

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for **Week 38** of 2020, which covers the period from **13 – 19 September**.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 96.3 to 125.1 kcfs. Daily average powerhouse forebay elevation ranged from 74.9' to 75.5' msl. Daily average project tailwater ranged from 9.3' to 11.1' msl. Secchi disk measurements remained 7.0'. Daily average water temperature remained 67°F.

b. Daily average spill ranged from 1.3 to 1.4 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	RTS	Reason
5	0612 on 14 Sep	---	P.O., Annual Maintenance
13	0758 on 08 Sep	---	F.O., TH Bearing Cooler Leak
15	0003 on 15 Sep	1546 on 15 Sep	P.O., Quarterly Thrust Collar Inspection

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	RTS	Reason	Duration
F1	0023 on 15 Sep	1010 on 15 Sep	P.O., Replace Slip Ring Brushes	9 hrs, 47 mins
F2	0002 on 18 Sep	0317 on 18 Sep	R.S., Float Trash	3 hrs, 15 mins

- Table 3. Fish Unit Drawdowns, in Feet.

Date	F1	F2
9/13	0.6'	1.2'
9/14	0.5'	1.3'
9/15	0.3'	1.7'
9/16	0.5'	0.4'
9/17	0.2'	2.3'
9/18	0.2'	0.1'
9/19	0.2'	0.2'

2. MAINTENANCE ACTIVITIES:

a. Auxiliary Water System Closures.

- FV 3-7 closed for cleaning from 1257 to 1317 on 17 September.
- FV 3-9 closed for cleaning from 1257 to 1317 on 17 September
- FV 1-1 closed for cleaning from 1508 to 1530 on 17 September.

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. Nighttime video counting (2100-0500) began on 15 May. Fish counts can be viewed [here](#).
- b. PSMFC – Smolt Monitoring: Debris at the PDS and fish/debris separator was light consisting mostly of aquatic macrophytes, sticks and dead adult American Shad. GBT sampling concluded for the season as of 31 August. Truck releases of summer/fall out-migrants originating from the Snake River dams began 03 August and occur every other day. Five salmon 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: Hazing started 17 August.
- d. CRITFC – Adult Salmonid Sampling: Adult Salmonid sampling in the AFF began on 25 May and typically occurs 5 days per week.
- e. ODFW – Steelhead Sampling: Steelhead sampling in the AFF began on 13 July and occurs in conjunction with CRITFC Adult Salmonid Sampling.
- f. USGS – Bass and Crayfish Sampling: Bass and Crayfish tagging and sampling in the forebay began on 24 August.

4. FISHWAYS:

- a. Project biologists inspected 13, 15 – 19 September.
- b. Fish passage plan observations.

- Table 5. FPP Items Out of Criteria.

Date	Location	FPP Violation	Cause	Response
9/14	Bonn	No Inspection	Haz. Smoke Conditions	NA
Bradford Island				
9/13,16,17	A-Branch	Weir Staff Gauge > 1.1'	Unknown	NA
9/13,15-19	B-Branch	FG 3-26,27 open	Mechanically Bound	NA
9/16	PH1CC	Ent. Diff. < 1.0'	Unknown	NA
Cascades Island – Nothing to report.				
Washington Shore – Nothing to report.				

- FG6-11 (Cascades Island) is broken in the partially open position. The diffuser shaft broke 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 $\geq 14.0'$.
- FG6-12 (Cascades Island) is mechanically bound in the open position. The diffuser 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.
- FG6-18 (Cascades Island) is mechanically bound in the closed position. The diffuser 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.

- FG6-19 (Cascades Island) is mechanically bound in the closed position. The diffuser should be open with tailwaters > 15.0'. 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 15 Sept.
- (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 out of service.
- (4) The DSM remains in service.
- (5) STSs are installed.

e. Lamprey Fishways.

- (1) LPSs remain 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 was taken out of service on 16 September.

