

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 25** of 2020, which covers the period from **14 – 20 June**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 279.3 to 308.1 kcfs. Daily average powerhouse forebay elevation ranged from 74.0' to 74.7' msl. Daily average project tailwater ranged from 21.3' to 22.5' msl. Secchi disk measurements ranged from 3.5' to 5.5'. Daily average water temperature ranged from 58° to 60°F.

b. Daily average spill ranged from 96.2 to 138.5 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
8	0700 on 15 Jun	---	P.O., 5 year overhaul
12	0753 on 20 Apr	---	P.O., 4 year overhaul

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	2230 on 13 Jun	0530 on 14 Jun	R.S., Nighttime Lamprey Ops	7 hrs, 0 mins
F2	2230 on 14 Jun	0529 on 15 Jun	R.S., Nighttime Lamprey Ops	6 hrs, 59 mins
F2	2230 on 15 Jun	0532 on 16 Jun	R.S., Nighttime Lamprey Ops	7 hrs, 2 mins
F1	2231 on 16 Jun	0530 on 17 Jun	R.S., Nighttime Lamprey Ops	6 hrs, 59 mins
F2	2230 on 17 Jun	0536 on 18 Jun	R.S., Nighttime Lamprey Ops	7 hrs, 6 mins
F1	2229 on 18 Jun	0533 on 19 Jun	R.S., Nighttime Lamprey Ops	7 hrs, 4 mins
F2	2231 on 19 Jun	0536 on 20 Jun	R.S., Nighttime Lamprey Ops	7 hrs, 5 mins
F1	2233 on 20 Jun	---	R.S., Nighttime Lamprey Ops	---

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
6/14	0.4'	0.6'
6/15	0.2'	0.3'
6/16	0.5'	0.3'
6/17	0.2'	0.5'
6/18	0.2'	0.1'
6/19	0.2'	0.3'
6/20	0.4'	0.3'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV 3-7 closed for cleaning from 0910 to 0918 on 16 June.
- FV 3-9 closed for cleaning from 0910 to 0918 on 16 June.
- FV 1-1 closed for cleaning from 1251 to 1327 on 18 June.
- FV 3-7 closed for cleaning from 1505 to 1609 on 18 June.
- FV 3-9 closed for cleaning from 1505 to 1609 on 18 June.

b. STS/VBS Inspections, 18 June 2020

UNIT #	PREVIOUS STS HRS	HRS WHEN INSPECTED	HRS RUN
11	50359	51434	1075
12	39139	39603	464
13	07448	0285	285
14	10247	10495	248
15	20307	20953	646
16	33205	33814	609
17	28416	29109	693
18	68794	68794	Hour meter o.o.s

- c. Dewatering and Fish Salvages.** Project Biologists recovered approximately 300 salmonids and juvenile salmonids (up to 14”), 5 juvenile bass and carp and 1 catfish from the unit 8 scroll case and approximately 35 salmonids and juvenile salmonids (up to 14”), 1 sturgeon (5’), 5 juvenile bass and carp and 1 catfish from the unit 8 draft tube. They were released both downstream and upstream (upstream release was due to time limitations). Many of the juvenile salmonids appeared to be skinny and in poor condition.

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 to moderate consisting mostly of aquatic macrophytes 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: 200 yearling Chinook, subyearling Chinook, steelhead and one yellow perch examined with two fish (1.0%) with GBT symptoms observed. two steelhead, and six 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.

4. FISHWAYS:

- a.** Project biologists inspected 14 - 20 June.
- b.** Fish passage plan observations.
- Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island				
6/16,20	A-Branch	Weir Staff Gauge > 1.4’	Unknown	NA

Cascades Island – Nothing to report.
Washington Shore – Nothing to report.

