



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
BONNEVILLE LOCK AND DAM PROJECT
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CENWP-OD-B

12 September 2013

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 36 of 2013, which covers the period from 01 through 07 September 2013

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 96.3 to 105.6 kcfs. Daily average project tailwater ranged from 9.5' to 10.3' msl. Daily average powerhouse forebay elevation ranged from 74.9' to 75.7' msl. Daily average water temperatures ranged from 72°F to 73°F. Secchi disk measurements ranged from 6.0' to greater than 7.0'.

b. Spill Bays 01 and 18 provide attraction flow for Cascades Island and B-branch, respectively. They are open 6" during daylight hours. The summer spill season ended on 31 August. Daily average spill ranged from 1.3 to 1.6 kcfs.

c. Unit Operation. Powerhouse Two is the priority powerhouse.

(1) Unit 01 went out of service at 0946 on 23 July for a 5 year overhaul.

(2) Unit 11 went out of service at 0900 on 09 September 2012 for high thrust bearing temperatures.

(3) Unit 12 went out of service at 0713 on 22 July for digital governor installation. It was returned to service at 1707 on 05 September.

d. 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. Gatewell drawdowns are measured on Tuesdays and more frequently as needed.

2. ACTIVITIES:

a. Auxiliary Water System Closures. The following AWS closures occurred this reporting week:

(1) FV1-1 was closed for cleaning from 0728 to 0740 on 03 September.

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(2) FV5-3 was closed from 0900 to 1200 on 04 September for a dive to re-cover a blown hatch in the FG6-18 diffuser pit.

(3) FV5-4 was closed from 0900 to 1200 on 04 September for a dive to re-cover a blown hatch in the FG6-18 diffuser pit.

b. STS/VBS inspections. Table 3. STS and VBS inspection.

| <i>Unit</i> | <i>Date</i> | <i>Run Hours</i> | <i>Comments</i> |
|-------------|-------------|------------------|---------------------------------------|
| 11 | N/A | OOS | Unit 11 remains out of service |
| 12-18 | N/A | N/A | Inspection scheduled for 23 September |

c. Dewatering and Fish Salvage. The following fish salvage activities occurred this reporting week:

(1) On 03 September, Project Biologists recovered 30 Sculpin spp., 2 juvenile lamprey, and 2 crayfish from the Unit 12 tail logs. All fishes were returned to the tailrace in good condition.

3. RESEARCH:

a. CRITFC. Annual Chinook, Coho, sockeye, and steelhead sampling in the AFF continues. Modified trapping procedures under FPP App. G, Section 4 occurred on 5 August. Temperatures in excess of 72°F negated sampling from 1-3 September.

b. NOAA – Lamprey. LPS count network installed. HD-PIT tagging continues from the AFF traps.

c. Normandeau – Fish Counting. Visual counting continues.

d. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. Higher temperature sampling protocols continued this week due to water temperatures above 70°F. Modified sampling during higher temperatures means Index/Condition sampling will take place every other day until the daily average descends to 69.5°F. Sample and bypass mode will occur on alternating 24 hour periods (0700-0700). No research fish were collected. Fallbacks recorded crossing the separator bars this reporting week: 11 salmon and one unknown salmonid. Truck releases of summer out-migrants originating from Snake River dams began on 18 August.

e. University of Idaho – AFF. USACE funded adult salmonid sampling continues.

Trapping in the AFF ceased on 5 August when daily average river temperatures reached 70°F.

f. University of Idaho – Lamprey. HD-PIT and JSATs tagging continues from the AFF traps.

g. Oregon and Washington Departments of Fish and Wildlife – Tule counting. Tule counting began on 15 August.

4. FISHWAYS:

a. Project biologists inspected 01 through 07 September.

b. Fish Passage Plan Observations.

(1) Table 4. FPP Out of Criteria items.

| Date | Location | FPP Items | Cause | Response |
|------------------------------|------------------|--------------------|-------------------------|-------------------|
| BRADFORD ISLAND (BI) | | | | |
| 9/7 | PH1 | Unit Priority | Split flows - FPP 2.1.2 | Ops adjusted |
| 9/1 | Brad Island Exit | Needs cleaning | Macrophytes | Cleaned |
| 9/6-7 | FV3-9 trash rack | Needs cleaning | Macrophytes | Request submitted |
| 9/4,6 | A-branch | Water level > 1.1' | Suspected conduit leak | None |
| 9/2 | B-branch | Ent diff < 1.0' | Unknown | Ops adjusted |
| CASCADES ISLAND (CI) | | | | |
| 9/4 | C.I. Entrance | Ent diff < 1.0' | Dive to repair FG6-18 | Job completed |
| WASHINGTON SHORE (WS) | | | | |
| 9/7 | SDE | Ent diff < 1.0' | Unknown | None |

(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.