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

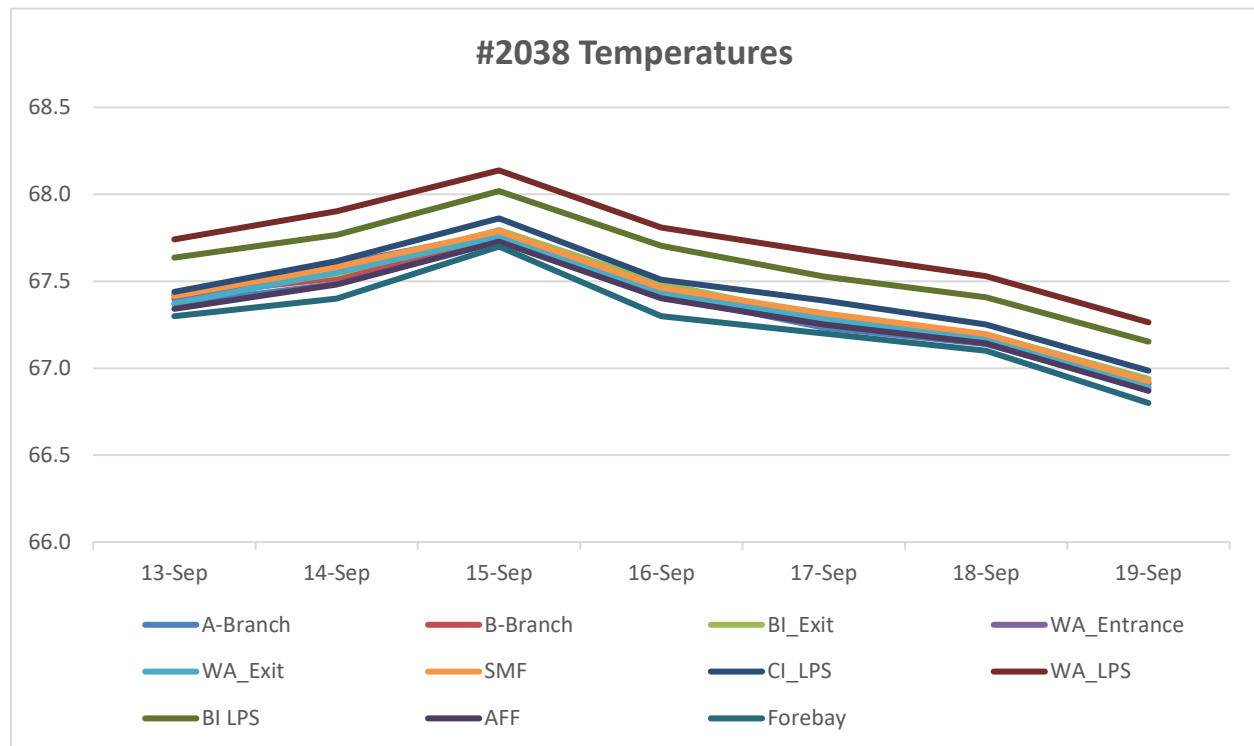
(1) Table 5. Avian Counts.

Date	Gulls	Cormorants	Terns	Wh. Pelicans	Grebes
9/13	14	5	0	0	0
9/14	---	---	---	---	---
9/15	8	31	0	0	0
9/16	2	1	0	0	0
9/17	3	6	0	0	0
9/18	3	7	0	0	0
9/19	12	19	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
13-Sep	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.7	67.6	67.3	67.3
14-Sep	67.5	67.5	67.5	67.6	67.6	67.6	67.6	67.9	67.8	67.5	67.4
15-Sep	67.7	67.8	67.8	67.8	67.8	67.8	67.9	68.1	68.0	67.7	67.7
16-Sep	67.4	67.4	67.5	67.5	67.4	67.5	67.5	67.8	67.7	67.4	67.3
17-Sep	67.2	67.3	67.3	67.3	67.3	67.3	67.4	67.7	67.5	67.3	67.2
18-Sep	67.1	67.2	67.2	67.2	67.2	67.2	67.3	67.5	67.4	67.1	67.1
19-Sep	66.9	66.9	66.9	66.9	66.9	66.9	67.0	67.3	67.2	66.9	66.8



