

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 09 of 2018, which covers the period from 25 February- 03 March.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 210 to 225.4 kcfs. Daily average powerhouse forebay elevation ranged from 72.8' to 73.4' msl. Daily average project tailwater ranged from 17.9' to 18.6' msl. Secchi disk measurements stayed at 5.0'. Daily average water temperature ranged from 38° to 39°F.
- b. Daily average spill ranged from 0.6 to 1.2 kcfs.
- c. Unit Operation. PH2 remains the priority powerhouse. Main unit drawdowns are measured every Monday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
10	1040 on 18 Dec	1143 on 01 Feb	5 YR Overhaul
11	0736 on 08 Jan	---	FGE Work / Turbine Integrity Inspection
12	0002 on 27 Feb	1340 on 03 Mar	PO FGE/ Thrust Collar Inspection
13	0002 on 26 Feb	1959 on 26 Feb	Thrust Collar inspection
14	2145 on 02 Mar	---	Governor oil leak
17	1145 on 26 Feb	1622 on 26 Feb	STS Repair

- d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder.
- e. Table 2. Fish unit drawdowns, in feet.

Date	F1	F2
2/25	0.2'	-
2/26	0.2'	-
2/27	3.5'	-
2/28	0.4'	-
3/01	0.2'	0.2'
3/02	0.2'	0.2'
3/03	0.1'	0.1'

2. MAINTENANCE ACTIVITIES:

- f. Auxiliary Water System Closures. Nothing to report.

g. STS/VBS inspections.

Unit	Date	Hours upon Install	Comments
11	2/20	36472	OOS
12	2/20	26641	Ok
13	2/20	97913	Ok
14	2/20	00020	Ok (new meter)
15	2/20	12674	Ok
16	2/20	24457	Ok
17	2/20	16080	OK
18	2/20	54473	Ok

h. Dewatering and Fish Salvages. On 28 Feb, Project Biologists salvaged ~20 sculpin, 1 juvenile panfish, and ~15 juvenile lamprey from unit 10 tail logs. All fish were released to tailwater in good condition.

2. RESEARCH:

a. Normandeau – Fish counting. Daytime video counting (0400 to 2000) began on 01 March.

3. FISHWAYS: All adult and juvenile fishways were in service for the March 1 start of fish passage season.

- a. Project biologists inspected 26 February- 03 March.
- b. Fish passage plan observations.

(1) Table 3. FPP out of criteria items.

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
2/27	A-Branch	FG3-5 not open	Unknown	TR submitted
2/27, 3/1-3	A-Branch	Water over weir >1.2'	Conduit leak	none
CASCADES ISLAND - Nothing to report				
WASHINGTON SHORE - Nothing to report				

- (2) Bonneville had the majority of its avian lines broken due to ice storms during the 2016/17 winter. Avian lines will be replaced starting 19 March (pending weather and river conditions).
- (3) PH2 diffuser B4 was discovered to have its stem bent on 24 May 2017. This likely occurred while trying to close and the valve is believed to be open. It should be closed at tailwaters above 31.0' and below 11.0' msl.

c. Adult Fishways.

- (1) The AFF was dewatered on 15 November.
- (2) Sensor calibration did not occur this reporting week. Bradford Island fishway sensors were undergoing calibration after the winter maintenance period.
- (3) SLEDs are installed at all entrances.

d. Juvenile Fishways.

- (1) The ITS remains in service.
- (2) The hydro-cannon is in service.
- (3) The B2CC is out of service.
- (4) The DSM returned to service on 20 February.
- (5) STSs are installed.

e. Lamprey Fishways. All LPS remain out of service.

f. Avian Monitoring. Bird counts are recorded between 01 April and 31 October.

4. WATER QUALITY MONITORING:

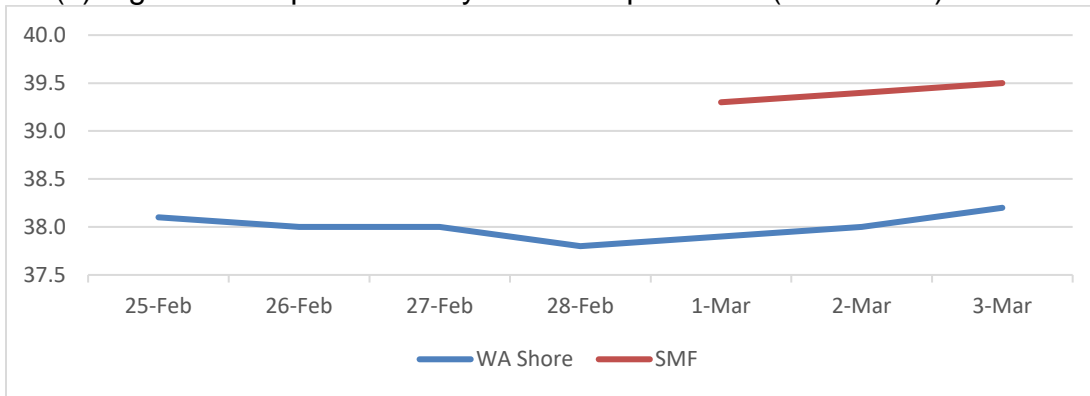
a. Fishway Temperatures. Temperatures are taken from 01 March through 30 November.

(1) Table 4. Average daily fishway water temperatures (Fahrenheit).

Date	WA Shore	SMF
25-Feb	38.1	---
26-Feb	38.0	---
27-Feb	38.0	---
28-Feb	37.8	---
1-Mar	37.9	39.3
2-Mar	38.0	39.4
3-Mar	38.2	39.5

*Technical difficulties have delayed the Bradford Island temperature collection.

(2) Figure 1. Graph of fishway water temperatures (Fahrenheit).



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 31 August sets wintertime (01 September 2017 through 31 March 2018) spill priority lists and spill caps for lack of load conditions.
- b. A teletype sent on 20 December states that effective 1300 on 21 December until further notice, the Bonneville dam minimum tailwater elevation is 11.8' during all hours. The intent is to ensure sufficient tailwater elevation to protect Chum Salmon redds in the Ives/Pierce Island complex during egg incubation.

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