

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 22 of 2020, which covers the period from 24 – 30 May.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 313.2 to 365.8 kcfs. Daily average powerhouse forebay elevation ranged from 72.7' to 74.6' msl. Daily average project tailwater ranged from 23.0' to 25.5' msl. Secchi disk measurements remained 3.0'. Daily average water temperature ranged from 55° to 57°F.

b. Daily average spill ranged from 136.0 to 149.3 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
12	0753 on 20 Apr	---	P.O., 4 year overhaul
13	0005 on 27 May	1553 on 27 May	P.O., Quarterly Thrust Collar Insp.

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
5/24	1.1'	1.6'
5/25	1.7'	2.0'
5/26	0.3'	0.6'
5/27	0.2'	0.4'
5/28	0.1'	0.2'
5/29	0.2'	0.2'
5/30	0.4'	0.3'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV 1-1 closed for cleaning from 0721 to 0738 on 26 May.
- FV 3-7 closed for cleaning from 0814 to 0913 on 26 May.
- FV 3-7 closed for cleaning from 0814 to 0913 on 26 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 “mulch like” debris and a few sticks. GBT examinations began on 19 April and are typically performed two days per week through spill. Results of this week’s GBT examinations: 164 yearling Chinook, subyearling Chinook and Steelhead plus two three-spine stickleback, one peamouth and one smallmouth bass examined with one fish (0.6%) GBT symptoms observed. 19 steelhead, one salmon and one 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.
- e. CRITFC – Adult Salmonid Sampling. Adult Salmonid sampling in the AFF began on 25 May and typically occurs 5 days per week.

4. FISHWAYS:

- a. Project biologists inspected 24 - 30 May.
- b. Fish passage plan observations.

- Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island – Nothing to report				
5/24-30	A-Branch	Weir Diff. > 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.
- c. Adult Fishways.

- (1) The AFF remains in service.
- (2) Sensor calibration occurred on 30 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.

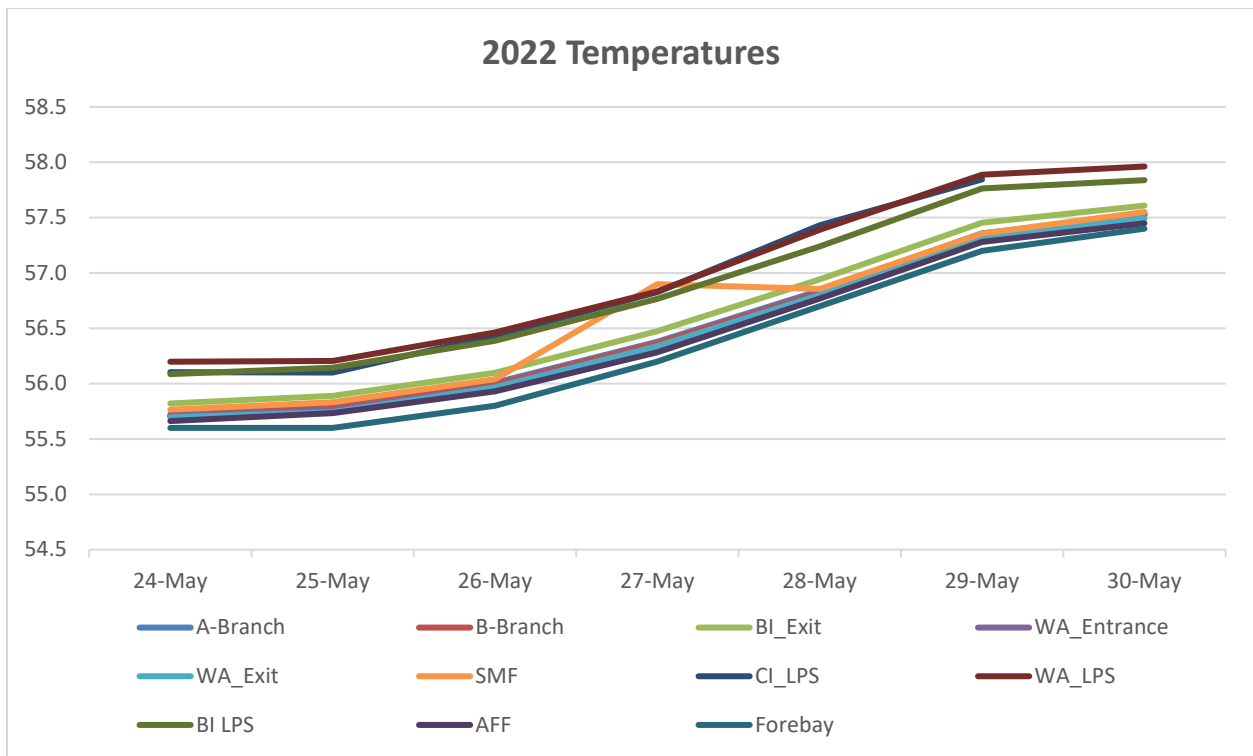
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
5/24	18	1	0	0	0
5/25	---	---	---	---	---
5/26	7	2	0	0	0
5/27	10	7	0	0	0
5/28	2	3	0	0	0
5/29	5	0	0	0	0
5/30	2	0	0	0	0

5. WATER QUALITY MONITORING:

a. Fishway Temperatures. Temperatures are taken from 01 March - 30 November. CI LPS logger failure 30 May – 4 June

Date	A-Branch	B-Branch	BI_Exit	WA_Entrance	WA_Exit	SMF	CI_LPS	WA_LPS	BI LPS	AFF	Forebay
24-May	55.7	55.7	55.8	55.7	55.7	55.8	56.1	56.2	56.1	55.7	55.6
25-May	55.8	55.8	55.9	55.8	55.7	55.8	56.1	56.2	56.1	55.7	55.6
26-May	56.0	56.0	56.1	56.0	56.0	56.0	56.4	56.5	56.4	55.9	55.8
27-May	56.4	56.4	56.5	56.3	56.3	56.9	56.8	56.8	56.8	56.3	56.2
28-May	56.8	56.8	56.9	56.8	56.8	56.9	57.4	57.4	57.2	56.8	56.7
29-May	57.4	57.3	57.5	57.3	57.3	57.4	57.8	57.9	57.8	57.3	57.2
30-May	57.5	57.5	57.6	57.5	57.5	57.6		58.0	57.8	57.4	57.4



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.

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