

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 16** of 2019, which covers the period from **14-20 April**.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 219.2 to 256.5 kcfs. Daily average powerhouse forebay elevation ranged from 73.4' to 75.1' msl. Daily average project tailwater ranged from 19.2' to 21.8' msl. Secchi disk measurements ranged from 1.0' to 3.0'. Daily average water temperature ranged from 48°F - 51°F.
- b. Daily average spill ranged from 113.0 to 118.4 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 Date	RTS Date	Reason
15	0714 on 18 Mar	---	4 Year Overhaul
12	0005 on 15 Apr	1529 on 18 Apr	PO, annual & thrust collar insp.

- 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 Date	RTS Date	Reason
F2	0042 on 14 Apr	0241 on 14 Apr	RS, float trash
F1	0138 on 14 Apr	0245 on 14 Apr	RS, float trash
F1	0802 on 19 Apr	0913 on 19 Apr	MFR19BON05

Table 3. Fish unit drawdowns, in feet.

Date	F1	F2
4/14	0.2'	0.9'
4/15	0.1'	0.2'
4/16	0.1'	0.1'
4/17	0.1'	0.2'
4/18	0.1'	0.2'
4/19	0.2'	0.2'
4/20	0.4'	0.4'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV1-1 was closed from 0823 to 0905 on 15 April and from 0736 to 0810 on 18 April for trash rack cleaning.

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. Gas Bubble Trauma (GBT) examinations began on 13 April and are typically performed two days per week through the end of spill. Results of this week's Gas Bubble Trauma (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: two 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 14-20 April.

b. Fish passage plan observations.

- Table 4. FPP out of criteria items.

Date	Location	FPP Violation	Cause	Response
Bradford Island				
4/15,17	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 was opened (auto-chain gates 3B, 6C, & 10B only – no fixed gates 1A or 1B) per the 15 March teletype. The ITS will be open 24/7 until repairs can be made to the lower gate.
- (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) WA Shore LPS was returned to service on 11 April.

(2) Cascades Island LPS was returned to service on 16 April.

(3) Bradford Island LPS was returned to service on 18 April.

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

(1) Table 5. Avian Counts.

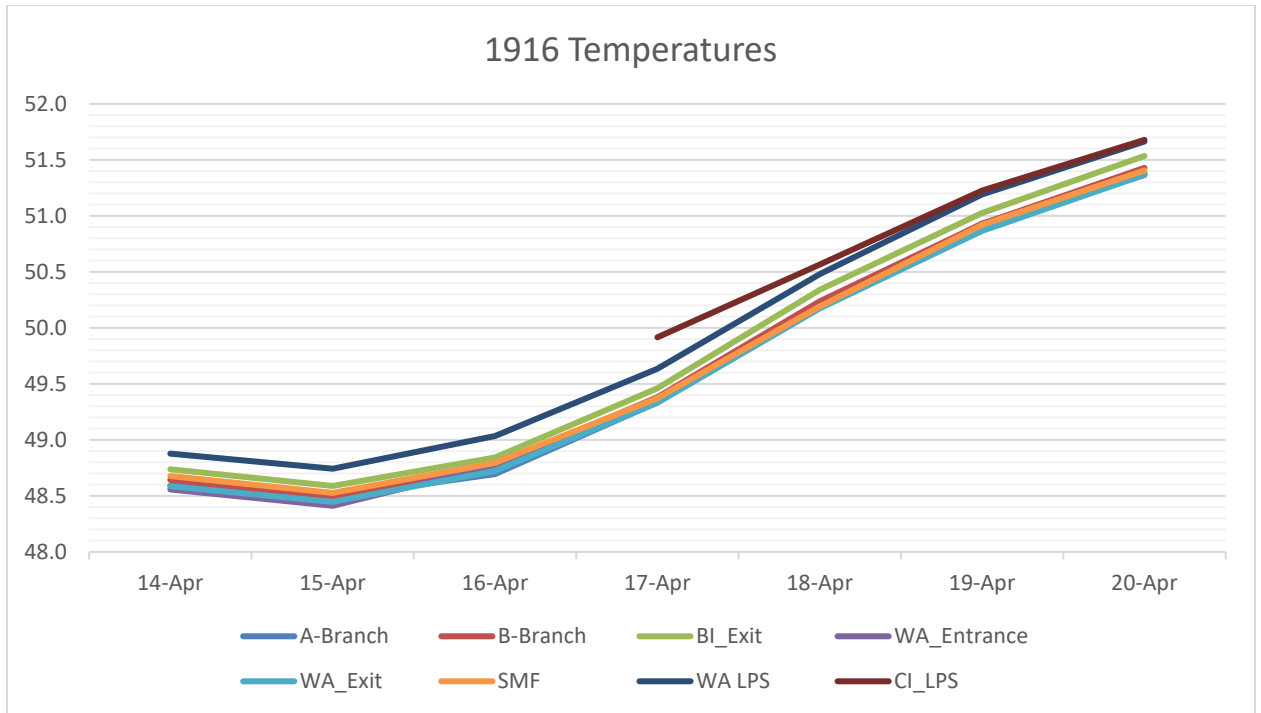
Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
4/14	38	0	0	0	0
4/15	12	0	0	0	0
4/16	11	0	0	0	0
4/17	8	0	0	0	0
4/18	12	0	0	0	0
4/19	11	0	0	0	0
4/20	11	0	0	0	0

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	SMF	WA_LPS	CI_LPS
14-Apr	48.6	48.6	48.7	48.6	48.6	48.7	48.9	---
15-Apr	48.5	48.5	48.6	48.4	48.4	48.5	48.7	---
16-Apr	48.7	48.8	48.8	48.8	48.7	48.8	49.0	---
17-Apr	49.3	49.4	49.5	49.3	49.3	49.4	49.6	49.9
18-Apr	50.2	50.2	50.3	50.2	50.2	50.2	50.5	50.6
19-Apr	50.9	50.9	51.0	50.9	50.9	50.9	51.2	51.2
20-Apr	51.4	51.4	51.5	51.4	51.4	51.4	51.7	51.7

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. TELETYPES 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. A teletype sent on 17 & 18 April update the spill priority list for Bonneville Dam.

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