

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 22** of 2021, which covers the period from **23 to 29 May 2021**.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 187.1 to 217.7 kcfs. Daily average powerhouse forebay elevation ranged from 74.5' to 75.2' msl. Daily average project tailwater ranged from 15.8' to 17.8' msl. Secchi disk measurements ranged 6.0' to 7.0'. Daily average water temperature ranged 56 to 58°F.
- b. Daily average spill ranged from 126.6 to 133.0 kcfs. Spring spill season began on 10 April and will continue through 15 June in accordance with FOP guidelines.
- 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
10	0007 on 12 Apr	---	P.O., Annual Overhaul
9	1000 on 12 Apr	---	P.O., 5-Yr Overhaul
8	1000 on 12 Apr	1535 on 27 May	P.O., Station Service Work
7	1000 on 12 Apr	1535 on 27 May	P.O., Station Service Work
12	0006 on 24 May	1729 on 27 May	P.O., Annual Overhaul
5	0936 on 24 May	1613 on 25 May	F.O., BPA Disc Fail/Urgent Outage Line 2
6	0936 on 24 May	1613 on 25 May	F.O., BPA Disc Fail/Urgent Outage Line 2
18	0840 on 24 May	1012 on 24 May	P.O., Trash Raking
11	1012 on 24 May	1111 on 24 May	P.O., Trash Raking
5	0744 on 27 May	1535 on 27 May	P.O., BPA Work
6	0744 on 27 May	1535 on 27 May	P.O., BPA Work
14	1858 on 29 May	0912 on 02 May	F.O., STS Motor Failure

- 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
05/23	0.5'	0.5'
05/24	0.7'	0.6'
05/25	0.6'	0.6'
05/26	0.8'	0.7'
05/27	0.9'	0.8'
05/28	0.9'	1.0'
05/29	1.2'	1.3'

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.

3. RESEARCH:

- a. Four Peaks Environmental - Fish counting contract: Daytime visual counting (0500 to 2100 PDT) began on 01 April. Night video (2100 to 0500 PDT) counting began 15 May. Fish counts can be viewed [here](#).
- b. USFWS – Lamprey Metamorphosis Study: Juvenile lamprey researchers are onsite, and the work is underway.
- c. Pacific States Marine Fisheries Commission - Smolt Monitoring: Sample collections at the SMF began at 0700 on 02 March. Debris at the primary dewatering structure (PDS) and fish/debris separator was light consisting mostly of sticks. Gas Bubble Trauma (GBT) examinations began on 10 April and are typically performed 2 days/week through the end of spill season. Results from this week’s GBT examinations: 200 yearling Chinook and steelhead examined with no GBT symptoms observed. No fish collections for research purposes were conducted this week. More details can be found on the [FPC web page](#).
- d. USDA – Pinniped and Avian Hazing: Deck-based hazing continues.
- e. State Agency Pinniped Trapping: Sea lion trapping began on 05 April.
- f. WDFW/ PSMFC – Pikeminnow Sampling: Hook and line angling activities continue for Northern Pikeminnow within the BONBRZ as a constituent of Gas Bubble Trauma (GBT) monitoring.
- g. CRITFC – Adult Salmonid Sampling: Adult Salmonid sampling in the AFF began on 20 April and typically occurs 5 days per week.

4. FISHWAYS:

- a. Project biologists inspected 23 to 29 May.
- b. Fish Passage Plan observations.

• **Table 4. FPP Items Out of Criteria.**

Date	Location	FPP Violation	Cause	Response
PH1				
05/23-29	PH1 ITS	S. End Gate Inoperable and Chain Gates 1a & 1b Closed	S. End Gate Inoperable, 1a and 1b Closed for Safety Reasons	W.O.
Bradford Island				
05/23-29	A-Branch	FG3-4 Partially Open	FG3-4 mechanically bound partially open/closed	W.O.
05/23-24,27-29	A-Branch	Weir Staff Gauge >1.1’	Unknown	NA
Cascades Island – Nothing to Report				
Washington Shore – Nothing to Report				
05/25-27	WA Shore	Weir 37 High Water	Unknown	Operators Notified

c. Adult Fishways.

- (1) The AFF remains in service.
- (2) Sensor calibration occurred on 25 May.
- (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) STS's remain in service. 14C was found to have motor failure on 29 May and forced shutdown of U14 until 02 June.

e. Lamprey Fishways.

- (1) BI, CI, and WA Shore LPS's are in service.
- (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.
- (5) The CI Lamprey trap remains out of service.

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

Table 5. *Avian Counts 23 to 29 May.*

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
05/23	20	2	0	0	0
05/24	21	2	0	0	0
05/25	6	2	0	0	0
05/26	4	0	0	0	0
05/27	6	0	0	0	0
05/28	2	0	0	0	0
05/29	2	0	0	0	0

5. WATERQUALITY MONITORING:

a. Fishway Temperatures. Temperature logs began on 28 February and will continue through 30 November.

