

MEMORANDUM FOR CENWP-OP, ATTN: Operations Biologist

SUBJECT: Bonneville Lock and Dam, Fishway and Fish Activities for Week 22 of 2013, which covers the period from 26 May through 01 June 2013.

1 OPERATION SUMMARY

- 1.1 Daily average river flows ranged from 254.0 to 307.7 kcfs. Daily average project tailwater ranged from 20.2' to 22.9' msl. Daily average powerhouse forebay elevation ranged from 73.4' to 74.2' msl. Daily average water temperatures ranged from 57°F to 58°F. Secchi disk measurements ranged from 5.0' to 7.0' or greater.
- 1.2 Spill Bays 1 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 90.4 to 99.2 kcfs.
- 1.3 Unit Operation. Powerhouse Two is the priority powerhouse.
 - 1.3.1 Unit 03 went out of service at 0100 on 28 May for a 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 16 went out of service at 0748 on 29 April for digital governor install #1 / air gap install.
- 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 FV 1-1 was closed for cleaning from 1527 to 1533 on 22 May.
- 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
12	05/06	1268	OK
13	05/06	1253	OK
14	05/06	940	OK
15	05/06	1261	OK
16	05/06	1065	OK
17	05/06	1209	OK
18	05/06	1269	OK

- 2.3 Dewatering and Fish Salvage. The following fish salvage occurred this week:
 - 2.3.1 On 28 May, project biologists recovered approximately 40 juvenile salmonids from the tops of Unit 03 headgates. All fish were released into the ITS in good condition.

3 RESEARCH

- 3.1 CRITFC. Sea lion hazing from boats concluded on 06 May due to decreased pinniped presence. Annual Chinook, Coho, sockeye and steelhead sampling in the AFF continues.
- 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 Normandeau – Fish Counting. Visual counting continues. Nighttime video counts are scheduled to commence on 15 June.

- 3.4 PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. Separation by Code is currently active for separate NOAA studies by Marsh. This week 163 yearling Chinook and steelhead were examined with one (0.6%) incidence of gas bubble trauma observed. Fallbacks recorded crossing the separator bars this week: 16 steelhead and two salmon. Fallback observations are available at the FPC website:
<http://www.fpc.org/adultsalmon/bonkeltcounts.htm>.
- 3.5 University of Idaho - AFF USACE funded adult salmonid sampling commenced on 02 May.
- 3.6 USDA - Sea Lion Hazing. Land-based hazing continues.

4 FISHWAYS

- 4.1 Project biologists inspected 26 May through 01 June.
- 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)				
5/30	A-branch	Water level > 1.4'	N/A	None
5/27	B-branch	Water level > 1.4'	N/A	None
CASCADES ISLAND (CI)				
5/26,28	UMT	Water level < 1.2'	N/A	None
WASHINGTON SHORE (WS)				
5/29,6/1	DSM2	Channel elevation < 64.2'	N/A	None

- 4.2.2 A-branch diffuser FG3-3 is partially open and FG3-6 is closed. Repairs will occur when the Bradford Island ladder is dewatered. The next possible time period will be 2013/14 winter maintenance.
- 4.2.3 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 01 June.
- 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.
- 4.5.4.1 All ladders were switched to Shad Mode on 22 May, congruous with FPP 2.5.1.2.a
- 4.5.4.2 On 01 June nighttime lamprey operations commenced at PH2.
- 4.5.5 The AFF remains in service.
- 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. The Bradford Island LPS was watered up on 17 April. The WA shore AWS LPS was watered up on 06 May. All other 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. Flume construction is complete. Pumps were installed on 30 May and punch list items are being addressed.

6 HAZMAT, SPILLS AND CLEANUP

6.1 Nothing to report.

7 TELETYPES CURRENTLY IN EFFECT

- 7.1** 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.
- 7.2** A teletype sent on 29 May extends a previous teletype intended to improve gateway conditions for fish passage. Effective immediately until 1700 on 05 June, operate turbine units as directed. To pass increasing flow, operate PH2 units within the mid-range of 1% peak efficiency, then operate PH1 units up to the 1% upper limit, then operate PH1 units to the best operating point (BOP), and if more flow needs to be passed then increase flow through PH2 units in a manner that maintains a flow-neutral operation with PH1 at BOP.
- 7.3** A teletype sent on 30 May updates the spill priority list and spill caps for fish passage season starting 15 May until further notice based on observed TDG data.
- 7.4** A teletype sent on 31 May updates a previous teletype that states effective immediately and until further notice, for the purposes of flood control operate Grand Coulee and the Columbia River system to meet Corps of Engineers flood risk requirements. Operating criteria for upriver dams are provided. Additional coordination and guidance is possible in the future if deemed necessary.

JERRY CARROLL
Operations Project Manager