

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 44** of 2019, which covers the period from **27 October – 02 November**.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 89.9 to 114.4 kcfs. Daily average powerhouse forebay elevation ranged from 74.5' to 75.2' msl. Daily average project tailwater ranged from 8.3' to 10.4' msl. Secchi disk measurements 6.0 to 7.0+'. Daily average water temperature ranged from 51°F to 56°F.
- b. Daily average spill ranged from 0.9 to 1.2 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 Date	RTS Date	Reason
1	1700 on 22 Oct	2055 on 28 Oct	ZJ13 inspection/repair
2	0616 on 21 Oct	2055 on 28 Oct	Bank 1/2 Outage
3	0001 on 21 Oct	---	P.O. Annual / Cooler Replacement
5	0600 on 28 Oct	1139 on 29 Oct	P.O. XFMR Deluge Wiring
6	0600 on 28 Oct	1139 on 29 Oct	P.O. XFMR Deluge Wiring
7	0600 on 28 Oct	1139 on 29 Oct	P.O. XFMR Deluge Wiring
8	0600 on 28 Oct	1139 on 29 Oct	P.O. XFMR Deluge Wiring
1	0820 on 29 Oct	1212 on 29 Oct	XJ1 Open, U2 forced OOS.
2	0820 on 29 Oct	---	XJ1 Open, U2 forced OOS.

- 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 Date	RTS Date	Reason
F1	1624 on 30 Oct	---	F.O. Lower Guide Oil Leak
F2	1913 on 30 Oct	0129 on 31 Oct	RS, (7.1') Float Trash

- Table 3. Fish unit drawdowns, in feet.

Date	F1	F2
10/27	0.9'	0.8'
10/28	0.1'	0.2'
10/29	0.4'	1.8'
10/30	*	7.1'
10/31	*	0.2'
11/1	*	0.3'
11/2	*	---

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV 1-1 closed for cleaning from 0733 to 0756 on 28 October.
- FV 3-7 closed for cleaning from 1250 to 1310 on 28 October.
- FV 3-9 closed for cleaning from 1250 to 1310 on 28 October.
- FV 1-1 closed for cleaning from 1049 to ____ on 31 October.
- FV 3-7 closed for cleaning from 1456 to 1633 on 31 October.
- FV 3-9 closed for cleaning from 1456 to 1633 on 31 October.

b. STS/VBS Inspections. Nothing to report.

c. Dewatering and Fish Salvages. Nothing to report.

3. RESEARCH:

a. Four Peaks Environmental - Fish counting contract: Daytime visual counting (0500 to 2100) began on 01 April. Nighttime video counting (2100 to 0500) concluded on 30 September. Fish counts can be viewed [here](#).

b. PSMFC – Smolt Monitoring Facility: Smolt monitoring operations concluded for the season at Bonneville Juvenile Fish Monitoring Facility at 0700 on Thursday, 31 October. The system was placed in bypass mode at that time. Full flow PIT tag interrogation will remain active until the 2-mile pipe is dewatered, typically around mid-December. Debris at the PDS and fish/debris separator ranged from light to moderate consisting of filamentous algae, aquatic macrophytes, a few sticks and dead adult shad. Spill and corner collector operations for the juvenile fish passage season concluded just after midnight on 01 September. GBT monitoring activities have concluded for the season. Please follow this [link](#) to the FPC web page for further details. Truck releases of summer/fall out-migrants originating from Snake River dams occur every other day and are scheduled to end on 01 November. Fallbacks observed this week: six salmon. No fish collections for research were conducted this week.

c. CRITFC – Adult Salmonid Sampling: Adult salmonid sampling concluded in the AFF on 18 October.

- d. Whooshh Innovations: Evaluation of a proprietary fish identification system commenced in coordination with CRITFC’s adult salmonid sampling efforts in the AFF on 30 April and concluded on 18 October. Whooshh’s equipment is planned for removal from the AFF after its dewatering in November.
- e. University of Idaho – Lamprey Evaluations: Collection and tagging in association with Corps funded research commenced with the start of the Lamprey Flume Structure (LFS) and AFF lamprey traps on 13 May. Collection and tagging efforts ended 13 September. They remain onsite collecting passage data and removing equipment.

4. FISHWAYS:

- a. Project biologists inspected from 27 October – 02 November.
- b. Fish passage plan observations.

- Table 4. FPP out of criteria items.

Date	Location	FPP Violation	Cause	Response
Bradford Island				
10/28-11/2	PH1CC (south)	Differential < 1.0'	Unknown	NA
10/27-28	B-Branch	Differential >2.0'	Unknown	NA
10/30	A-Branch	Differential >1.1'	Unknown	NA
Cascades Island – Nothing to report				
Washington Shore – Nothing to report				

- 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.
- On 28 March 2019, FG3-5 (A-Branch) was reported not closing due to a torque limit issue. The diffuser was opened due to current tailwater limits and a safe clearance was issued on the equipment. Repairs can not be made until the in-water work period this winter. FG3-5 should only be open for tailwaters of $\geq 16.7'$.

- On 23 August 2017, FG 3-27 (B-branch) was found to be mechanically unsound. It has been set to manual and remains in the open position to avoid further damage. FG3-27 should be open between tailwaters of 10.5' - 28.0' Repairs are planned for the 2019-2020 outage.

c. Adult Fishways.

- (1) The AFF went into bypass mode for the season on 18 October.
- (2) Sensor calibration occurred did not occur this reporting week.
- (3) SLEDs are installed at all locations.

d. Juvenile Fishways.

- (1) The ITS remains open (auto-chain gates 3B, 6C, & 10B only).
- (2) The hydro-cannon remains in service.
- (3) The B2CC remains closed.
- (4) The DSM remains in service.
 - DSM2 had the emergency release gate (ERG) intentionally tripped at 0924 on 31 October to accomidate the LFS hatch ROV inspection. See [19BON63 MFR](#) for more details.
- (5) STSs are installed.

e. Lamprey Fishways.

- (1) The Bradford Island, Cascades Island, and Washington Shore LPSs were shut down for the season on 31 October.
- (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. Nighttime 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. A teletype sent on 30 October states effective 04 November at 0600 until further notice, operate the Bonneville tailwater for Chum Salmon spawning operations. Please see teletype for more details.

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Bonneville Project