

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 24** of 2019, which covers the period from **09 - 15 June**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 212.7 to 257.5 kcfs. Daily average powerhouse forebay elevation ranged from 73.4' to 74.2' msl. Daily average project tailwater ranged from 17.4' to 19.6' msl. Secchi disk measurements ranged from 4.0' to 5.5'. Daily average water temperature ranged from 60°F - 63°F.

b. Daily average spill ranged from 116.7 to 119.4 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
1	0015 on 10 June	---	P.O.
2	0001 on 10 June	0206 on 10 June	P.O.
11	0005 on 03 June	1335 on 13 June	P.O., T11 bi-annual.
12	0005 on 03 June	1336 on 13 June	P.O., T11 bi-annual.
13	0005 on 03 June	1331 on 13 June	P.O., T11 bi-annual.
14	0004 on 03 June	1332 on 13 June	P.O., T11 bi-annual, annual.

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
F1	2132 on 08 June	0430 on 09 June	RS, Nighttime Lamprey Ops.
F2	2131 on 09 June	0433 on 10 June	RS, Nighttime Lamprey Ops.
F1	2130 on 10 June	0431 on 11 June	RS, Nighttime Lamprey Ops.
F2	2130 on 11 June	0430 on 12 June	RS, Nighttime Lamprey Ops.
F1	2210 on 12 June	0430 on 13 June	RS, Nighttime Lamprey Ops.
F2	2205 on 13 June	0447 on 14 June	RS, Nighttime Lamprey Ops.
F2	2206 on 14 June	0448 on 15 June	RS, Nighttime Lamprey Ops.
F2	2132 on 15 June	---	RS, Nighttime Lamprey Ops.

Table 3. Fish unit drawdowns, in feet.

Date	F1	F2
6/9	0.1'	0.4'
6/10	0.2'	0.2'
6/11	0.2'	0.3'
6/12	0.3'	0.2'
6/13	0.1'	0.3'
6/14	0.2'	0.2'
6/15	0.1'	0.3'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV3-7 was closed for cleaning from 0845 until 1103 on 10 June.
- FV3-9 was closed for cleaning from 0904 until 0924 on 10 June.
- FV6-9 was closed for cleaning from 1605 until 1610 on 13 June.

b. STS/VBS Inspections. Nothing to report.

c. Dewatering and Fish Salvages. Nothing to report.

RESEARCH:

a. Four Peaks Environmental - Fish counting contract: Daytime visual counting (0500 to 2100) began on 01 April. Nighttime video counting (2100 to 0500) began on 15 May. Fish counts can be viewed [here](#).

b. PSMFC – Smolt Monitoring Facility: Sample collections at the SMF began at 0700 on 02 March. Debris at the PDS and fish/debris separator ranged from light to light-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, subyearling Chinook and steelhead examined: 3 fish (1.5%) with GBT symptoms were observed. Please follow this [link](#) to the FPC web page for further details. Fallbacks observed this week: three steelhead, six salmon and one unknown salmonid. No fish collections for research were conducted this week.

c. CRITFC – Adult Salmonid Sampling. Adult Salmonid sampling in the AFF began on 30 April and typically occurs 5 days per week.

d. NOAA (Frick) – Bradford Island Lamprey Wetted Wall. Evaluation of the Bradford Island wetted wall commenced for the second year on 17 April.

- e. Whooshh Innovations – Evaluation of a proprietary fish identification system commenced in coordination with CRITFC’s adult salmonid sampling efforts in the AFF on 30 April.
- f. University of Idaho – Lamprey Evaluations: Collection and tagging in association with Corps funded research commenced with the start of the Lamprey Flume Structure (LFS) and AFF lamprey traps on 13 May.

3. FISHWAYS:

- a. Project biologists inspected from 09 - 15 June.
- b. Fish passage plan observations.

- Table 4. FPP out of criteria items.

Date	Location	FPP Violation	Cause	Response
Bradford Island – Nothing to report.				
6/14	B-branch	Ent. Diff. < 0.9'	Unknown	Monitor
Cascades Island – Nothing to report.				
Washington Shore – Nothing to report.				
6/14-15	AFF Picket Leads	1 Picket lead stuck in down position	Disconnected from winch	Work Order

- 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 13 June
 - (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.

