

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 35** of 2020, which covers the period from **23 – 29 August**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 133.3 to 155.9 kcfs. Daily average powerhouse forebay elevation ranged from 74.0' to 74.7' msl. Daily average project tailwater ranged from 11.9' to 13.8' msl. Secchi disk measurements remained 7.0'. Daily average water temperature remained 70°F.

b. Daily average spill ranged from 50.2 to 50.7 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	1658 on 27 Aug	P.O., Annual
4	1924 on 09 Aug	1658 on 27 Aug	P.O., Annual
11	0739 on 24 Aug	1006 on 24 Aug	STS Repair
13	0001 on 24 Aug	1557 on 24 Aug	P.O., Quarterly Thrust Collar Inspection
15	0844 on 24 Aug	1051 on 24 Aug	F.O., Gov. PLC
15	1342 on 24 Aug	1615 on 24 Aug	STS Repair
17	0633 on 25 Aug	0937 on 25 Aug	STS Repair

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
F2	2130 on 22 Aug	0558 on 23 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 28 mins
F1	2130 on 23 Aug	0601 on 24 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 31 mins
F2	2131 on 24 Aug	0556 on 25 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 25 mins
F1	2143 on 25 Aug	0556 on 26 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 13 mins
F2	2130 on 26 Aug	0557 on 27 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 27 mins
F1	2132 on 27 Aug	0559 on 28 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 27 mins
F2	2129 on 28 Aug	0603 on 29 Aug	R.S., Nighttime Lamprey Ops	8 hrs, 34 mins
F1	2129 on 29 Aug	---	R.S., Nighttime Lamprey Ops	---

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
8/23	0.3'	0.2'
8/24	0.1'	0.3'
8/25	0.1'	0.1'
8/26	0.2'	0.2'
8/27	0.2'	0.2'
8/28	0.1'	0.2'
8/29	0.3'	0.3'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV 3-7 was closed for cleaning from 1309 to 1330 on 27 Aug.
- FV 3-9 was closed for cleaning from 1309 to 1330 on 27 Aug.

b. STS/VBS Inspections.

UNIT #	PREVIOUS STS HRS	HRS WHEN INSPECTED	HRS RUN
11	53425	54066	641
12	40445	40997	552
13	01872	02208	336
14	12469	12763	294
15	22783	22961	178
16	35594	35675	81
17	00495	00982	487
18	00472	01115	643

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: Debris at the PDS and fish/debris separator was light consisting mostly of aquatic macrophytes, a few sticks and dead adult American Shad. Higher sampling protocols were initiated on 30 July when water temperatures ascended to 70°F. Modified sampling protocols during higher temperatures will take place until the daily average descends to 69.5°F. Sample and bypass mode will occur on alternating 24 hour periods (0700-0700). 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. One salmon fallback was 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.

f. USGS – Bass and Crayfish Sampling: Bass and Crayfish tagging and sampling in the forebay began on 24 August.

4. FISHWAYS:

a. Project biologists inspected 23 – 29 August.

b. Fish passage plan observations.

- Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island				
8/23-24, 27	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 25 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 and CI Lamprey traps remain in service.

