

## MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 12 of 2016, which covers the period from 13 to 19 March 2016.

**1. OPERATION SUMMARY:**

- a. Daily average river flows ranged from 200.4 to 235.4 kcfs. Daily average powerhouse forebay elevation ranged from 73.2' to 75.3' msl. Daily average project tailwater ranged from 18.5' to 20.1' msl. Secchi disk measurements ranged from 4' to 5'. Daily average water temperature remained at 43° F.
- b. Spill Bays 01 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 1.2 to 1.3 kcfs.
- c. Unit Operation. PH2 remains the priority powerhouse. Main unit draw downs are measured every Monday and more frequently as needed.

## (1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
3&4	0017 on 17 Mar	1713 on 18 Mar	Breaker cubicle measurements
5	0201 on 17 Mar	1830 on 17 Mar	Breaker cubicle measurements
6	0200 on 17 Mar	1824 on 17 Mar	Breaker cubicle measurements
7	0103 on 22 Feb	---	Annual, bank 7/8 outage, main unit breaker replacement
8	0103 on 22 Feb	---	
11	1101 on 16 Mar	1534 on 16 Mar	Raking trash
12	1020 on 16 Mar	1058 on 16 Mar	Raking trash
12	2152 on 19 Mar	---	North servo leak
17	1057 on 29 Feb	---	Wicket gate seal replacement
18	0822 on 16 Mar	1015 on 16 Mar	Raking trash

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

- (1) F1 was placed on standby from 1256 to 1446 on 14 March for trash raking.  
 (2) F2 was placed on standby from 1257 to 1446 on 14 March for trash raking, and from 1840 to 1939 on 18 March to float debris.

## (3) Table 2. Fish unit drawdowns, in feet.

Date	F1	F2
3/13	0.5	1.0

3/14	0.3	0.4
3/15	0.3	0.3
3/16	0.1	0.2
3/17	0.5	1.0
3/18	0.2	0.2
3/19	0.4	0.7

**2. ACTIVITIES:**

a. Auxiliary Water System Closures

- (1) FV1-1 was closed for cleaning from 0814 to 0900 on 14 March.
- (2) FV3-7 was closed for cleaning from 0756 to 0834 on 17 March.
- (3) FV6-9 was closed for cleaning from 1039 to 1052 on 17 March.

b. STS/VBS inspections. None.

c. Dewatering and Fish Salvages. None.

**3. RESEARCH:**

a. Normandeau – Fish Counting. Visual counting ended and video counting began on 01 December.

b. Fisheries Field Unit--Pinniped Observation. Observations began on 04 January.

c. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring began at 0700 on 02 March. No research fish were collected this reporting week. Fallbacks recorded crossing the separator bars: 16 steelhead. More details can be found on the [FPC web page](#).

**4. FISHWAYS:**

a. Project biologists inspected 13 – 19 March.

b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
<b>BRADFORD ISLAND</b>				
3/16,18-19	A-branch	Water over weir > 1.1'	Unknown	None
<b>CASCADES ISLAND</b>				
3/11	FG6-20	Closed at 22.5' tailwater	Unknown	Ops Adjusted

WASHINGTON SHORE				
3/13-19	PH2	Diffuser A2 closed	See 4.b.2 below	None
3/13	Weir 38	Water over weir < 0.9'	Unknown	None

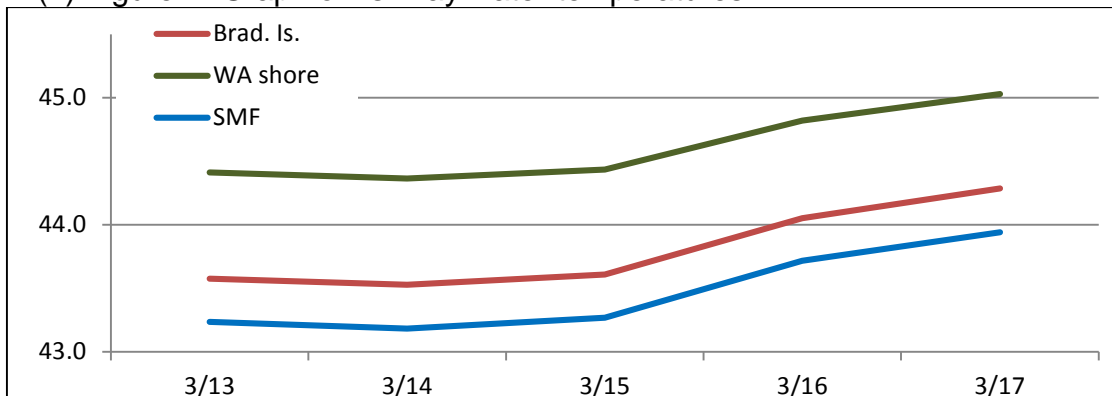
(2) PH2CC diffuser A2 was unable to be repaired during winter maintenance 2014/15 and remains closed. It should be open when tailwater is above 13.0' msl. The gate for diffuser B5 was removed for repairs and therefore cannot be closed. It should be closed below tailwaters of 12.0' msl.

c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. Forebay temperatures can be found [online](#). The BON site is not yet active.

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

Date	Fishways		
	Brad. Is.	WA shore	SMF
3/13	43.6	43.2	44.4
3/14	43.5	43.2	44.4
3/15	43.6	43.3	44.4
3/16	44.1	43.7	44.8
3/17	44.3	43.9	45.0
3/18	44.2	43.9	45.0
3/19	44.2	43.9	45.1

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



d. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

e. Avian Monitoring. Bird counts are made between 01 April and 31 October.

f. Adult Fishways.

(1) Fishway instrument calibration was checked on 17 March.

(2) Eight of 12 floating orifice gates (FOGs) are installed; the 4 middle slots have

bulkheads in place. FOG sea lion bars are installed. Plywood sea lion barriers were installed on top of all FOGs on 11 February to prevent sea lions from jumping into the PH2CC.

(3) All SLEDs are installed.

g. Juvenile Fishways.

- (1) The ITS remains open.
- (2) The hydro-cannon is on.
- (3) The B2CC remains open.
- (4) The DSM remains in service.

h. Lamprey Fishways.

- (1) All LPSs remain out of service.

**5. CONSTRUCTION:**

- a. The Navigational Lock went out of service for annual maintenance at 0600 on 05 March. It was returned to service at 1500 on 17 March.

**6. HAZMAT, SPILLS AND CLEANUP:** Nothing to report.

**7. TELETYPES CURRENTLY IN EFFECT:**

- a. A teletype sent on 06 January updated previous Chum tailwater operations. Effective immediately until further notice operate BON tailwater at a minimum of 12.5' for all hours. This operation is to protect Chum Redds below BON at the Ives/Pierce Island complex.

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