

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 10 of 2018, which covers the period from 04-10 March.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 188.5 to 221.5 kcfs. Daily average powerhouse forebay elevation ranged from 72.7' to 73.1' msl. Daily average project tailwater ranged from 16.2' to 18.1' msl. Secchi disk measurements ranged from 5.0' to 6.0'. Daily average water temperature remained at 39°F all week.
- b. Daily average spill ranged from 1.2 to 1.3 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	1314 on 05 Mar	1604 on 06 Mar	Unit Exciter Control Faulty
11	0736 on 08 Jan	---	FGE Work / Turbine Integrity Inspection
14	2145 on 02 Mar	2055 on 05 Mar	Governor oil leak

- 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
3-4	0.1'	0.1'
3-5	0.2'	0.2'
3-6	0.2'	0.2'
3-7	0.3'	0.3'
3-8	0.1'	0.1'
3-9	0.2'	0.2'
3-10	0.3'	0.3'

2. MAINTENANCE ACTIVITIES:

- f. Auxiliary Water System Closures.

- (1) FV1-1 was close from 0715 to 0734 on 07 Mar for trash rack raking.
- (2) FV3-7 was close from 0958 to 1039 on 08 Mar for trash rack raking.

- g. STS/VBS Inspections. STS/VBS were installed 20 February. Monthly inspections will be in April. Baseline data is below.

UNIT #	PREVIOUS STS HRS	HRS WHEN INSPECTED	STS-A	STS-B	STS-C	VBS A,B,C	HRS RUN	REMARKS
11		36472	ok	ok	ok	ok		OOS
12		26641	ok	ok	ok	ok		
13		97913	ok	ok	ok	ok		
14		00020	ok	ok	ok	ok		New hour meter
15		12674	ok	ok	ok	ok		
16		24457	ok	ok	ok	ok		
17		16080	ok	ok	ok	ok		
18		54473	ok	ok	ok	ok		

- h. Dewatering and Fish Salvages.

(1) On 06 March, Project Biologist salvaged 2 sculpin, 2 crawdads, and 1 smallmouth bass from the upper Nav Lock sill basin.

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 04-10 March.
 b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
3/5-9	A-Branch	Differential >1.1'	Unknown	NA
3/7	A-Branch	Incorrect Diffusers Open	Unknown	Ops Adjusted
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 occurred on 10 March.
- (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.

- (1) The Bradford Island LPS was returned to service for the season on 06 March.
All other lamprey passage systems remain off.

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

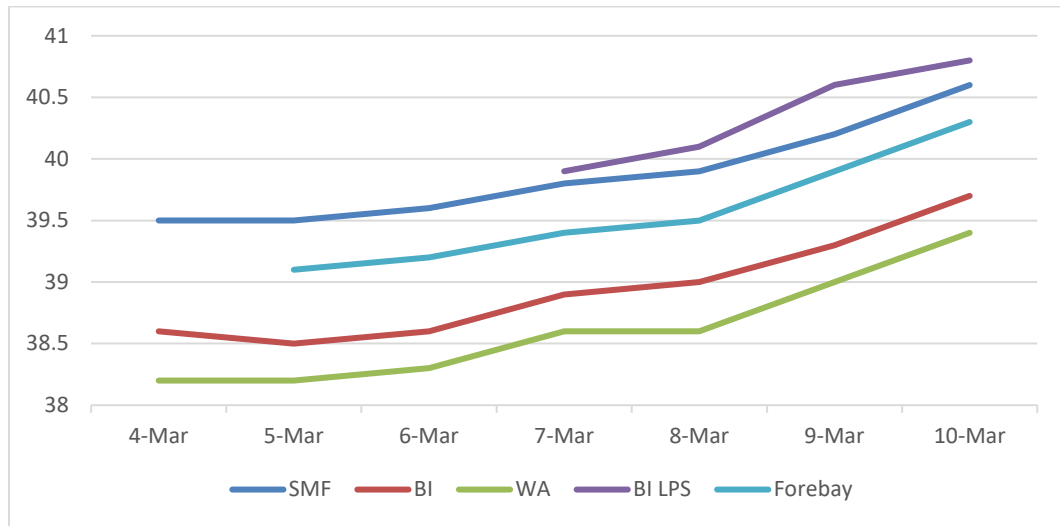
4. WATER QUALITY MONITORING:

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

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

Date	SMF	BI	WA	BI LPS	Forebay
4-Mar	39.5	38.6	38.2	---	---
5-Mar	39.5	38.5	38.2	---	39.1
6-Mar	39.6	38.6	38.3	---	39.2
7-Mar	39.8	38.9	38.6	39.9	39.4
8-Mar	39.9	39.0	38.6	40.1	39.5
9-Mar	40.2	39.3	39.0	40.6	39.9
10-Mar	40.6	39.7	39.4	40.8	40.3

(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.
- c. A teletype sent on 09 March outlined the procedure for advancing clocks due to Daylights Savings.

TONY R. KIRK
Operations Manager
Bonneville Project