

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

**SUBJECT:** Bonneville Project, Fishway and Fish Activities for **Week 14** of 2020, which covers the period from **29 March – 04 April**.

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 125.6 to 150.2 kcfs. Daily average powerhouse forebay elevation ranged from 74.2' to 74.7' msl. Daily average project tailwater ranged from 11.5' to 13.4' msl. Secchi disk measurements ranged from 4.0' to 6.0'. Daily average water temperature ranged from 44° to 45°F.

b. Daily average spill ranged from 1.3 to 1.5 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
10	0436 on 04 Apr	1126 on 04 Apr	Governor Issues/ Solenoid Repair
14	0740 on 24 Feb	---	P.O., 4 year overhaul

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	0747 on 27 Mar	1357 on 29 Mar	Headgate Insp.	2 days, 6 hrs, 10 mins

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
3/29	0.1'	0.2'
3/30	0.3'	0.4'
3/31	0.3'	0.4'
4/1	0.2'	0.3'
4/2	0.2'	0.3'
4/3	0.2'	0.3'
4/4	---	0.3'

**2. MAINTENANCE ACTIVITIES:**

a. Auxiliary Water System Closures.

- FV 3-7 closed for cleaning from 1313 to 1335 on 31 Mar.
- FV 3-9 closed for cleaning from 1313 to 1335 on 31 Mar.
- FV 4-3 closed to troubleshoot for FG 3-26
- FV 3-7 closed for cleaning from 0747 to 0829 on 01 Apr.
- FV 3-9 closed for cleaning from 0747 to 0829 on 01 Apr.

- 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. Fish counts can be viewed [here](#).
- b. PSMFC – Smolt Monitoring: Sample collections at the SMF began at 0700 on 02 March. Debris at the PDS and fish/debris separator was light to moderate consisting mostly of sticks. Kelt observations were monitored by direct observation from Smolt Monitoring personnel and video recording by Fisheries Field Unit and SMP until the Kelt Trigger was reached. Nine steelhead fallbacks were observed this week. No fish collections for research purposes were conducted this week. More details can be found on the [FPC web page](#).
- c. USDA - Pinniped hazing: Deck-based hazing began 01 March.
- d. CRITFC - Pinniped hazing: Hazing by boat began 01 March. Suspended indefinitely 20 March for social distancing purposes.

**4. FISHWAYS:**

- a. Project biologists inspected 29 March - 04 April.
- b. Fish passage plan observations.

- Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island – Nothing to report				
3/29,31 4/2-4	A-Branch	Staff Gauge Diff. > 1.1'	Unknown	NA
3/30 4/1-4	PH1CC	S. Ent. Diff. < 1.0'	Unknown	NA
3/31	FG 3-26	Closed	Deadband Cycling	Manually Opened
4/3-4	B-Branch	Ent. Diff. > 2.0'	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.
- c. Adult Fishways.

- (1) The Bradford Island fishway remains in service.
- (2) The AFF remains out of service.
- (3) Sensor calibration occurred on 04 Apr.
- (4) SLEDs are installed at all locations.

d. Juvenile Fishways.

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

e. Lamprey Fishways.

- (1) WA Shore and CI LPSs were returned to service on 01 April. BI LPS remains 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.

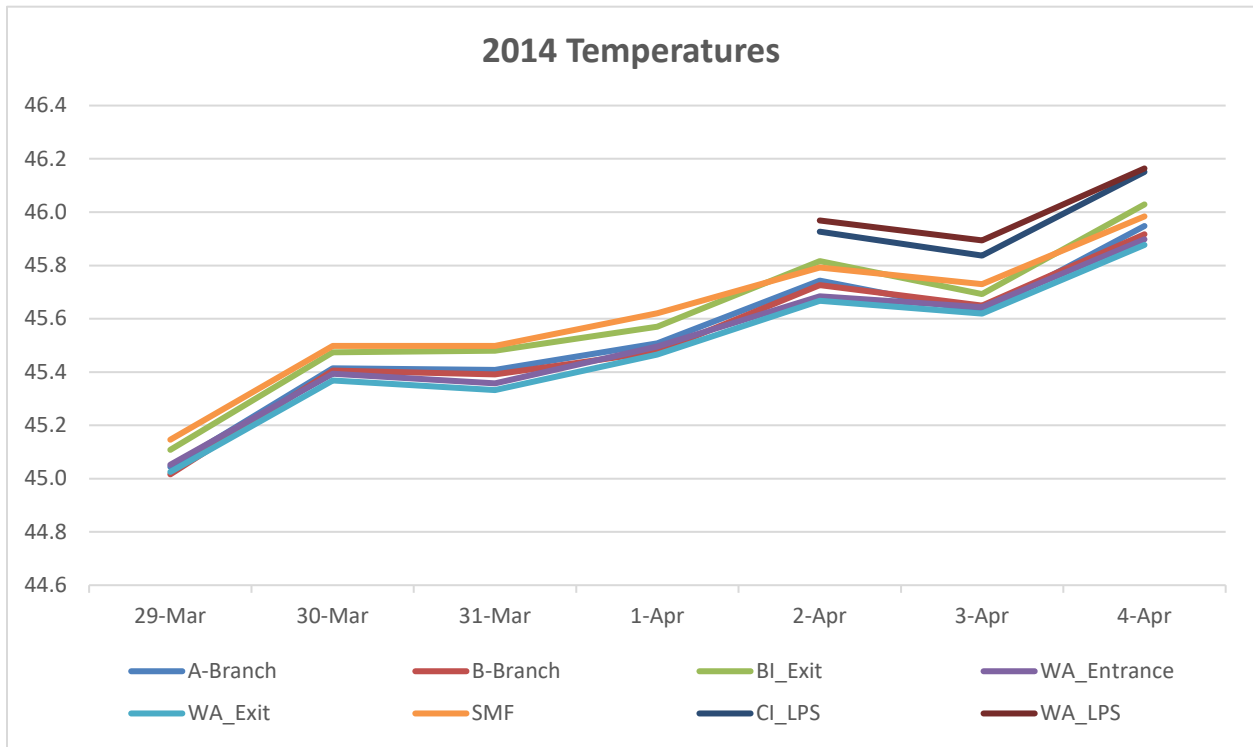
- (1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
4/1	---	---	---	---	---
4/2	1	0	0	0	0
4/3	2	0	0	0	0
4/4	5	2	0	0	0

**5. WATER QUALITY MONITORING:**

a. Fishway Temperatures. Temperatures are taken from 01 March - 30 November.

Date	A-Branch	B-Branch	BI_Exit	WA_Entrance	WA_Exit	SMF	CI_LPS	WA_LPS
29-Mar	45.0	45.0	45.1	45.1	45.0	45.1		
30-Mar	45.4	45.4	45.5	45.4	45.4	45.5		
31-Mar	45.4	45.4	45.5	45.4	45.3	45.5		
1-Apr	45.5	45.5	45.6	45.5	45.5	45.6		
2-Apr	45.7	45.7	45.8	45.7	45.7	45.8	45.9	46.0
3-Apr	45.6	45.6	45.7	45.6	45.6	45.7	45.8	45.9
4-Apr	45.9	45.9	46.0	45.9	45.9	46.0	46.2	46.2



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).

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