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

13 March 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 10 of 2014, which covers the period from 02-08 March 2014

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 165.9 to 271.9 kcfs. Daily average project tailwater ranged from 14.8' to 22.0' msl. Daily average powerhouse forebay elevation ranged from 73.9' to 74.5' msl. Daily average water temperatures ranged from 38°F to 41°F this week. Secchi disk measurements ranged from 3.0' to 5.0'.

b. Spill Bays 01 and 18 are open 6" during daylight hours to provide attraction flow for Cascades Island and B-branch, respectively. Spill Bay 18 opened on 27 February when B-branch came back to service. Daily spill ranged from 1.2 to 33.0 kcfs this reporting week.

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	0734 on 05 March	1456 on 05 March	BPA Dispatcher line & disconnect
13	0735 05 March	1504 on 05 March	BPA Dispatcher line & disconnect
14	0735 05 March	1456 on 05 March	BPA Dispatcher line & disconnect
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 on Tuesdays and more frequently as needed. FU1 went out of service at 0001 on 10 February for digital governor installation and servo repairs.

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2. ACTIVITIES:

a. Auxiliary Water System Closures.

- (1) FV1-1 was closed for cleaning from 1038 to approximately 1053 on 03 March.
- (2) FV3-9 was closed for cleaning from 1505 to approximately 1520 on 03 March.
- (3) FV6-9 was closed for cleaning from 1520 to approximately 1535 on 03 March.
- (4) FV3-7 was closed for cleaning from 1324 to 1351 on 06 March.
- (5) FV3-9 was closed for cleaning from 1400 to 1406 on 06 March.

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

<i>Unit</i>	<i>Date</i>	<i>Comments</i>
11	N/A	Unit 11 remains out of service
12-14	24 Feb	STS install
15-17	25 Feb	STS install

c. Dewatering and Fish Salvage.

- (1) On 04 March, the Navigation Lock upper sill was dewatered. No fish were found.
- (2) On 06 March, the unit 15 draft tube was dewatered. No fish were found.

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: five steelhead, one salmon, and one unknown salmonid.

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.

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c. Fisheries Field Unit – Kelt Video Monitoring. Video recording of the separator bars began on 04 March, with the first review on 05 March.

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

4. FISHWAYS:

a. Project biologists inspected 02-08 March.

b. Fish Passage Plan Observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND (BI)				
3/2-4, 6, 7	WG-64	Submergence >8.4'	SCCH PLC	TR in place
3/3-6	SCCH	Differential <1.0	SCCH PLC	TR in place
3/4	NCCH	Differential >1.0	NA	NA
3/4-5,7,8	A-Branch	Water Level >1.1'	NA	NA
CASCADES ISLAND (CI)				
3/3	CI Entrance	Differential <1.0'.	NA	NA
WASHINGTON SHORE (WS)				
3/2-6	SDE, SUE, NDE	Differential <1.0'	F1 OOS	NA

(2) 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.

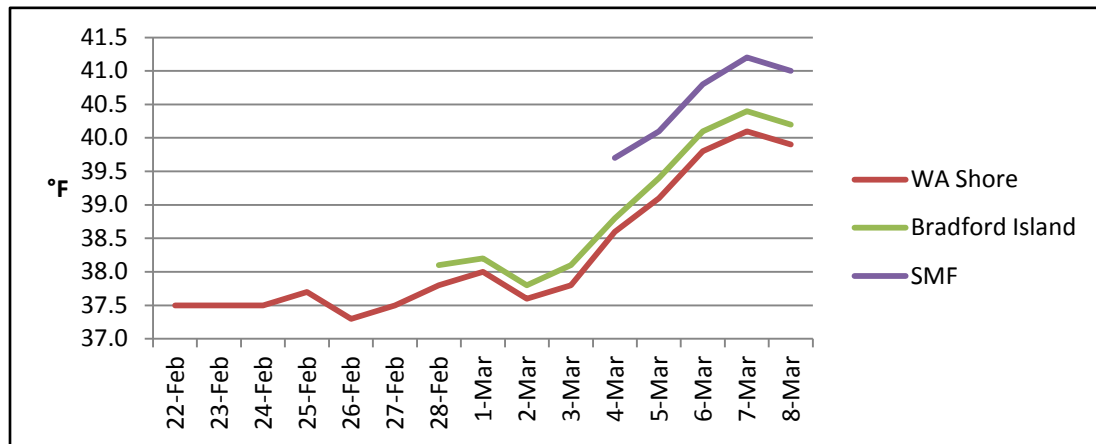
c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November.

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

Date	WA Shore	Bradford Island	SMF
02 March	37.6	37.8	
03 March	37.8	38.1	
04 March	38.6	38.8	39.7
05 March	39.1	39.4	40.1
06 March	39.8	40.1	40.8
07 March	40.1	40.4	41.2
08 March	39.9	40.2	41.0

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(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 04 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.

(5) PH1CC returned to service on 27 February.

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.

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(4) The B2CC was opened briefly from 1305 to approximately 1500 to test the PIT tag transceiver. After the testing was complete, the B2CC has remained close.

(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 for the B2CC array was found to be broken. The B2CC array will be installed once a new anchor line arrives. The PH2 avian array was reinstalled 03-05 March. The PH1 and Spillway arrays remain intact.

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 LPS continue.

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

7. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 06 March states that from 0600 to 1700 on 10 and 11 March, spill bays 1 or 18 may be closed to facilitate climbing inspections. 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 05 March states that from 10 – 14 March and 17– 21 March there will be ongoing spillway gate climbing inspections daily from 0730-1630.

c. A teletype sent on 04 March states that on 05 March the B2CC will be opened from 1300 – 1400 to test the pit tag transceiver. If testing is not complete by 1400, testing may continue until 1500.

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.

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