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. TELETYPES CURRENTLY IN EFFECT:

- A teletype sent on 26 August requests that during the dates and times listed, operate Bonneville forebay operate within the following constraints:
 From 0700 on 01 September through 1730 on 02 September, continuous, 74.5 to 76.0 feet, hard constraint.
 From 0700 on 07 September through 1730 on 11 September, continuous, 74.0 to 76.5 feet, hard constraint.
 From 0700 on 12 September through 1730 on 14 September, continuous, 74.0 to 75.5 feet, hard constraint, 74.5 to 75.5 feet, soft constraint.
 The purpose of this request is to support construction activities for the BNSF railroad bridge replacement

over the Little White Salmon River.

- A teletype sent on 31 August revised the teletype sent on 26 August. During the dates and times listed, operate Bonneville forebay operate within the following constraints:
From 0700 on 02 September through 1730 on 04 September, continuous, 74.5 to 76.0 feet, hard constraint.
From 0700 on 07 September through 1730 on 11 September, continuous, 74.0 to 76.5 feet, hard constraint.
From 0700 on 12 September through 1730 on 14 September, continuous, 74.0 to 75.5 feet, hard constraint, 74.5 to 75.5 feet, soft constraint.
The purpose of this request is to support construction activities for the BNSF railroad bridge replacement over the Little White Salmon River.
- A teletype sent on 02 September revised the teletype sent on 31 August. During the dates and times listed, operate Bonneville forebay operate within the following constraints:
From 0700 on 03 September through 1730 on 02 September, continuous, 74.5 to 76.0 feet, hard constraint.
From 0700 on 07 September through 1730 on 11 September, continuous, 74.0 to 76.5 feet, hard constraint.
From 0700 on 12 September through 1730 on 14 September, continuous, 74.0 to 75.5 feet, hard constraint, 74.5 to 75.5 feet, soft constraint.
The purpose of this request is to support construction activities for the BNSF railroad bridge replacement over the Little White Salmon River.
- A teletype sent on 02 September states that effective immediately through 31 October, the Bonneville dam spillway will be tagged out and unavailable for spill intermittently throughout this period to support a USGS fish tissue sampling crew. See teletype for details
- A teletype sent on 04 September revised the teletype sent on 02 September. During the dates and times listed, operate Bonneville forebay operate within the following constraints:
From 0700 on 07 September through 1730 on 11 September, continuous, 74.0 to 76.5 feet, hard constraint.
From 0700 on 12 September through 1730 on 14 September, continuous, 74.0 to 75.5 feet, hard constraint, 74.5 to 75.5 feet, soft constraint.
The purpose of this request is to support construction activities for the BNSF railroad bridge replacement over the Little White Salmon River.
- A teletype sent on 07 September revised the teletype sent on 04 September. During the dates and times listed, operate Bonneville forebay operate within the following constraints:
From 0700 on 09 September through 1730 on 11 September, continuous, 74.0 to 76.5 feet, hard constraint.
From 0700 on 12 September through 1730 on 14 September, continuous, 74.0 to 75.5 feet, hard constraint, 74.5 to 75.5 feet, soft constraint.
The purpose of this request is to support construction activities for the BNSF railroad bridge replacement over the Little White Salmon River.
- A teletype sent on 10 September requests that Bonneville pool operate within a 1.5' band, hard constraint, from 0600 on 14 September through 1800 on 18 September to facilitate treaty fishing.
- A teletype sent on 14 September cancels the teletype sent on 07 September. The railroad bridge construction is complete. Resume normal forebay operations.
- A teletype sent on 16 September requests that Bonneville pool operate within a 1.5' band, hard constraint, from 0600 on 21 September through 1800 on 25 September to facilitate treaty fishing.

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Bonneville Project