

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 17** of 2019, which covers the period from **21 - 27 April**.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 247.8 to 357.3 kcfs. Daily average powerhouse forebay elevation ranged from 73.4' to 74.2' msl. Daily average project tailwater ranged from 19.7' to 24.8' msl. Secchi disk measurements ranged from 1.0' to 2.0'. Daily average water temperature ranged from 51°F - 52°F.
- b. Daily average spill ranged from 118.0 to 135.1 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 Date	RTS Date	Reason
11	0836 on 24 Apr	1031 on 24 Apr	PO, Trash Raking
12	1033 on 24 Apr	1120 on 24 Apr	PO, Trash Raking
18	1123 on 24 Apr	1258 on 24 Apr	PO, Trash Raking
15	0714 on 18 Mar	---	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. Nothing to report.

Table 3. Fish unit drawdowns, in feet.

Date	F1	F2
4/21	0.1'	0.2'
4/22	---	---
4/23	---	---
4/24	0.2'	0.3'
4/25	0.4'	0.3'
4/26	0.4'	0.6'
4/27	1.3'	1.8'

2. MAINTENANCE ACTIVITIES:

- a. Auxiliary Water System Closures. Nothing to report.
- b. STS/VBS Inspections. Nothing to report.
- c. Dewatering and Fish Salvages. Nothing to report.

RESEARCH:

- a. Fisheries Field Unit - Fish counting: Daytime visual counting (0500 to 2100) began on 01 April. 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 ranged from light to moderate consisting mostly of sticks and other woody debris. GBT examinations began on 13 April and are typically performed two days per week through the end of spill. Results of this week’s GBT examinations: 200 yearling Chinook and Steelhead examined: two fish (1.0%) were observed with GBT symptoms. Please follow this [link](#) to the FPC web page for further details. Fallbacks observed this week: six Steelhead. No fish collections for research were conducted this week.
- c. Fisheries Field Unit - Pinniped Monitoring Program: Observations for pinniped abundance and predation began on 02 Jan. The FFU observes five days each week.
- d. USDA - Pinniped hazing: Deck-based hazing began 01 March.
- e. CRITFC - Pinniped hazing: Hazing by boat began 01 March.

3. FISHWAYS:

- a. Project biologists inspected from 21-27 April.
- b. Fish passage plan observations.

- Table 4. FPP out of criteria items.

Date	Location	FPP Violation	Cause	Response
Bradford Island				
4/21,23-24	A-Branch	Differential >1.1'	Unknown	NA
Cascades Island – Nothing to report.				
Washington Shore– Nothing to report.				

- On 01 May 2018, FG6-11 (Cascades Island) was found broken partially open. The diffuser shaft had broken away from the motor. Due to the subsidence issues at Cascades Island, repairs cannot occur until crane support is allowed in the vicinity.

- On 18 August 2018, FG6-12 (Cascades Island) was found to be mechanically bound in the open position. FG6-12 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.
- On 27 March 2019, FG6-18 (Cascades Island) was found to be mechanically bound in the closed position. FG6-18 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.

c. Adult Fishways.

- (1) The AFF remains in service.
- (2) Sensor calibration occurred on 18 April.
- (3) SLEDs are installed at all locations.

d. Juvenile Fishways.

- (1) The ITS remains open (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. All LPSs remain in service.

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

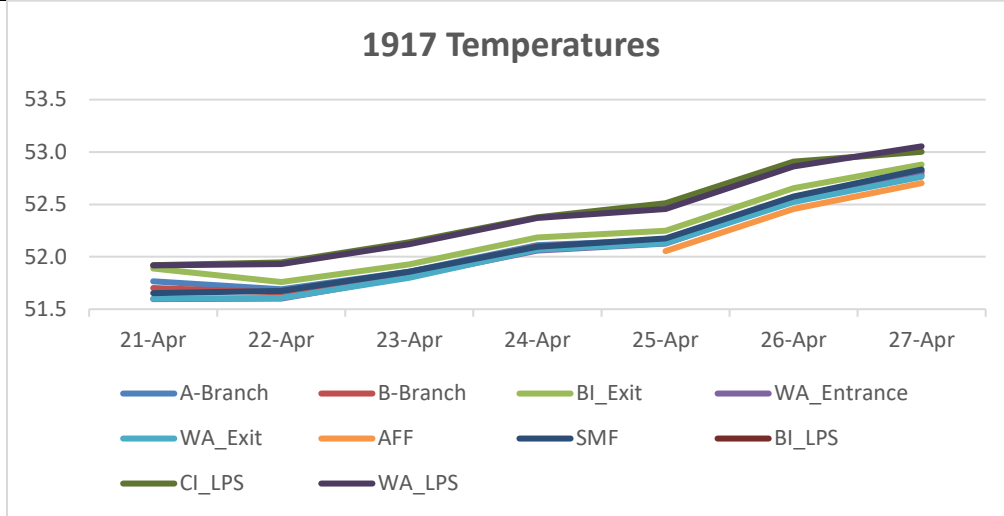
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
4/21	16	0	0	0	0
4/22	0	0	0	0	0
4/23	17	0	0	0	0
4/24	17	0	0	0	0
4/25	0	0	0	0	0
4/26	0	0	0	0	0
4/27	17	0	0	0	0

4. WATER QUALITY MONITORING:

a. Fishway Temperatures. Temperatures are taken from 01 March through 30 November.

Date	A-Branch	B-Branch	BI_Exit	WA_Entrance	WA_Exit	AFF	SMF	BI_LPS	CI_LPS	WA_LPS
21-Apr	51.8	51.7	51.9	51.6	51.6		51.7		51.9	51.9
22-Apr	51.7	51.7	51.8	51.6	51.6		51.7		51.9	51.9
23-Apr	51.9	51.8	51.9	51.8	51.8		51.9		52.1	52.1
24-Apr	52.1	52.1	52.2	52.1	52.1		52.1		52.4	52.4
25-Apr	52.2	52.1	52.2	52.1	52.1	52.1	52.2		52.5	52.5
26-Apr	52.6	52.6	52.7	52.5	52.5	52.5	52.6		52.9	52.9
27-Apr	52.8	52.8	52.9	52.8	52.8	52.7	52.8	53.1	53.0	53.1



b.

c. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

CONSTRUCTION: Nothing to report

5. HAZMAT, SPILLS AND CLEANUP: Nothing to report.

6. TELETYPE CURRENTLY IN EFFECT:

- a. A teletype sent on 04 April states effective 10 April through 15 June, operate Bonneville Dam in accordance with the 2019 FOP to provide spring spill for fish passage, spill according to patterns in the 2019 FPP, and open the B2CC at the start of spring spill.
- b. Teletypes sent on 24, 25, & 26 April updated the spill priority list for Bonneville Dam.

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 Bonneville Project