

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 11 of 2018, which covers the period from 11-17 March.

1. OPERATION SUMMARY:

- a. Daily average river flows ranged from 199 to 214 kcfs. Daily average powerhouse forebay elevation ranged from 72.7' to 73.6' msl. Daily average project tailwater ranged from 17.0' to 17.8' msl. Secchi disk measurements ranged from 6.0' to 7.0'+. Daily average water temperature ranged from 40°F to 42°F.
- 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
1	1532 on 15 Mar	1706 on 15 Mar	Governor Trouble
4	0804 on 13 Mar	0924 on 13 Mar	Planned Outage, Trash Raking
11	0736 on 08 Jan	---	FGE Work / Turbine Integrity Inspection
12	1001 on 16 Mar	1230 on 16 Mar	Unit 11 tail log dive operations
13	1002 on 16 Mar	1232 on 16 Mar	Unit 11 tail log dive operations

- d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder.

(1) F1 and F2 were both forced out of service from 0937 to 1225 on 16 March for Unit 11 tail log dive operations.

- e. Table 2. Fish unit drawdowns, in feet.

Date	F1	F2
3/11	0.2'	0.1'
3/12	0.2'	0.1'
3/13	0.2'	0.1'
3/14	0.2'	0.2'
3/15	-	-
3/16	0.4'	0.2'
3/17	0.3'	0.4'

2. MAINTENANCE ACTIVITIES:

f. Auxiliary Water System Closures.

(1) FV3-9 was closed from 0720 to 0725 on 12 March for trash rack raking.

g. STS/VBS Inspections. Nothing to report.

h. Dewatering and Fish Salvages.

(1) Unit 11 tail log removal began on 12 March. However, due to debris blocking a tail log, an emergency dive was required on 16 March. A small number of sculpin were returned to the tailrace but since no project biologists were available, we do not have an exact tally.

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 11-17 March.

b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
3/11,14-17	A-Branch	Differential > 1.1'	Unknown	NA
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.
- (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 remains out of service.
 - (a) The B2CC was open from 0800 to 0835 on 14 March to flush debris.
- (4) The DSM is in service.
- (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.
- (2) The Bradford Island Lamprey Wetted Wall was commissioned on 17 March.

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

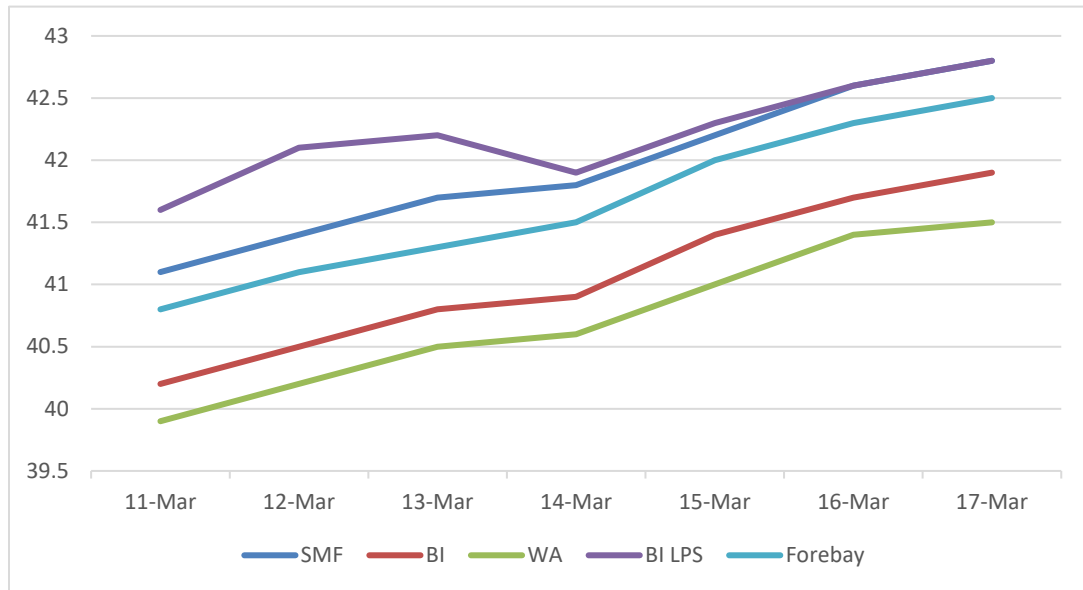
4. WATER QUALITY MONITORING:

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
11-Mar	41.1	40.2	39.9	41.6	40.8
12-Mar	41.4	40.5	40.2	42.1	41.1
13-Mar	41.7	40.8	40.5	42.2	41.3
14-Mar	41.8	40.9	40.6	41.9	41.5
15-Mar	42.2	41.4	41	42.3	42.0
16-Mar	42.6	41.7	41.4	42.6	42.3
17-Mar	42.8	41.9	41.5	42.8	42.5

(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:** **

****UPDATE**** On 1 February, 2018, approximately one cup of oil leaked from an STS gearbox into gatewell 11C at Powerhouse 2. The oil was confined to the gatewell and absorbents were deployed to remove the material. The gearbox was repaired and all required reporting was initiated.

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. Three teletypes sent on 14 March updated the previous teletype regarding spill priority lists and spill caps for lack of load conditions.

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