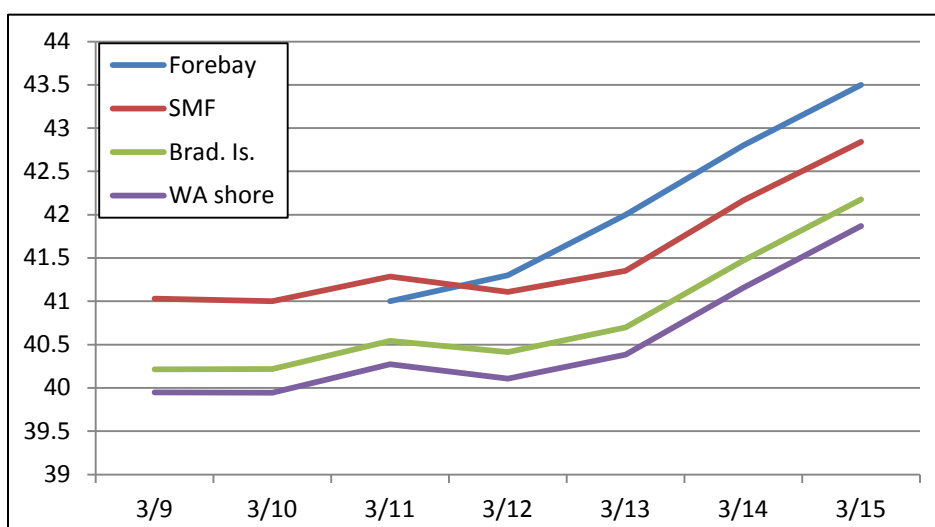
- c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. Forebay temperatures are found [online](#).

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

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 11 of 2014, which covers the period from 09 – 15 March 2014

Date	Forebay	SMF	Bradford Is.	WA shore
3/9	---	41.0	40.2	39.9
3/10	---	41.0	40.2	39.9
3/11	41.0	41.3	40.5	40.3
3/12	41.3	41.1	40.4	40.1
3/13	42.0	41.4	40.7	40.4
3/14	42.8	42.2	41.5	41.2
3/15	43.5	42.8	42.2	41.9

(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 11 March.

(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) SLEDs are currently installed at all fishway entrances.

(4) PH2-NUE remains out of service during FU1 maintenance.

f. Juvenile Fishways.

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 11 of 2014, which covers the period from 09 – 15 March 2014

(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 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 once a new anchor line arrives. 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 13 March updates a previous teletype regarding spillway gate inspections. Effective today through 21 March, from 0600 to 1700 spill bays 1 or 18 may be closed for inspection. At no point may both spill bay 1 and 18 be closed simultaneously in order to maintain attraction flow to the spillway fish entrances.

b. A teletype sent on 11 March states that on 11 March during periods of spill, implement the spill pattern defined within to flush large boulders off the spill bay 17 apron. The spill pattern is to be maintained as long as flows allow, with a two-hour minimum, without exceeding TDG standards.

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

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

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 11 of 2014, which covers the period from 09 – 15 March 2014

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  
Operations Manager  
Bonneville Project