- (1) The Bradford Island Wetted Wall (BIWW) began operations on 17 April.
- (2) The PH2 Lamprey Flume Structure (LFS) began trapping on 13 May.
- (3) The AFF Lamprey trap began trapping on 13 May.

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

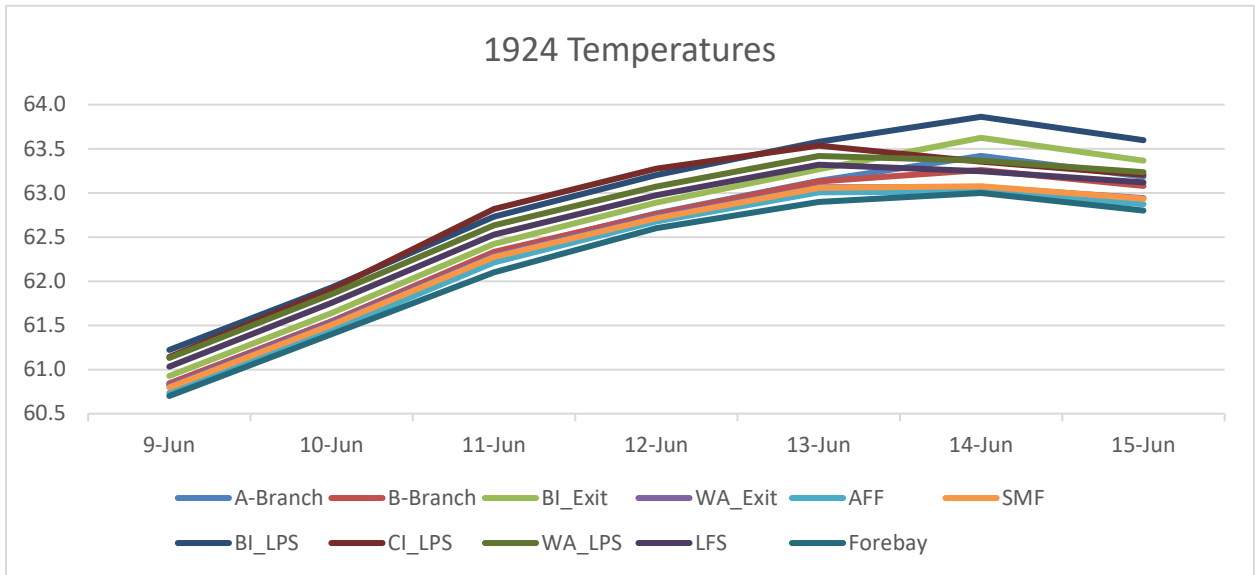
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
6/9	8	4	0	0	0
6/10	5	2	0	0	0
6/11	0	11	0	0	0
6/12	0	4	0	0	0
6/13	0	3	0	0	0
6/14	0	5	0	0	0
6/15	2	3	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_Exit	AFF	SMF	BI_LPS	CI_LPS	WA_LPS	LFS	Forebay
9-Jun	60.8	60.8	60.9	60.8	60.7	60.8	61.2	61.1	61.1	61.0	60.7
10-Jun	61.5	61.5	61.6	61.5	61.4	61.5	61.9	61.9	61.9	61.8	61.4
11-Jun	62.3	62.3	62.4	62.3	62.2	62.3	62.7	62.8	62.6	62.5	62.1
12-Jun	62.8	62.8	62.9	62.7	62.7	62.7	63.2	63.3	63.1	63.0	62.6
13-Jun	63.1	63.1	63.3	63.1	63.0	63.1	63.6	63.5	63.4	63.3	62.9
14-Jun	63.4	63.3	63.6	63.1	63.0	63.1	63.9	63.4	63.4	63.2	63.0
15-Jun	63.2	63.1	63.4	62.9	62.9	62.9	63.6	63.2	63.2	63.1	62.8



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

5. CONSTRUCTION: Nothing to report

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

7. 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 12 June states effective 16 June through 31 August, operate Bonneville Dam in accordance with the 2019 FOP to provide summer spill for fish passage, spill according to patterns in the 2019 FPP, and keep the B2CC open until within one hour of the end of spill on 31 August.
- c. A teletype sent on 14 June requests that Bonneville pool operate within a 1.5' band, hard constraint, from 0600 on 17 June until 1800 on 22 June and from 0600 on 24 June until 1800 on 26 June to facilitate treaty fishing.

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Bonneville Project