

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 07 April through 13 April 2013.

**1 OPERATION SUMMARY**

- 1.1 Daily average river flows ranged from 247.0 to 306.2 kcfs. Daily average project tailwater ranged from 20.1' to 22.9' msl. Daily average powerhouse forebay elevation ranged from 73.9' to 75.0' msl. Daily average water temperatures ranged from 48°F to 50°F. Secchi disk measurements ranged from 3.5' to 4.5' 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 17.7 to 100.1 kcfs.
- 1.3 Unit Operation. Powerhouse Two is the priority powerhouse.
  - 1.3.1 Unit 04 was out of service from 0435 to 1125 on 11 April for low turbine bearing oil level.
  - 1.3.2 Unit 08 went out of service at 1024 on 01 March 2013 for its five year overhaul.
  - 1.3.3 Unit 11 went out of service at 0900 on 09 September 2012 for high thrust bearing temperatures.
  - 1.3.4 Unit 17 was out of service from 0000 on 08 April to 1321 on 09 April for cable 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. The following AWS closures occurred this reporting week.
  - 2.1.1 FV3-7 was closed for cleaning from 1338 to 1425 on 09 April.
- 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. No dewatering or fish salvage activities occurred this week.

**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](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. Separation by Code is currently active for separate NOAA studies by Marsh and Gilbreath. A total of 642 yearling Chinook and 300 subyearling Chinook were collected for PNNL research (Growth Study) this week. A combined 8.2 million tule fall Chinook from Spring Creek National Fish Hatchery (6.4 million) and Little White Salmon NFH (1.8 million) were released on 11 April and arrived at BON on 12 April, approximately 15 hours after release with significant numbers passing within one hour after the initial sighting. PSMFC personnel report that for the sample period from 0120 through 0700 12 April, the Spring Creek mortality rate was very low, 0.8% (2,106 sampled – 0.7% sample rate), and decaling was negligible.

Fallbacks recorded crossing the separator bars this week: 15 steelhead and two unknown salmonids. 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. Visual counting continues.

#### 4 FISHWAYS

4.1 Project biologists inspected 07 through 13 April.

4.2 Fish Passage Plan Observations.

4.2.1 Table 4. FPP Out of Criteria items.

Date	Location	FPP Items	Cause	Response
<b>BRADFORD ISLAND (BI)</b>				
4/10	PH1CC	S and N Entrance Diff < 1.0'	N/A	None
4/10	WG-64	Submergence > 8.4'	N/A	None
All week	A-branch	FG3-3 half open	Mechanically bound	TR in place
4/8-11,13	A-branch	Water level > 1.1'	N/A	None
<b>CASCADES ISLAND (CI) – Nothing to Report.</b>				
<b>WASHINGTON SHORE (WS)</b>				
4/7-8	PH2 Monoliths	Tailwater / gate criteria <13.0'.	N/A	None
4/9-13	DSM2	Channel elevation < 64.2'	N/A	None

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 13 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 pump 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-diving 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 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.
- 7.3** A teletype sent on 09 April states that during the Spring Creek Hatchery (SCH) release and turbine reduction testing (TRD) at PH2, special operations will be in effect from 0001 hours on 12 April through 0900 hours on 17 April as a hard constraint and from 0901 hours on 17 April through 0900 hours on 22 April as a soft constraint. Operation of units for TRD testing takes precedence over operations for the SCH release. Start and end dates and times may be modified as needed by Project Fisheries based on passage numbers at the SMF. Further details can be found in Appendix A of the FPP.
- 7.4** A teletype sent on 09 April provides the 2013 spill schedule for fish passage, effective from 0001 on April 10 through 2400 on August 31. Operations for the B2CC and turbine units, as well as lamprey operations, are also provided for this period.
- 7.5** A teletype sent on 12 April updates the spill priority list and spill caps for 01 April through 2359 on 15 May.

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