

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 23** of 2019, which covers the period from **02 - 08 June**.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 293.0 to 312.3 kcfs. Daily average powerhouse forebay elevation ranged from 73.4' to 74.4' msl. Daily average project tailwater ranged from 19.4' to 22.9' msl. Secchi disk measurements ranged from 3.0' to 4.5'. Daily average water temperature ranged from 59°F - 60°F.
- b. Daily average spill ranged from 115.9 to 130.9 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 Date	RTS Date	Reason
11	0005 on 03 June	---	P.O. T11 bi-annual.
12	0005 on 03 June	---	P.O. T11 bi-annual.
13	0005 on 03 June	---	P.O. T11 bi-annual.
14	0004 on 03 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	2130 on 01 June	0430 on 02 June	RS, Nighttime Lamprey Ops.
F2	2202 on 02 June	0430 on 03 June	RS, Nighttime Lamprey Ops.
F2	2129 on 03 June	0430 on 04 June	RS, Nighttime Lamprey Ops.
F1	2130 on 04 June	0431 on 05 June	RS, Nighttime Lamprey Ops.
F2	2131 on 05 June	0425 on 06 June	RS, Nighttime Lamprey Ops.
F1	2131 on 06 June	0432 on 07 June	RS, Nighttime Lamprey Ops.
F2	2132 on 07 June	0436 on 08 June	RS, Nighttime Lamprey Ops.
F1	2132 on 08 June	---	RS, Nighttime Lamprey Ops.

Table 3. Fish unit drawdowns, in feet.

Date	F1	F2
6/2	0.3'	0.3'
6/3	0.4'	0.4'
6/4	0.4'	0.3'
6/5	0.2'	0.4'
6/6	0.2'	0.2'
6/7	0.2'	0.3'
6/8	0.2'	0.2'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV6-9 was closed for cleaning from 0720 until approximately 0750 on 03 June.

b. STS/VBS Inspections. A STS/VBS inspection occurred on 03 June.

UNIT #	PREVIOUS STS HRS	HRS WHEN INSPECTED	HRS RUN
11	44,361	45,164	803
12	34,190	34,996	806
13	3,910	4,716	806
14	7,007	7,814	807
15	17,292	17,724	432
16	30,030	30,810	780
17	23,531	24,349	818
18	62,670	63,485	815

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 and steelhead examined with no GBT symptoms observed. Please follow this [link](#) to the FPC web page for further details. Fallbacks observed this week: three steelhead, five salmon and three unknown salmonids. 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 02 - 08 June.
- b. Fish passage plan observations.

- Table 4. FPP out of criteria items.

Date	Location	FPP Violation	Cause	Response
Bradford Island				
6/5-8	A-Branch	Differential >1.3'	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 did not occur this reporting week.
- (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.

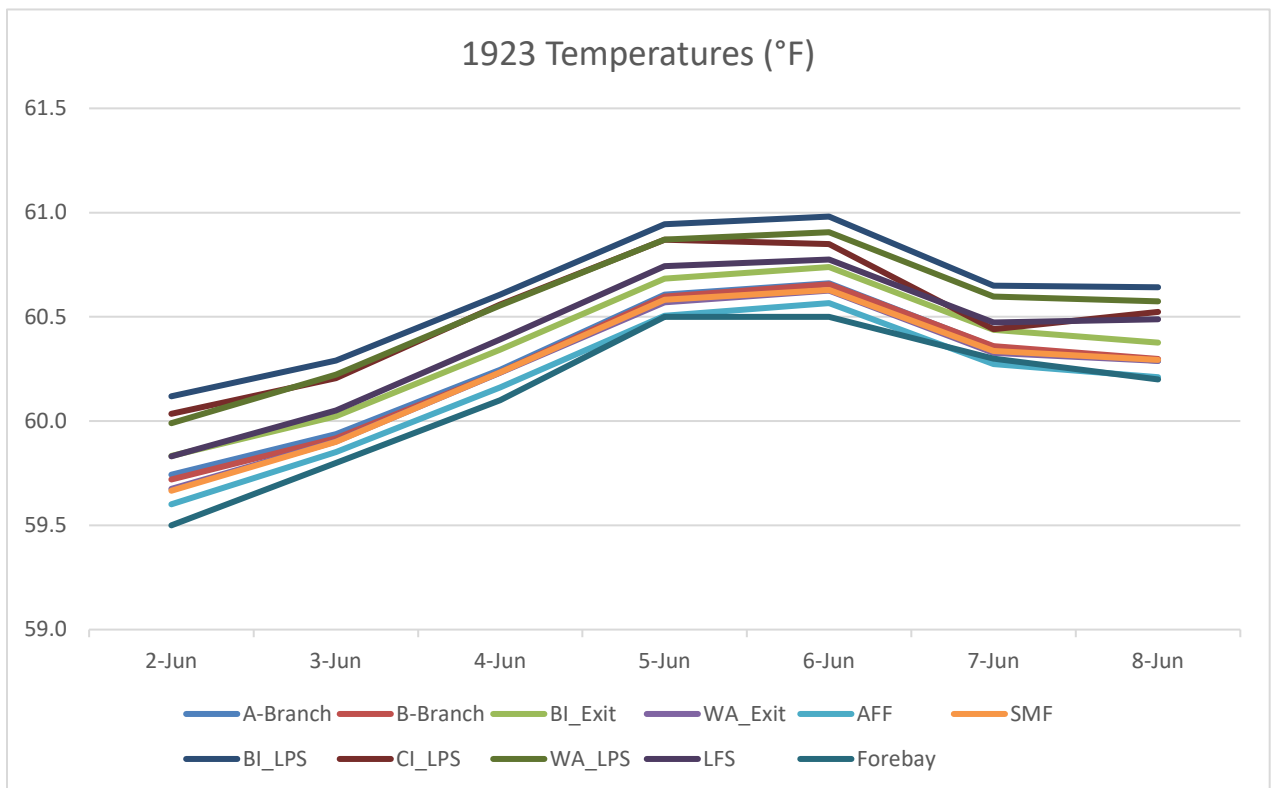
Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
6/2	4	1	0	0	0
6/3	0	0	0	0	0
6/4	0	0	0	0	0
6/5	0	2	0	0	0
6/6	0	0	0	0	0
6/7	3	0	0	0	0
6/8	5	0	0	0	0

4. WATER QUALITY MONITORING:

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

*Temperature probe malfunctions occurred with the WA entrance during this time period.

Date	A-Branch	B-Branch	BI_Exit	WA_Exit	AFF	SMF	BI_LPS	CI_LPS	WA_LPS	LFS	Forebay
2-Jun	59.7	59.7	59.8	59.7	59.6	59.7	60.1	60.0	60.0	59.8	59.5
3-Jun	59.9	59.9	60.0	59.9	59.9	59.9	60.3	60.2	60.2	60.1	59.8
4-Jun	60.2	60.2	60.3	60.2	60.2	60.2	60.6	60.6	60.6	60.4	60.1
5-Jun	60.6	60.6	60.7	60.6	60.5	60.6	60.9	60.9	60.9	60.7	60.5
6-Jun	60.7	60.7	60.7	60.6	60.6	60.6	61.0	60.8	60.9	60.8	60.5
7-Jun	60.4	60.4	60.4	60.3	60.3	60.3	60.6	60.4	60.6	60.5	60.3
8-Jun	60.3	60.3	60.4	60.3	60.2	60.3	60.6	60.5	60.6	60.5	60.2



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. Teletypes sent on 06 June updated the spill caps and priority lists until further notice.
- c. A teletype sent on 07 June canceled the flood risk management restrictions.

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