

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 30** of 2020, which covers the period from **19 – 25 July**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 172.9 to 214.7 kcfs. Daily average powerhouse forebay elevation ranged from 73.5' to 74.2' msl. Daily average project tailwater ranged from 14.8' to 17.3' msl. Secchi disk measurements ranged from 6.0' to 7.0'. Daily average water temperature ranged from 67° to 68°F.

b. Daily average spill ranged from 95.0 to 95.5 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
6	2000 on 12 Jul	---	P.O., Annual
8	0700 on 15 Jun	---	P.O., 5 year overhaul
13	0723 on 13 Jul	---	P.O., Headcover Pump Replacement
17	0021 on 21 Jul	1530 on 21 Jul	P.O., Quarterly Thrust Collar Insp.
18	0800 on 13 Jul	---	F.O., Thrust Bearing Leak

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	2300 on 18 Jul	0534 on 19 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 34 mins
F2	2312 on 19 Jul	0528 on 20 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 16 mins
F1	2300 on 20 Jul	0532 on 21 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 32 mins
F2	2309 on 21 Jul	0528 on 22 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 19 mins
F1	2304 on 22 Jul	0531 on 23 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 27 mins
F2	2259 on 23 Jul	0529 on 24 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 30 mins
F2	2251 on 24 Jul	0514 on 25 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 23 mins
F1	2259 on 25 Jul	---	R.S., Nighttime Lamprey Ops	---

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
7/19	0.5'	0.2'
7/20	0.6'	0.2'
7/21	0.5'	3.6'
7/22	1.3'	0.5'
7/23	0.1'	1.7'
7/24	0.5'	1.2'
7/25	1.0'	0.7'

2. MAINTENANCE ACTIVITIES:

- a. Auxiliary Water System Closures.
 - FV 3-7 closed for cleaning from 1510 to 1520 on 23 July.
 - FV 3-9 closed for cleaning from 1510 to 1520 on 23 July.
- 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 (2100-0500) began on 15 May. 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 consisting mostly of aquatic macrophytes, a few sticks and dead adult American Shad. GBT examinations began on 19 April and are typically performed two days per week through spill. Results of this week’s GBT examinations: 200 subyearling Chinook examined with no GBT symptoms observed. One steelhead and one salmon 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 - Avian hazing: Deck-based hazing began 01 March.
- d. CRITFC – Adult Salmonid Sampling. Adult Salmonid sampling in the AFF began on 25 May and typically occurs 5 days per week.
- e. ODFW – Steelhead Sampling. Steelhead sampling in the AFF began on 13 July and occurs in conjunction with CRITFC Adult Salmonid Sampling.

4. FISHWAYS:

- a. Project biologists inspected 19 - 25 July.
- b. Fish passage plan observations.
 - Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island				
7/19,22	A-Branch	Weir Staff Gauge > 1.4'	Unknown	NA
Cascades Island – Nothing to report.				
Washington Shore – Nothing to report.				

- FG6-11 (Cascades Island) is broken in the partially open position. The diffuser shaft broke 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 $\geq 14.0'$.
- FG6-12 (Cascades Island) is mechanically bound in the open position. The diffuser 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.
- FG6-18 (Cascades Island) is mechanically bound in the closed position. The diffuser 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.

- FG6-19 (Cascades Island) is mechanically bound in the closed position. The diffuser should be open with tailwaters > 15.0'. 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 22 July.
- (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 in service.