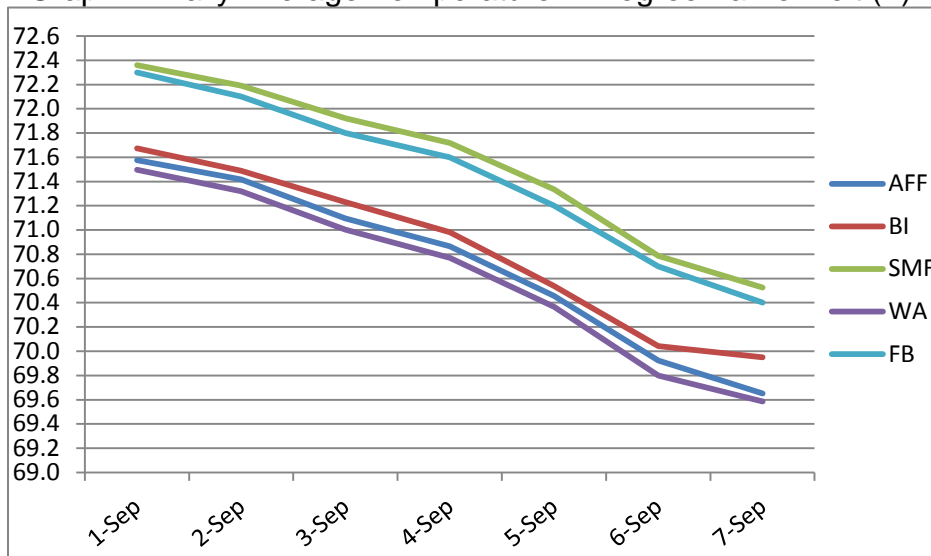
(3) A-branch diffuser FG3-3 and 3-6 are partially open in manual. FG3-5 is closed in manual. Repairs will occur when the Bradford Island ladder is dewatered. The next possible time period will be 2013/14 winter maintenance.

(4) PH2CC diffuser A2 is stuck closed. Diffuser B7 has been closed until repairs to the limit torque can be performed. The next possible time period will be 2014/15 winter maintenance.

c. Fishway Temperatures. Temperatures are normally taken from 01 March through 30 November. Table 5. Daily Average Temperature in Degree Fahrenheit (F).

| Daily Averages | | | | | |
|----------------|------|-----------|------|----------|------|
| Date | AFF | Brad. Is. | SMF | WA Shore | FB |
| 1-Sep | 71.6 | 71.7 | 72.4 | 71.5 | 72.3 |
| 2-Sep | 71.4 | 71.5 | 72.2 | 71.3 | 72.1 |
| 3-Sep | 71.1 | 71.2 | 71.9 | 71.0 | 71.8 |
| 4-Sep | 70.9 | 71.0 | 71.7 | 70.8 | 71.6 |
| 5-Sep | 70.5 | 70.5 | 71.3 | 70.4 | 71.2 |
| 6-Sep | 69.9 | 70.0 | 70.8 | 69.8 | 70.7 |
| 7-Sep | 69.7 | 70.0 | 70.5 | 69.6 | 70.4 |

Graph1. Daily Average Temperature in Degree Fahrenheit (F).



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

e. Adult Fishways.

(1) Calibration was checked on 06 September.

(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.

(3) All SLEDs are removed.

(4) All ladders remain in service.

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f. Juvenile Fishways.

(1) The intake gate for the downstream exit of the Ice and Trash Sluiceway (ITS) was discovered to be in serious disrepair on 01 September. The cable holding the gate is frayed and emergency repairs are underway. Bulkheads were placed in front of all chaingates. Repairs are ongoing and are estimated to take several weeks.

(2) DSM2 remains in service.

(3) The hydrocannon remains in service.

(4) The B2CC was closed at 0008 on 01 September.

(5) All avian arrays are installed.

g. Lamprey Fishways.

(1) The Bradford Island LPS remains in service.

(2) The WA shore AWS LPS remains in service.

(3) The WA shore LPS/LFS was taken out of service on 30 August. University of ID personnel observed the low water alarm indication on the upwelling box and contacted Project Fisheries. After investigation by Operations and electrical crews it was determined that the water supply pump had faulted and potentially burnt out. Due to the fact that no water could be supplied without deploying a back up pump, the butterfly valve was closed to prevent lamprey from being falsely attracted up the LFS.

(4) Cascades Island LPS remains in service.

5. CONSTRUCTION: WA Shore LPS/LFS Installation. Flume construction is complete. Repairs and modifications to the LFS are tentatively scheduled for October/November 2013.

6. HAZMAT, SPILLS AND CLEANUP: Nothing to report.

7. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 04 September cancels a previous teletype intended to improve PH2 gatewell conditions for passing fish. Effective immediately all units are to resume operating within the upper and lower limits of the 1% efficiency range as defined in the FPP section 5.

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b. A teletype sent on 06 September requests that from 0600 on 10 September through 1800 on 14 September, operate Bonneville pool within a 1.5' band as a hard constraint for treaty fishing.

c. A teletype sent on 23 August requests that outflows be maintained as low and constant as possible from 0600 – 1200 on 2 September, with flows not exceeding 150 kcfs, for a cross-channel swim at Hood River, Oregon. RCC will be notified if swimmers leave the water earlier than 1200 hrs.

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Bonneville Project