

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 34** of 2020, which covers the period from **16 – 22 August**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 153.9 to 170.5 kcfs. Daily average powerhouse forebay elevation ranged from 73.6' to 74.6' msl. Daily average project tailwater ranged from 13.4' to 14.6' msl. Secchi disk measurements remained 7.0'. Daily average water temperature ranged from 70°F to 71°F.

b. Daily average spill ranged from 50.0 to 50.4 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
3	1924 on 09 Aug	---	P.O., Annual
4	1924 on 09 Aug	---	P.O., Annual

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	2245 on 15 Aug	0559 on 16 Aug	R.S., Nighttime Lamprey Ops	7 hrs, 14 mins
F2	2249 on 16 Aug	0601 on 17 Aug	R.S., Nighttime Lamprey Ops	7 hrs, 12 mins
F1	2230 on 17 Aug	0603 on 18 Aug	R.S., Nighttime Lamprey Ops	7 hrs, 33 mins
F2	2129 on 18 Aug	0559 on 19 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 30 mins
F1	2129 on 19 Aug	0600 on 20 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 31 mins
F2	2127 on 20 Aug	0601 on 21 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 34 mins
F1	2128 on 21 Aug	0600 on 22 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 32 mins
F2	2130 on 22 Aug	---	R.S., Nighttime Lamprey Ops	---

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
8/16	0.1'	0.5'
8/17	0.4'	0.2'
8/18	0.3'	0.3'
8/19	0.3'	0.2'
8/20	0.1'	0.3'
8/21	0.4'	0.2'
8/22	0.5'	0.5'

2. MAINTENANCE ACTIVITIES:

- a. Auxiliary Water System Closures.
 - FV 3-9 was closed for cleaning from 1243 to 1255 on 20 Aug.
 - FV 1-1 was closed for cleaning from 1257 to 1323 on 20 Aug.
- 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: 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 moderate consisting mostly of aquatic macrophytes, a few sticks and dead adult American Shad. Modified sampling protocols during higher temperatures will take place until the daily average descends to 69.5°F. Daily average water temperatures briefly fell to 69.5°F or below on 15 and 16 August and normal daily sampling resumed. However, by 17 August water temperatures increased and high temperature sampling protocols were re-initiated. GBT examinations were modified to one collection effort per week beginning on 04 August in conjunction with low TDG levels and higher temperature sampling protocols. GBT exams were not attempted this week due to insufficient fish numbers present during collection effort. Truck releases of summer/fall out-migrants originating from the Snake River dams began 03 August and occur every other day. 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 and Pinniped hazing: Deck-based avian hazing began 01 March. Pinniped hazing started 17 August following the 20 individual pinniped threshold being surpassed.
- 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 16 – 22 August.
- b. Fish passage plan observations.
 - Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island – Nothing to report.				
8/19	A-Branch	Weir Staff Gauge > 1.1'	NA	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 18 Aug.
- (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.