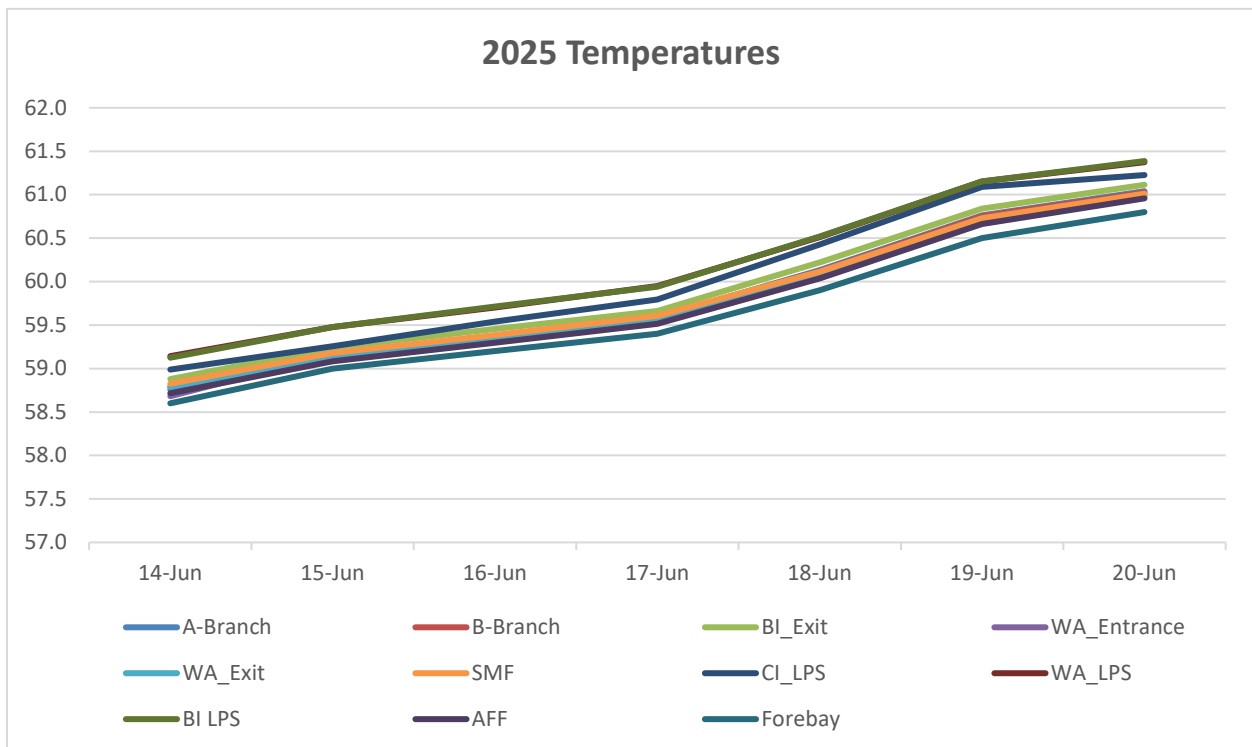
- FG6-11 (Cascades Island) is broken in the partially open position. The diffuser shaft broke away from the motor. Due to the subsidence issues at Cascades Island, repairs cannot occur until crane support is allowed in the vicinity. FG6-11 should be open at tailwaters $\geq 14.0'$.
 - FG6-12 (Cascades 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 did not occur this week.
 - (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
6/14	0	5	0	0	0
6/15	3	7	0	0	0
6/16	2	2	0	0	0
6/17	0	6	0	0	0
6/18	1	4	0	0	0
6/19	4	5	0	0	0
6/20	2	3	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
14-Jun	58.8	58.8	58.9	58.7	58.8	58.8	59.0	59.1	59.1	58.7	58.6
15-Jun	59.1	59.2	59.2	59.2	59.1	59.2	59.3	59.5	59.5	59.1	59.0
16-Jun	59.4	59.4	59.5	59.4	59.3	59.4	59.5	59.7	59.7	59.3	59.2
17-Jun	59.6	59.6	59.7	59.6	59.6	59.6	59.8	59.9	59.9	59.5	59.4
18-Jun	60.1	60.1	60.2	60.1	60.1	60.1	60.4	60.5	60.5	60.0	59.9
19-Jun	60.8	60.8	60.8	60.7	60.7	60.7	61.1	61.2	61.2	60.7	60.5
20-Jun	61.0	61.0	61.1	61.0	61.0	61.0	61.2	61.4	61.4	61.0	60.8



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 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.
- 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 17 June requests that Bonneville pool operate within a 1.5' band, hard constraint, from 0600 on 22 June through 1800 on 24 June to facilitate treaty fishing.

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Bonneville Project