

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 31** of 2020, which covers the period from **26 July – 01 August**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 171.3 to 196.7 kcfs. Daily average powerhouse forebay elevation ranged from 73.3' to 74.3' msl. Daily average project tailwater ranged from 14.6' to 16.1' msl. Secchi disk measurements ranged from 6.0' to 7.0'. Daily average water temperature ranged from 68° to 70°F.

b. Daily average spill ranged from 94.8 to 95.6 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
5	1431 on 30 Jul	1438 on 30 Jul	P.O., Support U6 RTS
6	2000 on 12 Jul	1438 on 30 Jul	P.O., Annual
7	1431 on 30 Jul	1438 on 30 Jul	P.O., Support U6 RTS
8	0700 on 15 Jun	---	P.O., 5 year overhaul
13	0723 on 13 Jul	1528 on 30 Jul	P.O., Headcover Pump Replacement
16	1115 on 28 Jul	1745 on 28 Jul	STS Repair/Inspection
16	2020 on 29 Jul	1115 on 30 Jul	Ground on STS
18	0800 on 13 Jul	1723 on 28 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	2259 on 25 Jul	0530 on 26 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 31 mins
F2	2300 on 26 Jul	0527 on 27 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 27 mins
F2	2316 on 27 Jul	0530 on 28 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 14 mins
F1	2301 on 28 Jul	0527 on 29 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 26 mins
F2	2300 on 29 Jul	0533 on 30 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 33 mins
F1	2300 on 30 Jul	0528 on 31 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 28 mins
F2	2259 on 31 Jul	0556 on 01 Aug	R.S., Nighttime Lamprey Ops	6 hrs, 57 mins
F1	2239 on 01 Aug	---	R.S., Nighttime Lamprey Ops	---

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
7/26	0.3'	2.3'
7/27	1.0'	0.7'
7/28	2.2'	0.4'
7/29	0.2'	2.3'
7/30	0.8'	0.4'

7/31	0.1'	1.1'
8/1	0.5'	0.4'

2. MAINTENANCE ACTIVITIES:

- a. Auxiliary Water System Closures. Nothing to report.
- b. STS/VBS Inspections. Nothing to report.
- c. Dewatering and Fish Salvages. On 30 July, Project Biologists recovered 3 smallmouth bass, 2 shad and 5 sculpin from unit 13 tail logs. They were released upstream.

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: Higher sampling protocols were initiated on 30 July when water temperatures ascended to 70°F. Debris at the PDS and fish/debris separator was light to light moderate 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. No 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 26 July – 01 August.
- b. Fish passage plan observations.
 - Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island – Nothing to report.				
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 26 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.

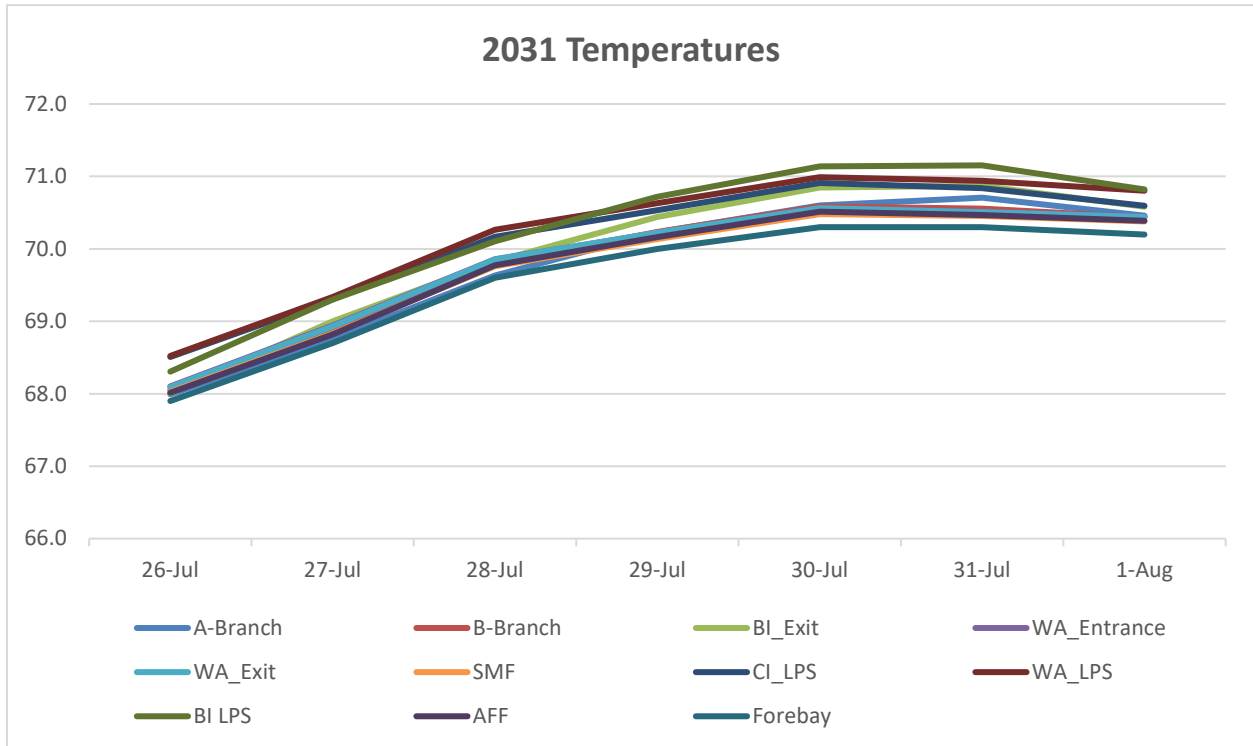
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
7/26	0	1	0	0	0
7/27	2	0	0	0	0
7/28	7	2	0	0	0
7/29	---	---	---	---	---
7/30	1	2	0	0	0
7/31	5	1	0	0	0
8/1	7	9	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
26-Jul	68.0	68.1	68.0	68.1	68.1	68.0	68.5	68.5	68.3	68.0	67.9
27-Jul	68.8	68.9	69.0	68.9	68.9	68.8	69.3	69.3	69.3	68.8	68.7
28-Jul	69.6	69.8	69.8	69.9	69.9	69.8	70.2	70.3	70.1	69.8	69.6
29-Jul	70.2	70.2	70.4	70.2	70.2	70.1	70.5	70.6	70.7	70.2	70.0
30-Jul	70.6	70.6	70.8	70.6	70.6	70.5	70.9	71.0	71.1	70.5	70.3
31-Jul	70.7	70.6	70.9	70.5	70.5	70.5	70.8	70.9	71.2	70.5	70.3
1-Aug	70.5	70.4	70.6	70.4	70.4	70.4	70.6	70.8	70.8	70.4	70.2



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. TELETYPES 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

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