Table 6. *Bonneville Fishway Temperatures 23 to 29 May.*

Date	A-Branch	B-Branch	BI Exit	WA Entrance	CI Entrance	WA Exit	CI LPS	WA LPS	BI LPS	AFF	SMF	Forebay
23-May	57.1	57.1	57.2	57.2	57.2	57.1	57.3	57.3	57.4	57.0	57.1	56
24-May	57.0	57.1	57.1	57.2	57.1	57.1	57.2	57.3	57.3	57.0	57.1	56
25-May	57.4	57.5	57.6	57.6	57.5	57.5	57.7	57.7	57.8	57.4	57.4	57
26-May	58.0	58.1	58.2	58.1	58.1	58.1	58.3	58.3	58.5	57.9	57.9	57
27-May	58.4	58.4	58.4	58.5	58.4	58.4	58.5	58.6	58.7	58.3	58.4	57
28-May	58.3	58.3	58.6	58.4	58.3	58.3	58.5	58.6	58.9	58.2	58.2	58
29-May	58.7	58.8	58.8	58.8	58.8	58.8	59.1	59.1	59.1	58.7	58.7	58

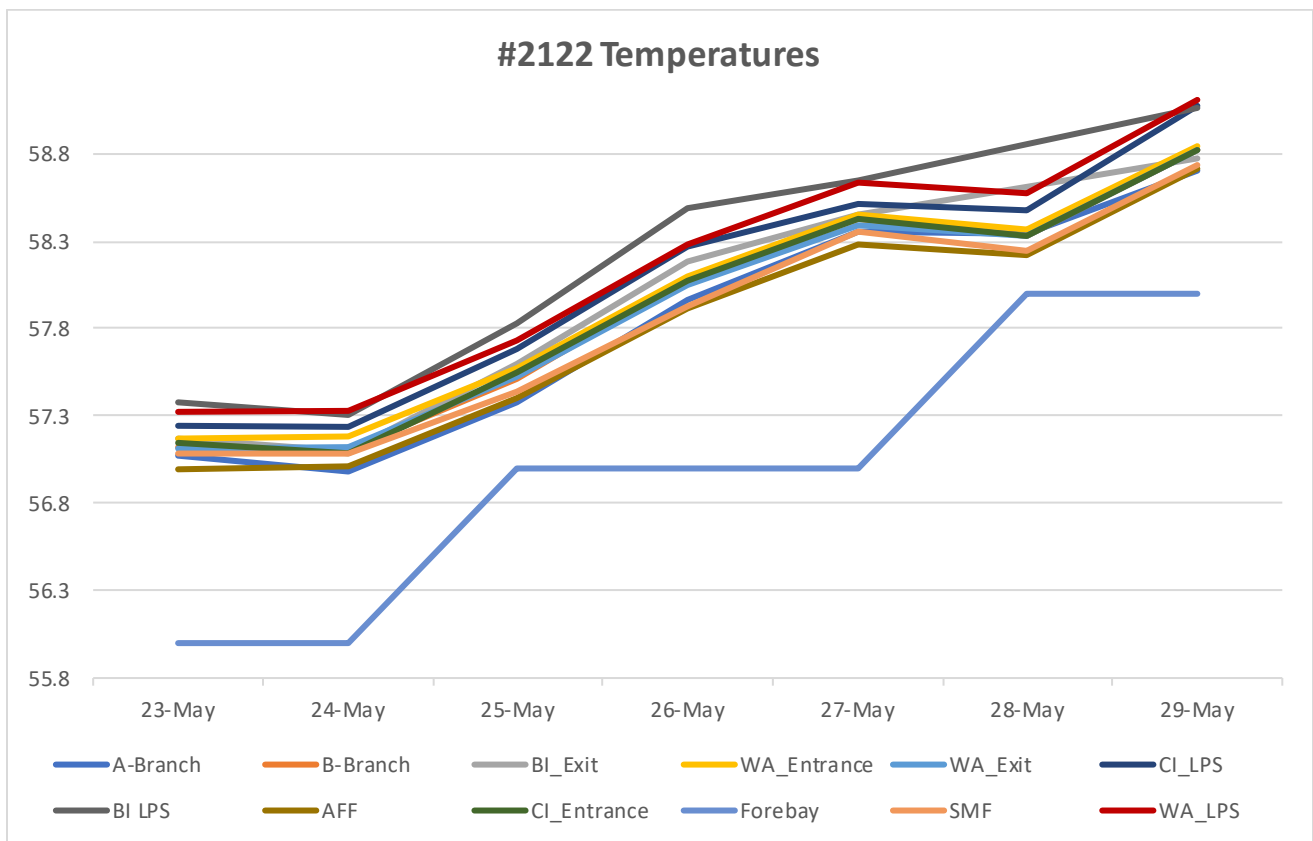


Figure 1. *Average fishway temperatures from 23 to 29 May.*

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 05 April states that effective 10 April through 15 June, Bonneville Dam operate in

accordance with FOP to Spring Spill for Juvenile Fish Passage. See teletype BONR 040521 0912 for details.

- A teletype was sent out on 07 April for all Columbia and Snake River Projects and BPA giving revisions to the Lack of Load Spill Priority List. Please see teletype BONR 040721 1225 for details.

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