

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 20** of 2020, which covers the period from **10 – 16 May**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 259.3 to 353.0 kcfs. Daily average powerhouse forebay elevation ranged from 72.6' to 73.7' msl. Daily average project tailwater ranged from 20.2' to 24.5' msl. Secchi disk measurements ranged from 3.0' to 5.0'. Daily average water temperature remained 55°F.

b. Daily average spill ranged from 132.5 to 142.4 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
2	0715 on 06 Apr	---	P.O., 5 year overhaul
11	1025 on 13 May	1131 on 13 May	P.O., Trash Raking
12	0753 on 20 Apr	---	P.O., 4 year overhaul
17	1141 on 13 May	1312 on 13 May	P.O., Trash Raking
18	1315 on 13 May	1357 on 13 May	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. Nothing to report.

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
5/10	0.6'	0.8'
5/11	0.8'	1.0'
5/12	0.9'	0.7'
5/13	0.1'	0.2'
5/14	0.2'	0.3'
5/15	0.5'	0.9'
5/16	0.3'	0.8'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV 6-9 closed for cleaning from 1024 to (time not recorded) on 11 May.
- FV 3-9 closed for cleaning from 1512 to 1518 on 14 May.

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. GBT examinations began on 19 April and are typically performed two days per week through spill. Results of this week’s GBT examinations: 200 yearling Chinook and Steelhead examined with two fish (1.0%) GBT symptoms observed. 16 steelhead, six salmon and three unknown salmonid 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 10 - 16 May.
- b. Fish passage plan observations.

• Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island – Nothing to report				
5/10-14,16	A-Branch	Weir Diff. > 1.1’	Unknown	NA
5/14	PH1CC	N. Ent. Diff. < 1.0’	Unknown	NA
5/10,15	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 ≥ 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 AFF remains in service.
- (2) Sensor calibration occurred on 16 May.
- (3) 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) LPSs remain in 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.

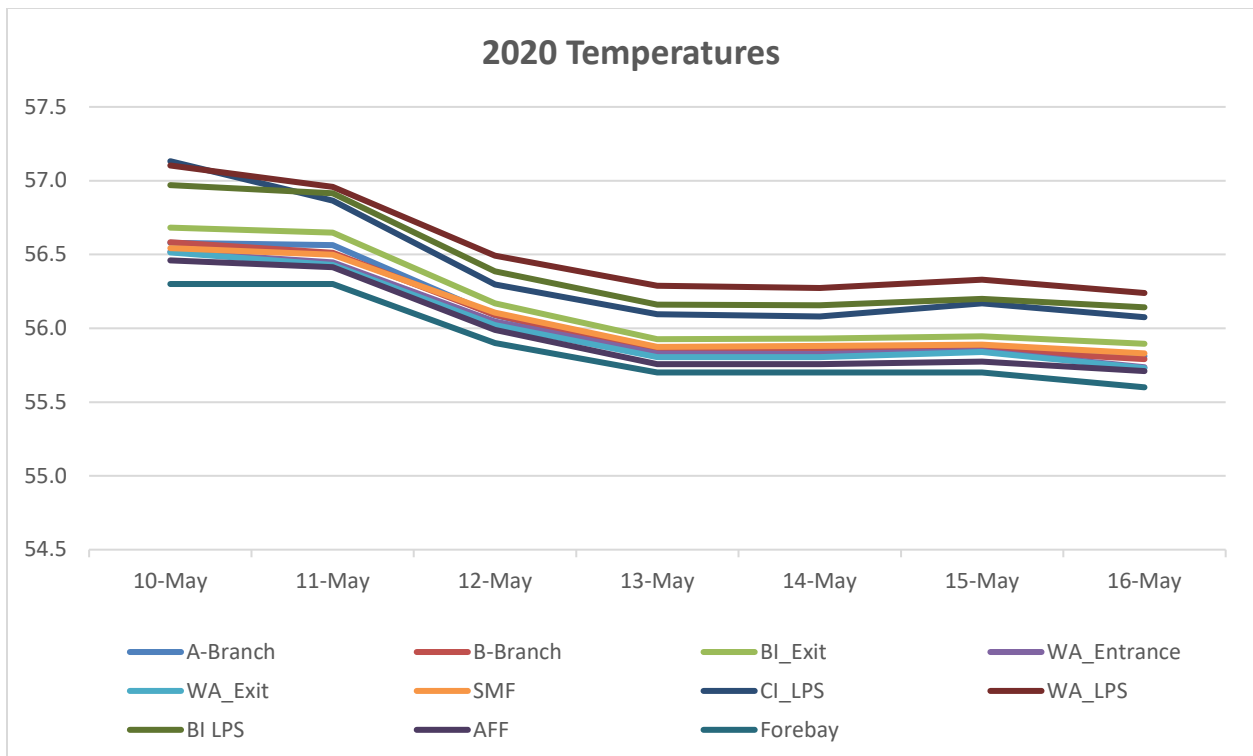
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
5/10	0	1	0	0	0
5/11	3	1	0	0	0
5/12	6	1	0	0	0
5/13	4	2	0	0	0
5/14	8	0	0	0	0
5/15	13	0	0	0	0
5/16	25	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	BI LPS	AFF	Forebay
10-May	56.6	56.6	56.7	56.5	56.5	56.5	57.1	57.1	57.0	56.5	56.3
11-May	56.6	56.5	56.6	56.4	56.4	56.5	56.9	57.0	56.9	56.4	56.3
12-May	56.1	56.1	56.2	56.0	56.0	56.1	56.3	56.5	56.4	56.0	55.9
13-May	55.8	55.8	55.9	55.8	55.8	55.9	56.1	56.3	56.2	55.8	55.7
14-May	55.8	55.8	55.9	55.8	55.8	55.9	56.1	56.3	56.2	55.8	55.7
15-May	55.9	55.9	55.9	55.8	55.8	55.9	56.2	56.3	56.2	55.8	55.7
16-May	55.8	55.8	55.9	55.7	55.7	55.8	56.1	56.2	56.1	55.7	55.6



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

6. CONSTRUCTION: Nothing to report.

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

8. TELETYPE CURRENTLY IN EFFECT:

- A teletype sent on 06 April states that effective 10 April through 15 June, operate in accordance with the FOP to provide Spring spill for fish passage. See teletype for details.

MICHAEL ADAMS, P.E.
Operations Project Manager
Bonneville Project