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

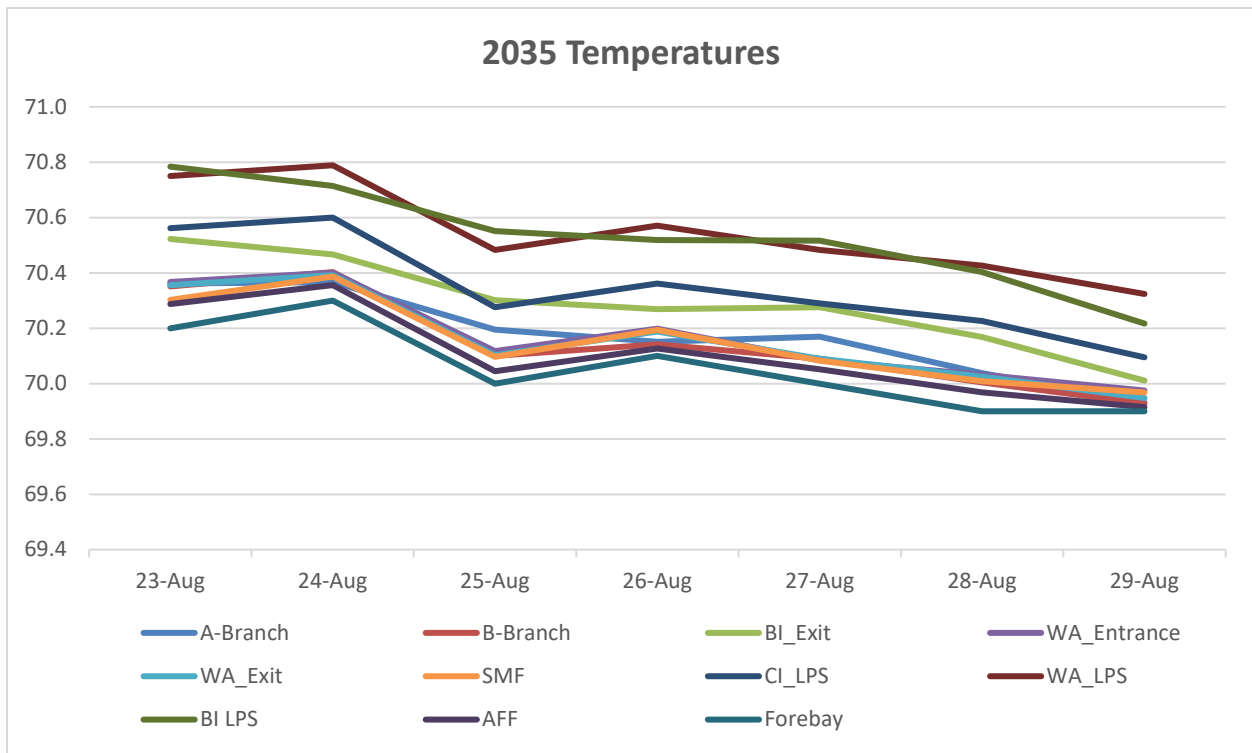
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
8/23	12	15	0	0	0
8/24	32	48	0	0	0
8/25	13	60	0	0	0
8/26	---	---	---	---	-
8/27	12	15	0	0	0
8/28	8	23	0	0	0
8/29	9	18	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
23-Aug	70.4	70.4	70.5	70.4	70.4	70.3	70.6	70.8	70.8	70.3	70.2
24-Aug	70.4	70.4	70.5	70.4	70.4	70.4	70.6	70.8	70.7	70.4	70.3
25-Aug	70.2	70.1	70.3	70.1	70.1	70.1	70.3	70.5	70.6	70.0	70.0
26-Aug	70.2	70.1	70.3	70.2	70.2	70.2	70.4	70.6	70.5	70.1	70.1
27-Aug	70.2	70.1	70.3	70.1	70.1	70.1	70.3	70.5	70.5	70.1	70.0
28-Aug	70.0	70.0	70.2	70.0	70.0	70.0	70.2	70.4	70.4	70.0	69.9
29-Aug	69.9	69.9	70.0	70.0	69.9	70.0	70.1	70.3	70.2	69.9	69.9



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 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.
- A teletype sent on 26 August requests that the during the dates and times listed, operate Bonneville forebay operate within the following constraints:
From 0700 on 01 September through 1730 on 02 September, continuous, 74.5 to 76.0 feet, hard constraint.
From 0700 on 07 September through 1730 on 11 September, continuous, 74.0 to 76.5 feet, hard constraint.
From 0700 on 12 September through 1730 on 14 September, continuous, 74.0 to 75.5 feet, hard constraint, 74.5 to 75.5 feet, soft constraint.
The purpose of this request is to support construction activities for the BNSF railroad bridge replacement over the Little White Salmon River.

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Bonneville Project