



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

3 April 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 13 of 2014, which covers the period from 23 – 29 March 2014

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 215.6 to 242.4 kcfs. Daily average project tailwater ranged from 17.8' to 19.6' msl. Daily average powerhouse forebay elevation was 74.2' msl. Daily average water temperatures remained at 43°F this reporting 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 1.2 to 19.1 kcfs this reporting week.

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

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	---	5 yr overhaul
11	0900 on 09 Sept 2012	---	High thrust bearing temps
15	0716 on 05 March	---	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 on Tuesdays and more frequently as needed.

2. ACTIVITIES:

a. Auxiliary Water System Closures.

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- (1) FV3-7 was closed for cleaning from 0730 to 0738 on 24 March.
- (2) FV3-9 was closed for cleaning from 0730 to 0738 on 24 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

b. Dewatering and Fish Salvage. No dewaterings or fish salvages occurred this reporting week.

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. Bi-weekly pinniped reports can be found at: 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.

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: 19 steelhead and 1 unknown salmonid.

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

4. FISHWAYS:

a. Project biologists inspected 23 – 29 March.

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b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND (BI)				
3/23-29	A-Branch	Water Level > 1.1'	Unknown	None
CASCADES ISLAND (CI) – Nothing to report				
WASHINGTON SHORE (WS)				
3/16-25	DSM	Orifice 11C-N closed	Unknown	TR in place

(2) Spillway Bay 17 is on sill until parts are available to repair the gear box.

(3) 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.

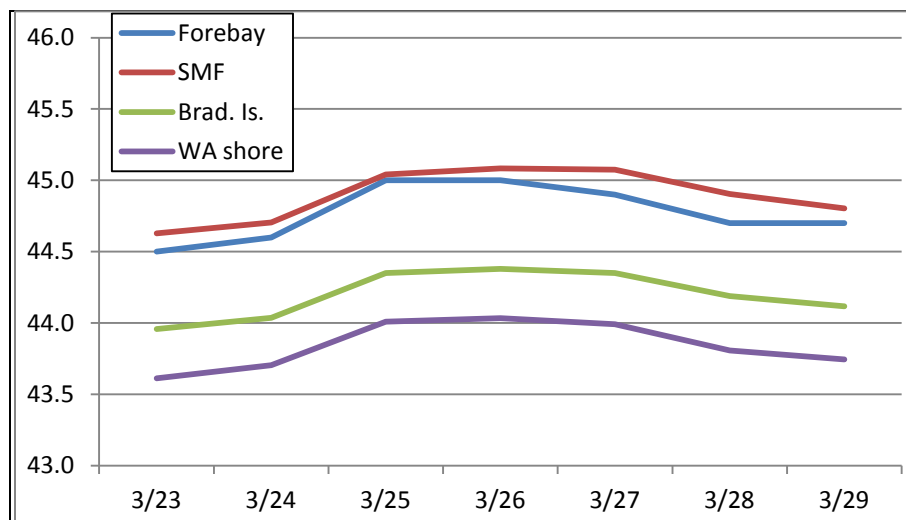
c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. Forebay temperatures are found [online](#).

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

Date	SMF	Bradford Is.	WA shore	Forebay
3/23	44.6	44.0	43.6	44.5
3/24	44.7	44.0	43.7	44.6
3/25	45.0	44.3	44.0	45.0
3/26	45.1	44.4	44.0	45.0
3/27	45.1	44.4	44.0	44.9
3/28	44.9	44.2	43.8	44.7
3/29	44.8	44.1	43.7	44.7

(2) Graph 1. Daily Average Temperature in Degree Fahrenheit (°F).

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d. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

e. Adult Fishways.

(1) Calibration was checked on 25 March.

(2) 10 of 12 floating orifice gates (FOGs) are installed. Two gates remain out for maintenance. Stab plates for all FOGs are installed, but scheduled to be removed on 31 March.

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

f. Juvenile Fishways.

(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 remains open.

(5) The B2CC avian array was removed on 09-10 October 2013 to facilitate the WA Shore LFS repairs. The anchor line was replaced on 27 March, and the array will be

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reinstalled after spill season. The PH1, PH2, and spillway avian arrays remain intact.

g. Lamprey Fishways. All LPSs remain dewatered.

5. CONSTRUCTION:

- a. WA Shore LPS/LFS Installation. Repairs and modifications to the LPS continue.
- b. FGE Gatewell Flow Control. Contractors will install a flow control plate to the Unit 15A gatewell in preparation for flow testing in spring and summer.

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 17 March states that effective 17 March at 0800 hours, operate the B2CC continuously through 31 August at 2400.
- 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 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.
- e. A teletype sent on 24 March provides the spill caps and updated lack of load conditions to be used from 0000 on 24 March to 2359 on 31 March.

JERRY A. CARROLL
Operations Manager
Bonneville Project