

MEMORANDUM FOR CENWP-OP, ATTN: Operations Biologist

SUBJECT: Bonneville Lock and Dam, Fishway and Fish Activities for Week 14 of 2013, which covers the period from 31 March through 06 April 2013.

1 OPERATION SUMMARY

- 1.1 Daily average river flows ranged from 169.1 to 222.4 kcfs. Daily average project tailwater ranged from 14.8' to 18.3' msl. Daily average powerhouse forebay elevation ranged from 72.6' to 74.6' msl. Daily average water temperatures ranged from 47°F to 48°F. Secchi disk measurements ranged from 4.0' to 6.0' throughout the week.
- 1.2 Spill Bays 1 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 1.2 to 1.5 kcfs.
- 1.3 Unit Operation. Powerhouse Two became the priority powerhouse on 14 March.
 - 1.3.1 Unit 08 went out of service at 1024 on 01 March 2013 for its five year overhaul.
 - 1.3.2 Unit 11 went out of service at 0900 on 09 September 2012 for high thrust bearing temperatures.
 - 1.3.3 Unit 13 went out of service from 0606 to 1548 on 06 March for gatewell 13-A STS repair.
- 1.4 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.
- 1.5 Gatewell drawdowns are measured on Tuesdays and more frequently as needed.

2 ACTIVITIES

- 2.1 Auxiliary Water System Closures. No AWS closures occurred this reporting week.
- 2.2 STS/VBS inspections.
 - 2.2.1 Table 3. STS and VBS inspection.

Unit	Date	Run Hours	Comments
11	N/A	N/A	Unit 11 OOS
14	03/26	N/A	STS installed
12,18	03/12	N/A	STS installed
13,15	03/13	N/A	STS installed
16,17	03/14	N/A	STS installed

- 2.3 Dewatering and Fish Salvage. On 02 March, project biologists recovered one yearling Chinook salmon from the Unit 08 draft tube. The fish was released into the tailrace at the Hamilton Island boat launch in good condition.

3 RESEARCH

- 3.1 CRITFC – Sea Lion Hazing. Hazing from boats commenced on 04 March.
- 3.2 Fisheries Field Unit – Sea Lion Observations. Observations commenced on 04 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/2013/sea_lion_hazing2013.html
- 3.3 PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring began on 12 March. Fallbacks recorded crossing the separator bars this week: two steelhead. Fallback observations are available at the FPC website: <http://www.fpc.org/adultsalmon/bonkeltcounts.htm>.
- 3.4 USDA - Sea Lion Hazing. Land based hazing began on 01 March and will continue until the end of May.
- 3.5 Normandeau – Fish Counting. Video counting continues. Visual counting commenced on 01 April. Normandeau assumed fish counting responsibilities from WDFW as of 01 March.

4 FISHWAYS

4.1 Project biologists inspected 31 March through 06 April.

4.2 Fish Passage Plan Observations.

4.2.1 Table 4. FPP Out of Criteria items.

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND (BI)				
4/02-04	PH1CC	S Entrance Diff < 1.0'	N/A	None
3/31, 4/1-2, 4/5	WG-64	Submergence > 8.4'	N/A	None
All week	A-branch	FG3-3 half open	Mechanically bound	TR in place
3/31-4/1, 4/4-5	A-branch	FG3-5 Closed	Mechanically bound	Ops Adjusted
3/31-4/3, 4/5-6	A-branch	Water level > 1.1'	N/A	None
4/02-03	FV1-1	Trash rack differential >0.5'.	Debris	Cleaned
CASCADES ISLAND (CI) – Nothing to Report.				
WASHINGTON SHORE (WS)				
All Week	PH2 Monoliths	Tailwater / gate criteria <13.0'.	NA	None
4/05-06	11C-S orifice	Closed for given forebay	Orifice in manual	Ops Adjusted

4.2.2 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.

4.3 Fishway Temperatures. Temperatures are normally taken from 01 March through 30 November. New temperature probes have been ordered and will be installed upon delivery.

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

4.5 Adult Fishways.

4.5.1 Calibration was checked on 06 April.

4.5.2 10 of 12 floating orifice gates (FOGs) are installed. Two gates remain out for maintenance. Sea lion barriers are in place on all installed FOGs.

4.5.3 All SLEDs are installed.

4.5.4 All ladders remain in service.

4.5.5 The AFF was watered up on 19 March and remains in bypass mode.

4.6 Juvenile Fishways.

4.6.1 Manual chaingates 1A and 1B remain open and are both set to 70' msl. Automated chaingates 3B, 6C and 10B are open and functioning in auto.

4.6.2 DSM2 remains in service.

4.6.3 The hydrocannon remains in service.

4.6.4 The B2CC remains open.

4.6.5 All avian arrays are installed.

4.7 Lamprey Fishways. All LPSs remain dewatered.

5 CONSTRUCTION

5.1 Cascades Island LPS Continuation. This expansion will remove the evaluation trap box and continue the LPS flume to a volitional exit near the CI fishway exit.

5.2 WA Shore LPS/LFS Installation. Construction is complete; pending pumps installation and testing.

5.3 AFF. Modifications and improvements were completed on 15 March. The AFF was watered up on 19 March and remains in bypass mode for testing.

6 HAZMAT, SPILLS AND CLEANUP

6.1 Nothing to report.

7 TELETYPE CURRENTLY IN EFFECT

- 7.1 A teletype sent on 20 February modifies the previous teletype for chum spawning, in order to gradually reduce the BON tailwater elevation for chum redd protection in response to the continued reduction in the water supply forecast. The four hard constraints are as follows. #1: Effective 1000 on 20 February, maintain a minimum tailwater elevation of 13.0'. #2: Effective 1000 on 22 February, maintain a minimum tailwater of 12.5'. #3: Effective 1000 on 24 February, maintain a minimum tailwater of 12.0'. #4: Effective 1000 on 26 February, maintain a tailwater minimum of 11.8'. For all four hard constraints, for one hour each day during non-dive hours (e.g. between 2000 and 2400) rewet exposed redds by achieving a tailwater elevation of 13.5' when both powerhouses are in service in order to maintain a tailwater of 13.5' for 1 hour in every 24 hour period.
- 7.2 A teletype sent on 02 April updates the spill priority list and spill caps for 01 April through 2359 on 15 May, 2013.
- 7.3 A teletype sent on 27 March states the most recent forebay restrictions and turbine flow testing criteria for velocity data collection at PH2. This data is being collected to evaluate the turbine reduction device (TRD). On 01 and 02 April from 0700 to 1900, maintain the forebay between 71.5' – 73.0' as a hard constraint and 71.5' – 72.5' as a soft constraint, with a minimum target turbine flow of 17 kcfs. These flows will be tested in gateway slot 14A on 01 April and 15A on 02 April. An updated daily schedule and progress report will be provided to the control room by the velocity test contractor. A modified unit priority for this testing is provided in Appendix A of the FPP. Additionally, as a soft constrain operate the unit adjacent to the test unit at the same flow rate. Outside the test dates and times, operate the forebay at the normal elevation of 71.5' – 76.5'.
- 7.4 A teletype sent on 03 April updates the tailwater operations for chum spawning. Effectively immediately through 2400 hours on 09 April, maintain a minimum tailwater elevation of 11.8'. This teletype discontinues the tailwater increase to 13.5' for one hour each day and defines the end date for chum minimum tailwater operations.

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