

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 27 of 2020, which covers the period from 28 June – 04 July.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 297.0 to 322.7 kcfs. Daily average powerhouse forebay elevation ranged from 73.0' to 74.5' msl. Daily average project tailwater ranged from 22.1' to 23.2' msl. Secchi disk measurements ranged from 4.0' to 5.0'. Daily average water temperature ranged from 63° to 65°F.

b. Daily average spill ranged from 94.9 to 111.9 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
2	0001 on 30 Jun	1605 on 30 Jun	P.O., Cooler Replacement
8	0700 on 15 Jun	---	P.O., 5 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	2235 on 27 Jun	0517 on 28 Jun	R.S., Nighttime Lamprey Ops	6 hrs, 42 mins
F2	2230 on 28 Jun	0532 on 29 Jun	R.S., Nighttime Lamprey Ops	7 hrs, 2 mins
F1	2231 on 29 Jun	0535 on 30 Jun	R.S., Nighttime Lamprey Ops	7 hrs, 4 mins
F2	2230 on 30 Jun	0535 on 01 Jul	R.S., Nighttime Lamprey Ops	7 hrs, 5 mins
F1	2230 on 01 Jul	0532 on 02 Jul	R.S., Nighttime Lamprey Ops	7 hrs, 2 mins
F1	2300 on 02 Jul	No Record	R.S., Nighttime Lamprey Ops	Unknown
F2	2300 on 03 Jul	0531 on 04 Jul	R.S., Nighttime Lamprey Ops	6 hrs, 31 mins
F1	2301 on 04 Jul	---	R.S., Nighttime Lamprey Ops	---

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
6/28	0.3'	0.8'
6/29	0.5'	0.1'
6/30	0.1'	1.1'
7/1	0.5'	0.2'
7/2	0.8'	0.5'
7/3	0.1'	1.6'
7/4	0.4'	0.2'

2. MAINTENANCE ACTIVITIES:

- a. Auxiliary Water System Closures.
 - FV 3-9 closed for cleaning from 1013 to 1021 on 28 June.
 - FV 1-1 closed for cleaning from 0646 to 0715 on 01 July.
 - FV 3-7 closed for cleaning from 0723 to 0805 on 01 July.
 - FV 3-9 closed for cleaning from 0723 to 0805 on 01 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 to light-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 subyearling Chinook examined with no GBT symptoms observed. Four steelhead, ten salmon and two unknown salmonids 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 28 June - 04 July.
- b. Fish passage plan observations.
 - Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island				
6/28-30, 7/3	A-Branch	Weir Staff Gauge > 1.4'	Unknown	NA
Cascades Island – Nothing to report.				
Washington Shore – Nothing to report.				
6/29	Weir 37	Weir Staff Gauge > 1.4'	Unknown	NA

- 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. The ERG was open from 1503 to 1530 on 01 July. High channel elevation due to excessively clogged screens forced the ERG to trip.
- (5) STSs are installed.

e. Lamprey Fishways.

- (1) CI and WA LPSs remain in service. BI LPS was taken out of service on 03 July due to a pump failure.
- (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.

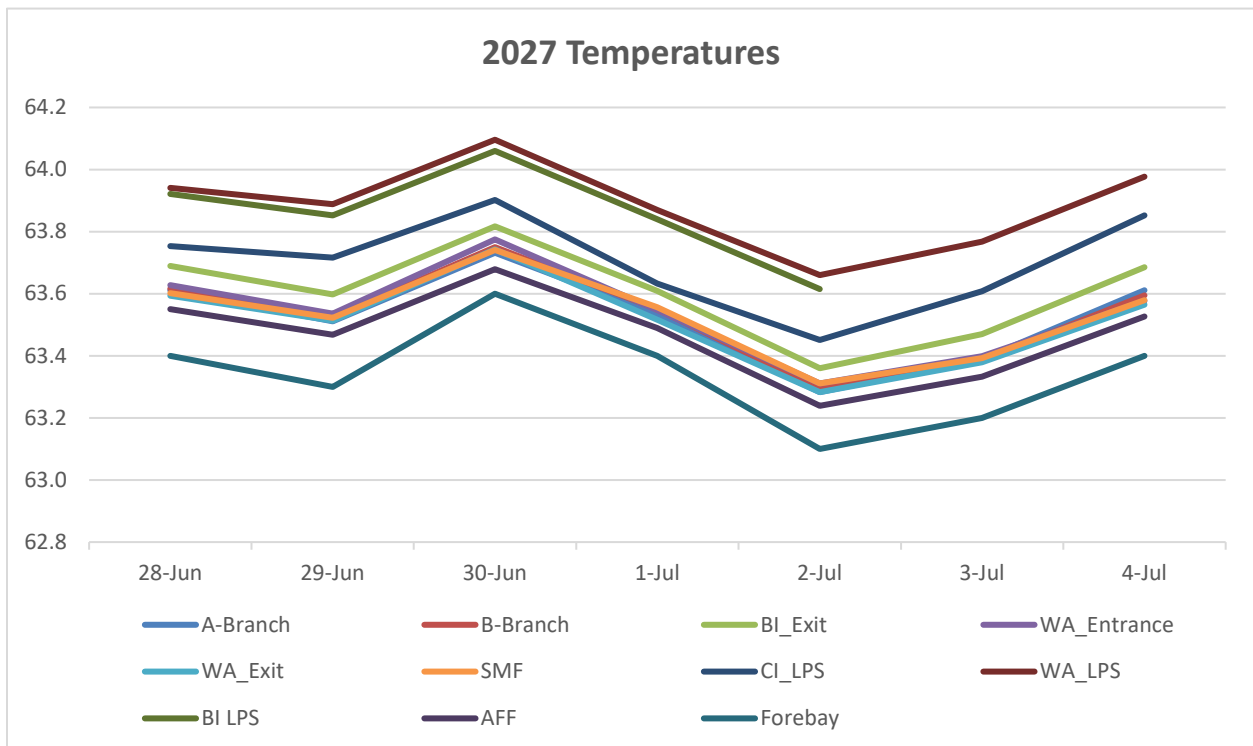
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
6/28	0	15	0	0	0
6/29	1	8	0	0	0
6/30	6	8	0	0	0
7/1	4	8	0	0	0
7/2	1	3	0	0	0
7/3	2	6	0	0	0
7/4	3	6	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
28-Jun	63.6	63.6	63.7	63.6	63.6	63.6	63.8	63.9	63.9	63.6	63.4
29-Jun	63.5	63.5	63.6	63.5	63.5	63.5	63.7	63.9	63.9	63.5	63.3
30-Jun	63.7	63.8	63.8	63.8	63.7	63.7	63.9	64.1	64.1	63.7	63.6
1-Jul	63.5	63.6	63.6	63.5	63.5	63.6	63.6	63.9	63.8	63.5	63.4
2-Jul	63.3	63.3	63.4	63.3	63.3	63.3	63.5	63.7	63.6	63.2	63.1
3-Jul	63.4	63.4	63.5	63.4	63.4	63.4	63.6	63.8	---	63.3	63.2
4-Jul	63.6	63.6	63.7	63.6	63.6	63.6	63.9	64.0	---	63.5	63.4



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. 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 30 June requests that Bonneville pool operate within a 1.5' band, hard constraint, from 0600 on 01 July through 1800 on 03 July and 0600 on 06 July through 1800 09 July to facilitate treaty fishing.

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Bonneville Project