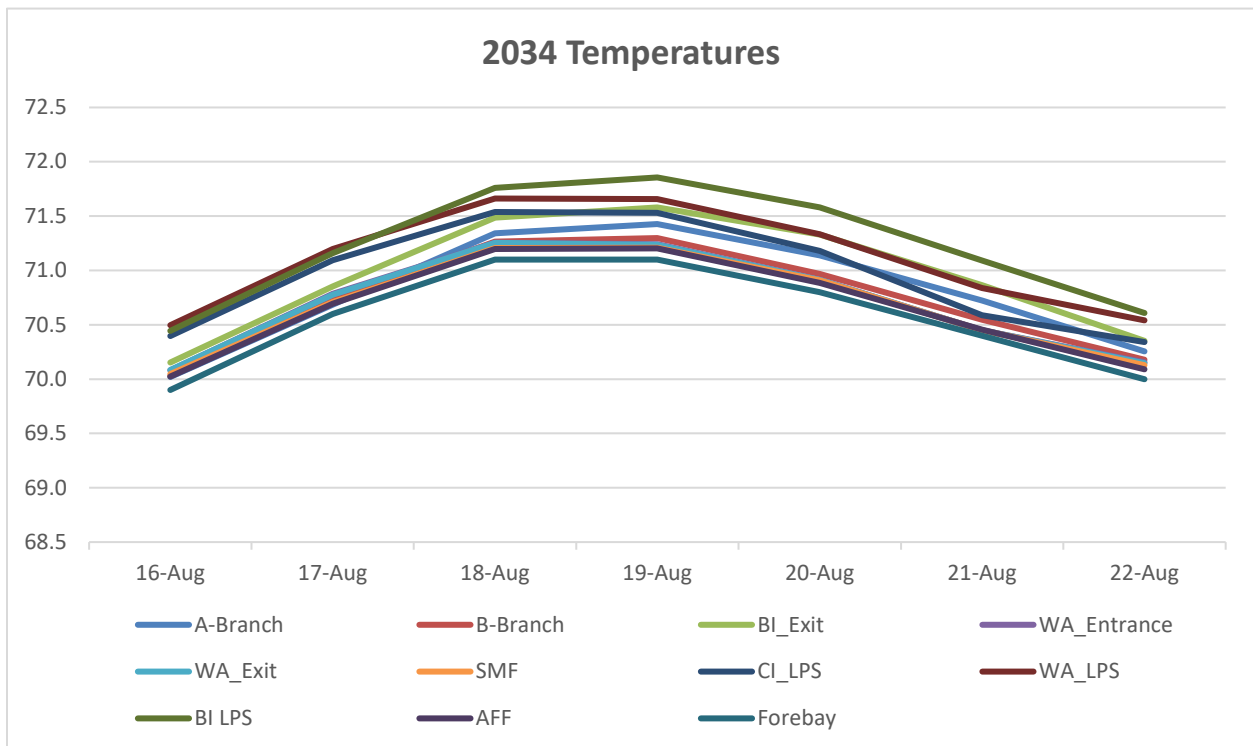
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
8/16	8	93	0	0	0
8/17	12	47	0	0	0
8/18	6	3	0	0	0
8/19	7	27	0	0	0
8/20	20	23	0	0	0
8/21	10	33	0	0	0
8/22	9	15	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
16-Aug	70.0	70.0	70.2	70.1	70.1	70.0	70.4	70.5	70.4	70.0	69.9
17-Aug	70.7	70.7	70.9	70.8	70.8	70.7	71.1	71.2	71.2	70.7	70.6
18-Aug	71.3	71.3	71.5	71.3	71.3	71.2	71.5	71.7	71.8	71.2	71.1
19-Aug	71.4	71.3	71.6	71.2	71.2	71.2	71.5	71.7	71.9	71.2	71.1
20-Aug	71.1	71.0	71.3	70.9	70.9	70.9	71.2	71.3	71.6	70.9	70.8
21-Aug	70.7	70.5	70.9	70.5	70.4	70.4	70.6	70.8	71.1	70.5	70.4
22-Aug	70.3	70.2	70.4	70.2	70.1	70.1	70.3	70.5	70.6	70.1	70.0



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.
- A teletype sent on 15 August requests that effective from 0800 to 1200 on 19 August, operate forebay from 75.0 to 76.5 feet, soft constraint. The purpose of this request is to provide a high pool for barge loading and shipping operations near Bingen, WA. See teletype for details.

- A teletype sent on 18 August cancels the teletype sent on 15 August requesting high pool for navigation.
- A teletype sent on 19 August requests that Bonneville pool operate within a 1.5' band, hard constraint, from 0600 on 24 August through 1800 on 27 August and 0600 on 31 August through 1800 03 September to facilitate treaty fishing.
- A teletype sent on 20 August states that effective from 0800 through 1500 on 01 September, Bonneville spillway will be tagged out and unavailable for spill to facilitate a hydrographic survey in the spillway basin.
- A teletype sent on 21 August revised the teletype sent on 20 August to include details regarding the operation of spillbays 1 and 18 for attraction flow during the hydrosurvey.

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