

MEMORANDUM FOR CENWP-OP, ATTN: Operations Biologist

SUBJECT: Bonneville Lock and Dam, Fishway and Fish Activities for Week 25 of 2013, which covers the period from 16 June through 22 June 2013.

1 OPERATION SUMMARY

- 1.1 Daily average river flows ranged from 205.4 to 256.4 kcfs. Daily average project tailwater ranged from 17.1' to 19.9' msl. Daily average powerhouse forebay elevation ranged from 73.1' to 74.1' msl. Daily average water temperatures ranged from 62°F to 64°F. Secchi disk measurements ranged from 5.5' to 7.0' or above.
- 1.2 Spill Bays 1 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 90.1 to 99.6 kcfs. Summer spill operations congruent with FPP section 2.2.3 took effect on 16 June.
- 1.3 Unit Operation. Powerhouse Two is the priority powerhouse.
 - 1.3.1 Unit 09 was out of service from 0001 on 17 June until 1308 on 20 June for annual maintenance and bank 9/10 maintenance.
 - 1.3.2 Unit 10 was out of service from 1057 to 1209 on 20 June for transformer switching.
 - 1.3.3 Unit 11 went out of service at 0900 on 09 September 2012 for high thrust bearing temperatures.
 - 1.3.4 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 FV3-9 was closed for cleaning from 0722 to 0726 on 17 June.
- 2.2 STS/VBS inspections.
 - 2.2.1 Table 3. STS and VBS inspection.

| Unit | Date | Run Hours | Comments |
|-------|------|-----------|-----------------------------------|
| 11 | N/A | OOS | Unit 11 remains out of service. |
| 12-18 | N/A | N/A | Inspection scheduled for 08 July. |

- 2.3 Dewatering and Fish Salvage. The following fish recovery occurred this reporting week.
 - 2.3.1 On 18 June, Project Biologists recovered ~1500 American shad from the AFF recovery pool in preparation for AFF modifications. Roughly half the shad were mortalities, with all fish released into the WA shore ladder. In addition, 63 Pacific lamprey were recovered from the same pool. With the exception of one mortality, these fish were given to the U of I as research fish.

3 RESEARCH

- 3.1 CRITFC. Annual Chinook, Coho, sockeye, and steelhead sampling in the AFF continues.
- 3.2 CTUIR – Lamprey. Collection of 238 lamprey for translocation studies began on 06 June.
- 3.3 NOAA – Lamprey. LPS count network installed. HD-PIT tagging is currently being conducted by University of Idaho for NOAA until NOAA staff can be on site.
- 3.4 Normandeau – Fish Counting. Visual counting continues. Nighttime video counts commenced on 15 June.
- 3.5 PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. Separation by Code is currently active for separate NOAA studies by D. Marsh. This week 52 yearling Chinook, subyearling Chinook, and steelhead were examined with no gas bubble trauma observed. Fallbacks recorded crossing the separator bars this week: 3 steelhead and

one salmon. Fallback observations are available at the FPC website:

<http://www.fpc.org/adultsalmon/bonkeltcounts.htm>.

- 3.6 University of Idaho – AFF. USACE funded adult salmonid sampling continues.
- 3.7 University of Idaho – Lamprey. HD-PIT and JSATs tagging continues from the AFF traps. Trap and haul activities continue at the WA Shore LFS/LPS.
- 3.8 USDA - Avian Hazing. Land-based hazing continues.
- 3.9 USFWS – National Fish Health Survey. Adult shad collection will begin in June. Juvenile shad collection is scheduled to begin in September.
- 3.10 Yakama Nation – Lamprey. Collection of 238 lamprey for translocation studies is scheduled to begin in June.
- 3.11 Yakama Nation – Shad. Collection of adult shad from the AFF for the white sturgeon broodstock program is scheduled to begin in June.
- 3.12 Nez Perce – Lamprey. Collection of 238 lamprey for translocation studies began on 21 June.

4 FISHWAYS

4.1 Project biologists inspected 16 through 22 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) | | | | |
| All Week | WG-64 | Submergence <8.0' | Malfunctioning A-branch diffusers | N/A |
| 6/17 | A-branch | Water level > 1.4' | N/A | None |
| CASCADES ISLAND (CI) – Nothing to report | | | | |
| WASHINGTON SHORE (WS) – Nothing to report | | | | |

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 22 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 were removed from fishway entrances by 13 June.

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 fishway entrances.

4.5.5 The AFF was out of service from 15 – 18 June due to elevated incidence of mortalities. The project removed the final segment of the bypass flumes and operations resumed on 19 June.

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.

4.7.1 The Bradford Island LPS was watered up on 17 April.

4.7.2 The WA shore AWS LPS was watered up on 06 May.

- 4.7.3 The new WA shore LPS/LFS was watered up on 4 June. The LFS system was shut down on 20 June due to lamprey mortalities and remains dewatered. The LPS system will operate until fish are salvaged from the system.
- 4.7.4 Cascades Island LPS remains out of service until connection to forebay is complete.

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.
- 5.3 **HAZMAT, SPILLS AND CLEANUP** Nothing to report.

6 TELETYPE CURRENTLY IN EFFECT

- 6.1 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.
- 6.2 A teletype sent on 18 June updates the spill priority list and spill caps for fish passage season starting 15 May until further notice based on observed TDG data.
- 6.3 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.
- 6.4 A teletype sent on 12 June requests that the BON pool operate within a 1.5' band, hard constraint from 0600 on 17 June until 1800 on 21 June, and from 0600 on 24 June until 1800 on 27 June for treaty fishing operations.
- 6.5 A teletype sent on 19 June requests that from 2000 to 2300 on 4 July, operate BON pool from 75.8' – 76.5' as a hard constraint and 76.0' – 76.5' as a soft constraint for Hood River fireworks staging and safety. In addition, for Hood River recreation use operate BON pool as following: less than 75.0' as a soft constraint from 1200 – 1800 on 5 July; less than 75.0' as a hard constraint and less than 74.5' as a soft constraint from 0600 – 1800 on 6 – 7 July.

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