

**MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)**

**SUBJECT:** Bonneville Project, Fishway and Fish Activities for **Week 06** of 2020, which covers the period from **02 - 08 February**.

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 158.6 to 235.9 kcfs. Daily average powerhouse forebay elevation ranged from 73.0' to 74.6' msl. Daily average project tailwater ranged from 15.3' to 19.9' msl. Secchi disk measurements ranged from 5.0' to 7.0+'. Daily average water temperature ranged from 39° to 40°F.

b. Daily average spill ranged from 0.5 to 7.9 kcfs.

c. Unit Operation. PH2 remains the priority powerhouse. Main unit drawdowns are measured every Monday and more frequently as needed.

- Table 1. Main Unit Outages.

| Unit | OOS            | RTS            | Reason             |
|------|----------------|----------------|--------------------|
| 1    | 1018 on 06 Feb | 1159 on 06 Feb | P.O., Trash Raking |
| 2    | 1525 on 04 Feb | 0713 on 05 Feb | Forced, Dive Ops   |
| 2    | 1203 on 06 Feb | 1342 on 06 Feb | P.O., Trash Raking |
| 9    | 1345 on 06 Feb | 1546 on 06 Feb | P.O., Trash Raking |
| 10   | 0001 on 03 Feb |                | P.O., Annual       |
| 11   | 0803 on 04 Feb | 2140 on 04 Feb | P.O., Dive Ops     |
| 12   | 0803 on 04 Feb | 2146 on 04 Feb | P.O., Dive Ops     |
| 13   | 0803 on 04 Feb | 2157 on 04 Feb | P.O., Dive Ops     |
| 13   | 1441 on 03 Feb | 1547 on 03 Feb | P.O., Trash Raking |
| 14   | 1342 on 03 Feb | 1439 on 03 Feb | P.O., Trash Raking |
| 14   | 1524 on 04 Feb | 2052 on 04 Feb | Forced, Dive Ops   |
| 15   | 1244 on 03 Feb | 1341 on 03 Feb | P.O., Trash Raking |
| 15   | 1530 on 04 Feb | 2051 on 04 Feb | Forced, Dive Ops   |
| 16   | 0003 on 03 Feb | 1437 on 06 Feb | P.O., Annual       |
| 17   | 0931 on 03 Feb | 1106 on 03 Feb | P.O., Trash Raking |
| 18   | 0835 on 03 Feb | 0929 on 03 Feb | P.O., Trash Raking |

d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder.

Fish Unit Outages. Fish Units are periodically placed into reserve service (RS) to float trash when debris differentials become excessive and trash raking is not possible.

- Table 2. Fish Unit Outages.

| Unit | OOS            | RTS            | Reason              | Duration       |
|------|----------------|----------------|---------------------|----------------|
| F1   | 1901 on 06 Feb | 0324 on 07 Feb | RS, Float Trash     | 8 hrs, 23 mins |
| F2   | 0010 on 15 Dec | ---            | P.O., 2-YR Overhaul | ---            |

- Table 3. Fish Unit Drawdowns, in Feet.

| Date | F1   | F2  |
|------|------|-----|
| 2/2  | 0.3' | --- |
| 2/3  | 0.9' | --- |
| 2/4  | 1.8' | --- |
| 2/5  | 3.0' | --- |
| 2/6  | 7.5' | --- |
| 2/7  | 0.2' | --- |
| 2/8  | 0.3' | --- |

## 2. MAINTENANCE ACTIVITIES:

- Auxiliary Water System Closures. Nothing to report.
- STS/VBS Inspections. Nothing to report.
- Dewatering and Fish Salvages. Nothing to report.

## 3. RESEARCH:

- Four Peaks Environmental - Fish counting contract: Daytime visual counting (0500 to 2100) began on 01 April and concluded on 30 November. Daytime video (0400-2000 PST) commenced on 01 December. Fish counts can be viewed [here](#).

## 4. FISHWAYS:

- Project biologists inspected 3-4, 6 February.
- Fish passage plan observations.

- Table 5. FPP Items Out of Criteria.

| Date                                 | Location     | FPP Violation       | Cause   | Response |
|--------------------------------------|--------------|---------------------|---------|----------|
| Bradford Island – Nothing to report  |              |                     |         |          |
| Cascades Island – Nothing to report  |              |                     |         |          |
| Washington Shore – Nothing to report |              |                     |         |          |
| 2/6                                  | Weir 37 & 38 | Differential > 1.1' | Unknown | NA       |

- On 01 May 2018, FG6-11 (Cascades Island) was found broken partially open. The diffuser shaft had broken away from the motor. Due to the subsidence issues at Cascades Island, repairs cannot occur until crane support is allowed in the vicinity. FG6-11 should be open at tailwaters  $\geq 14.0'$ .
- On 18 August 2018, FG6-12 (Cascades Island) was found to be mechanically bound in the open position. FG6-12 should only be open with tailwaters ranging from 11.0'-33.0'. Due to the subsidence issues at Cascades Island, repairs cannot occur until crane support is allowed in the vicinity.
- On 27 March 2019, FG6-18 (Cascades Island) was found to be mechanically bound in the closed position. FG6-18 should be open with tailwaters  $> 12.0'$ . Due to the subsidence issues at Cascades Island, repairs cannot occur until crane support is allowed in the vicinity.

c. Adult Fishways.

- (1) The Bradford Island fishway went out of service and to orifice flow on 28 November for the 2019/20 IWW period.
- (2) The AFF remains out of service.
- (3) Sensor calibration occurred on 05 Feb.
- (4) SLEDs are installed at all Cascades Island and PH2 entrances.

d. Juvenile Fishways.

- (1) The ITS remains in service (auto-chain gates 3B, 6C, & 10B only).
- (2) The hydro-cannon remains out of service.
- (3) The B2CC remains out of service.
- (4) The DSM remains out of service.
- (5) STSs remain out of service.

e. Lamprey Fishways.

- (1) All Lamprey Passage Structures remain out of service.
- (2) The Bradford Island Wetted Wall (BIWW) remains out of service.
- (3) The PH2 Lamprey Flume Structure (LFS) remains out of service.
- (4) The AFF Lamprey trap remains out of service.

f. Avian Monitoring. Avian counts are recorded 01 April – 31 October.

**5. WATER QUALITY MONITORING:**

- a. Fishway Temperatures. Temperatures are taken from 01 March - 30 November.
- b. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

**6. CONSTRUCTION:**

- a. Construction on the new PH2 Oil Water Separator began 14 October.

**7. HAZMAT, SPILLS AND CLEANUP:** Nothing to report.

**8. TELETYPES CURRENTLY IN EFFECT:**

- A teletype sent on 20 December updated the Chum Salmon spawning operations. Effective 24 December at 1200 until further notice, maintain Bonneville tailwater elevation at a minimum of 11.3' at all hours. The official tailwater staff gauge is located 50' upstream of Tanner Creek (Oregon side).

- A teletype sent on 31 January details the spill operation on 04 February from 1000 to 1200 hours to remove rocks from the spillway apron. The spill rate will be approximately 24 kcfs which equates to the flow through a gate open 12 feet.
- A teletype sent on 03 February replaces the teletype sent on 31 January. Paragraph 4 is revised from 2 additional hours up to 4 additional hours.

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