

MEMORANDUM FOR CENWP-OP, ATTN: Operations Biologist

SUBJECT: Bonneville Lock and Dam, Fishway and Fish Activities for Week 20 of 2013, which covers the period from 12 through 18 May 2013.

1 OPERATION SUMMARY

- 1.1 Daily average river flows ranged from 309.2 to 351.9 kcfs. Daily average project tailwater ranged from 22.9' to 24.9' msl. Daily average powerhouse forebay elevation ranged from 73.8' to 74.7' msl. Daily average water temperatures ranged from 57°F to 58°F all week. Secchi disk measurements ranged from 4.5' to 5.0'.
- 1.2 Spill Bays 1 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 106.5 to 145.8 kcfs.
- 1.3 Unit Operation. Powerhouse Two is the priority powerhouse.
 - 1.3.1 Unit 06 was out of service from 0306 to 1645 on 14 May for an oil leak repair.
 - 1.3.2 Unit 08 went out of service at 1024 on 01 April 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 12 was out of service from 0731 to 0816 on 14 May to rake trash
 - 1.3.5 Unit 13 was out of service from 0820 to 0859 on 14 May to rake trash.
 - 1.3.6 Unit 14 was out of service from 0912 to 1023 on 14 May to rake trash.
 - 1.3.7 Unit 15 was out of service from 1027 to 1110 on 14 May to rake trash.
 - 1.3.8 Unit 16 went out of service at 0748 on 29 April for digital governor install #1 / air gap install.
 - 1.3.9 Unit 18 was out of service from 1330 to 1437 on 14 May to rake trash.
- 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 0709 to 0713 on 16 May.
 - 2.1.2 FV 3-7 was closed for cleaning from 1329 to 1420 on 15 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. On 16 May one lamprey, two juvenile salmonids, and 50 sculpin were recovered from Unit 08 tail logs. The lamprey was returned to the forebay in good condition. The juvenile salmonids and sculpin were returned to the tailrace in good condition.

3 RESEARCH

- 3.1 University of Idaho – USACE funded adult sampling commenced on 02 May.
- 3.2 CRITFC. Sea lion hazing from boats concluded the week of 13 May due to decreased pinniped presence. Annual Chinook, Coho, sockeye and steelhead sampling in the AFF continues.
- 3.3 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
- 3.4 PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. Separation by Code is currently active for separate NOAA studies by Marsh and Gilbreath. This week 200 yearling Chinook and steelhead were examined with no gas bubble trauma observed. Fallbacks recorded crossing the separator bars this week: 37 steelhead, 20 salmon, and seven unknown salmonids. Fallback observations are available at the FPC website: <http://www.fpc.org/adultsalmon/bonkeltcounts.htm>.
- 3.5 USDA - Sea Lion Hazing. Land-based hazing continues.
- 3.6 USDA – Avian Hazing. Land-based hazing continues.
- 3.7 Normandeau – Fish Counting. Visual counting continues.

4 FISHWAYS

- 4.1 Project biologists inspected 12 through 18 May.
- 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)				
5/14,16	WG-65	Submergence > 8.4'	N/A	None
5/15-16	A-branch	Water level > 1.1'	N/A	None
CASCADES ISLAND (CI) – Nothing to report				
WASHINGTON SHORE (WS)				
5/15-16,18	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 18 May.
 - 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 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. Construction is complete; pending pump installation and testing.

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 18 May updates the spill priority list and spill caps for fish passage season starting 15 May until further notice based on observed TDG data.
- 7.3 A teletype sent on 01 May states that as a hard constraint from 0001 on 03 May through 0900 on 13 May, operate turbine units within specified operating ranges during the passage of Spring Creek Hatchery (SCH) fish. To pass increasing levels of flow, sequentially increase operation of turbine units within the operating ranges specified. Details are provided in the teletype. This special operation is to improve passage conditions for SCH fish released on 02 May. PH2 units will be limited to the mid-range of 1% peak efficiency to the extent practicable. The start and end dates and times may be modified at the direction of Project Fisheries based on smolt passage numbers observed at the JMF.
- 7.4 A teletype sent on 17 May updates a previous teletype that states effective 10 May 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.
- 7.5 A teletype sent on 15 May states that effective immediately until 1300 on 22 May, operate turbine units as directed to improve gatewell conditions for fish passage. To pass increasing flow, operate PH2 units within the mid-range of 1% peak efficiency, then operate PH1 units to the best operating point, then increase PH2 units 12, 15, and 17 one at a time to the upper 1% limit, maintaining units 13, 14, 18 within the 1% mid-range.

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