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

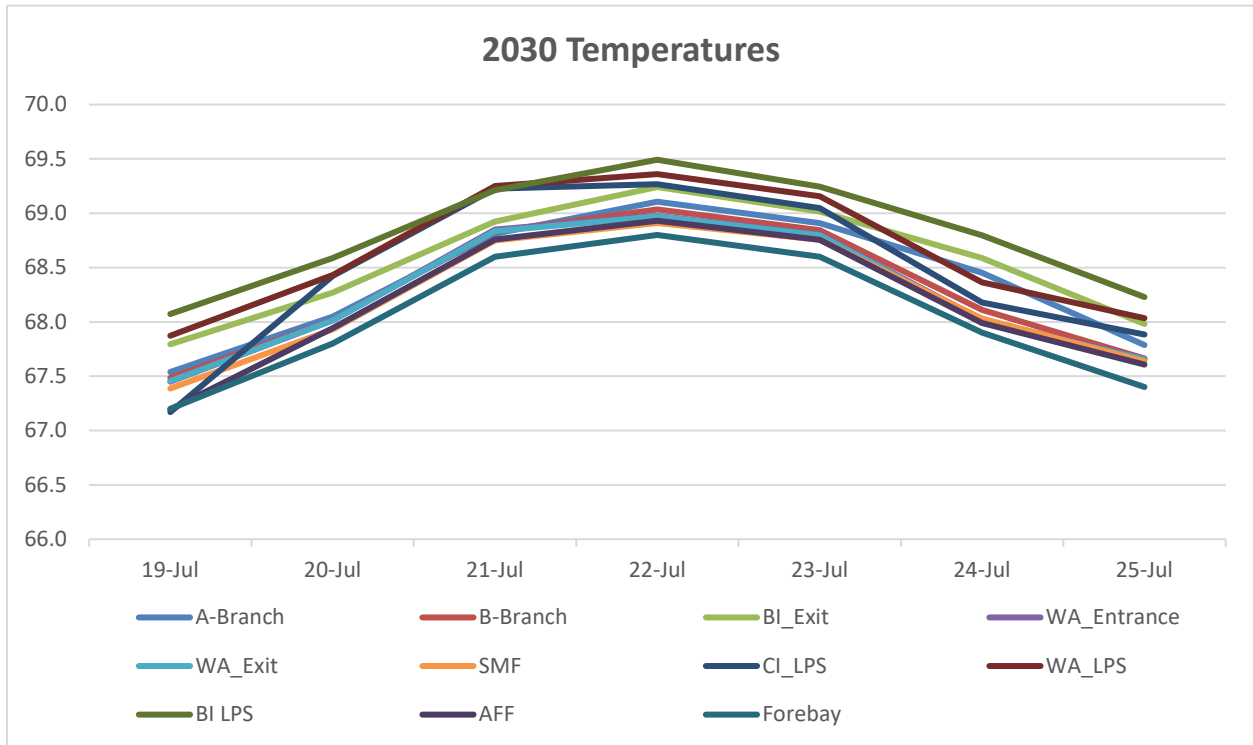
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
7/19	1	2	0	0	0
7/20	3	5	0	0	0
7/21	4	4	0	0	0
7/22	5	1	0	0	0
7/23	7	4	0	0	0
7/24	5	1	0	0	0
7/25	8	5	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
19-Jul	67.5	67.5	67.8	67.4	67.5	67.4	67.2	67.9	68.1	67.2	67.2
20-Jul	68.0	68.0	68.3	68.0	68.0	67.9	68.4	68.4	68.6	67.9	67.8
21-Jul	68.8	68.8	68.9	68.8	68.8	68.8	69.2	69.2	69.2	68.8	68.6
22-Jul	69.1	69.0	69.2	69.0	69.0	68.9	69.3	69.4	69.5	68.9	68.8
23-Jul	68.9	68.8	69.0	68.8	68.8	68.8	69.0	69.2	69.2	68.8	68.6
24-Jul	68.5	68.1	68.6	68.0	68.0	68.0	68.2	68.4	68.8	68.0	67.9
25-Jul	67.8	67.7	68.0	67.7	67.7	67.6	67.9	68.0	68.2	67.6	67.4



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 11 June states that effective 16 June through 31 August, operate in accordance with the FOP to provide Summer spill for fish passage. See teletype for details
- A teletype sent on 16 July requests that Bonneville pool operate within a 1.5' band, hard constraint, from 0600 on 20 July through 1800 on 23 July to facilitate treaty fishing.

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Bonneville Project