

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 16** of 2020, which covers the period from **12 – 18 April**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 143.0 to 164.4 kcfs. Daily average powerhouse forebay elevation ranged from 74.0' to 75.2' msl. Daily average project tailwater ranged from 12.8' to 13.9' msl. Secchi disk measurements ranged from 5.0' to 7.0'. Daily average water temperature ranged from 48° to 50°F.

b. Daily average spill ranged from 99.2 to 113.1 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	RTS	Reason
2	0715 on 06 Apr	---	P.O., 5 year overhaul
11	1308 on 15 Apr	1450 on 15 Apr	Trash Raking
14	0740 on 24 Feb	---	P.O., 4 year overhaul
18	1047 on 15 Apr	1132 on 15 Apr	Trash Raking

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
4/12	0.2'	0.5'
4/13	0.2'	0.5'
4/14	0.1'	0.4'
4/15	0.2'	0.5'
4/16	0.3'	0.4'
4/17	0.3'	0.6'
4/18	0.4'	0.6'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV 3-7 closed for cleaning from 1014 to 1017 on 16 April
- FV 3-9 closed for cleaning from 1014 to 1017 on 16 April

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. 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 sticks. Kelt observations were monitored by direct observation from Smolt Monitoring personnel and video recording by Fisheries Field Unit and SMP until the Kelt Trigger was reached. Four steelhead and one unknown Salmonid 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 - Pinniped hazing: Deck-based hazing began 01 March.
- d. CRITFC - Pinniped hazing: Hazing by boat began 01 March. Suspended indefinitely 20 March for social distancing purposes.

4. FISHWAYS:

- a. Project biologists inspected 12 - 18 April.
- b. Fish passage plan observations.

- Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
Bradford Island – Nothing to report				
4/12,14-18	A-Branch	Weir Diff. > 1.1'	Unknown	NA
4/12-14,17	PH1CC	S. Ent. Diff. < 1.0'	Unknown	NA
Cascades Island – Nothing to report				
Washington Shore – Nothing to report				
4/18	Weir 37	Weir Diff. > 1.1'	Unknown	NA

- 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. FG6-11 should be open at tailwaters $\geq 14.0'$.
- 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 returned to service on 14 Apr.
- (2) Sensor calibration occurred on 17 Apr.
- (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) WA Shore and CI LPSs remain in service. BI LPS returned to service on 16 April.
- (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 out of service.

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

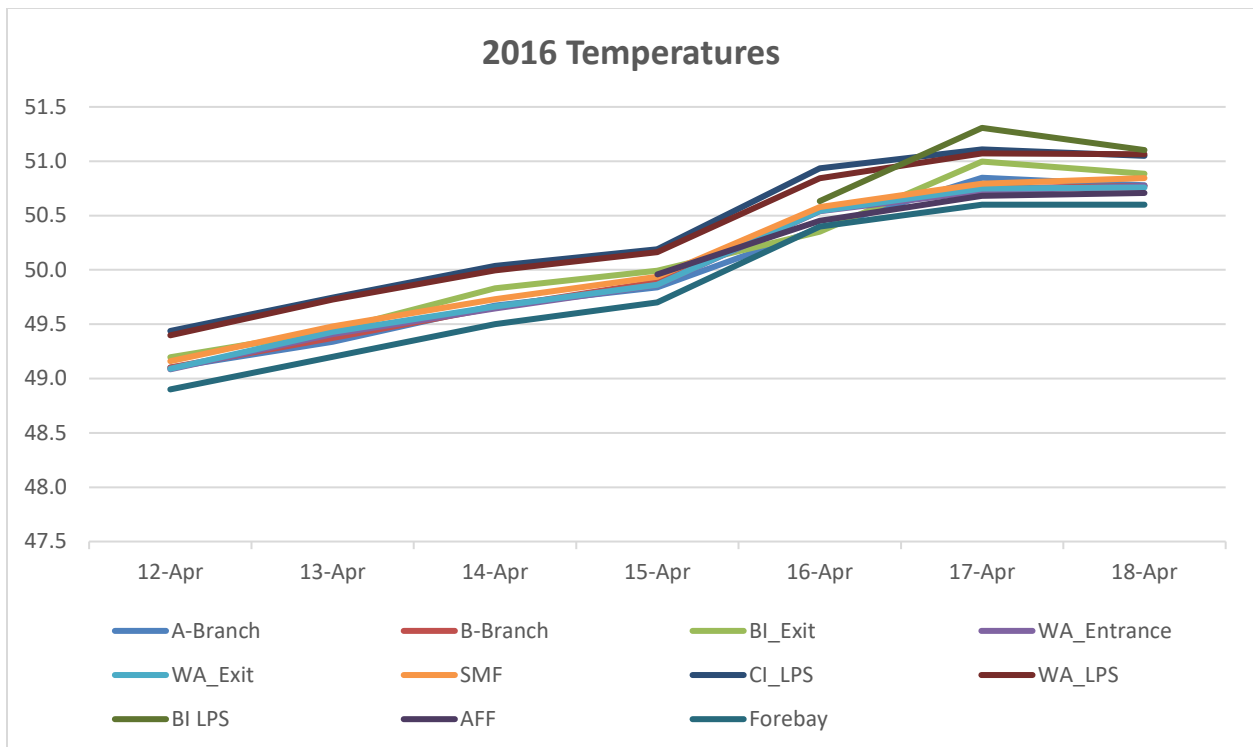
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
4/12	---	---	---	---	---
4/13	2	0	0	0	0
4/14	---	---	---	---	---
4/15	---	---	---	---	---
4/16	0	1	0	0	0
4/17	0	2	0	0	0
4/18	6	2	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
12-Apr	49.1	49.1	49.2	49.1	49.1	49.2	49.4	49.4			48.9
13-Apr	49.3	49.4	49.4	49.4	49.4	49.5	49.7	49.7			49.2
14-Apr	49.7	49.7	49.8	49.6	49.7	49.7	50.0	50.0			49.5
15-Apr	49.8	49.9	50.0	49.9	49.9	49.9	50.2	50.2		50.0	49.7
16-Apr	50.4	50.5	50.4	50.5	50.5	50.6	50.9	50.8	50.6	50.5	50.4
17-Apr	50.8	50.7	51.0	50.7	50.7	50.8	51.1	51.1	51.3	50.7	50.6
18-Apr	50.8	50.8	50.9	50.8	50.8	50.8	51.0	51.1	51.1	50.7	50.6



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. TELETYPE 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 08 April replaces the teletype sent on 20 December and states that effective 09 April at 2200 hours through April 20 at 2359, the minimum tailwater elevation is 12.5 feet during all hours. Resume normal tailwater operations as described in the water control manual. This special operation supersedes the routine practice of past years of ending chum tailwater requirement when Spring spill begins. Due to low flow conditions, regional salmon managers requested the operation to protect chum redds and fry from impacts of TDG during Spring spill

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