

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 13 of 2015, which covers the period from 22 to 28 March 2015.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 203.8 to 241.0 kcfs. Daily average powerhouse forebay elevation ranged from 73.8 to 75.6 msl. Daily average project tailwater ranged from 17.5 to 19.3 msl. Secchi disk measurements ranged from 6.0' to 7.0'. Daily average water temperature ranged from 46 to 47°F this week.

b. Spill Bays 01 and 18 are open during daytime hours to provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 1.2 to 4.0 kcfs.

c. Unit Operation. Powerhouse two became the priority powerhouse on 01 March. Main unit draw downs are measured every Monday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
1	1825 on 28 Mar	1924 on 28 Mar	Sailboat upstream of PH1 FB lost propulsion. Emergency turbine and auto chain gate shut-down ensued. Boat regained propulsion on its own and all operations returned to normal ~one hour later.
2	1825 on 28 Mar	1931 on 28 Mar	
3	1825 on 28 Mar	1925 on 28 Mar	
4	1825 on 28 Mar	1936 on 28 Mar	
5	1825 on 28 Mar	1937 on 28 Mar	
6	1825 on 28 Mar	1930 on 28 Mar	
7	1825 on 28 Mar	1941 on 28 Mar	
8	1826 on 28 Mar	1948 on 28 Mar	
9	1826 on 28 Mar	1943 on 28 Mar	
10	1826 on 28 Mar	1929 on 28 Mar	
15	1000 on 10 Feb	1032 on 27 Mar	4 year overhaul

d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder. The units may be placed on standby, as necessary, during nighttime hours to float debris. Gatewell drawdowns are measured daily.

(1) Table 2. Fish unit drawdowns, in feet.

Date	F1	F2
3/22	0.5	0.3

3/23	0.5	0.4
3/24	0.3	0.2
3/25	0.4	0.3
3/26	0.4	0.3
3/27	0.4	0.5
3/28	0.7	0.6

2. ACTIVITIES:

- a. Auxiliary Water System Closures. No closures this week.
- b. STS/VBS inspections. No inspections occurred this week.
- c. Dewatering and Fish Salvage.

(1) On 26 March, Project Biologists recovered 10 sculpin spp. and 1 crayfish from the Unit 15 tail logs. All fish were returned to the tailrace in good condition.

3. RESEARCH:

- a. CRITFC – Sea Lion hazing. Hazing by boat began on 6 March and will continue through May.
- b. Fisheries Field Unit – Sea Lion Observations. Observations commenced on 13 January and will continue through 29 May.
- c. NOAA – FGE testing. Biological testing of the flow control plate installed in the Unit 15-A gatewell is scheduled to begin on 1 April using subyearling Chinook. Testing in 15-C will occur in May. Review the FFDRWG update form [here](#).
- d. Normandeau – Fish Counting. Video monitoring continues.
- e. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. No research fish were collected this week. These fallbacks were recorded crossing the separator bars: 5 steelhead, 2 unknown salmonids. More details can be found on the [FPC web page](#).
- f. USDA – Sea lion and avian hazing. Land-based hazing began on 18 March.

4. FISHWAYS:

- a. Project biologists inspected 22 – 28 March.
- b. Fish passage plan observations.
 - (1) Table 3. FPP out of criteria items.

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
3/23,25,28	A-branch	Weir water level > 1.1'	Suspected FV3-7 conduit leak	None
CASCADES ISLAND – Nothing to report				
WASHINGTON SHORE – Nothing to report				

(2) WG-1, one of the south PH1CC entrances, experienced a gate failure on 17 November. The gate fell and the picking beam fell into the water. WG-2 has been closed to improve entrance differentials. Repairs will require the ITS to be closed and are being coordinated for August, 2015.

(3) A-branch diffuser FG3-3 is mechanically bound. Repairs are not possible until A-branch is dewatered below tailwater during the 2015/16 winter maintenance period.

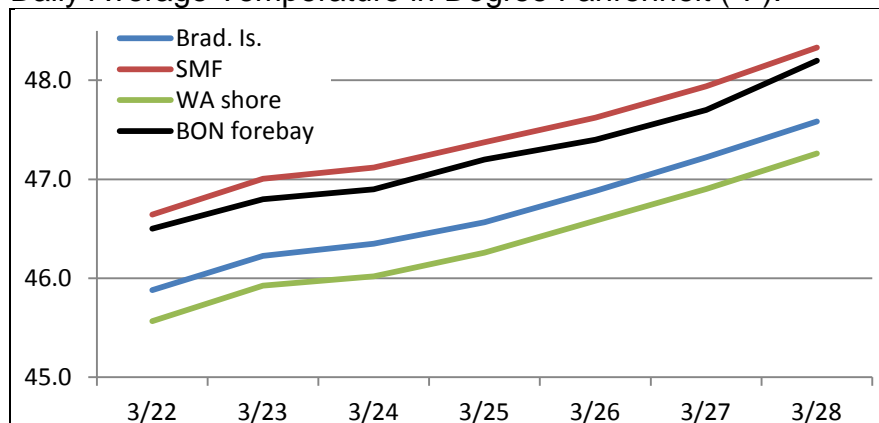
(4) PH2CC diffuser A2 was unable to be repaired during winter maintenance and remains closed. The gate for diffuser B5 was removed for repairs and therefore cannot be closed.

c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. Forebay temperatures can be found [online](#).

(1) Table 4. Daily Average Temperature in Degree Fahrenheit (°F).

Date	Fishways			
	Brad. Is.	WA shore	SMF	BON forebay
3/22	45.9	45.6	46.6	46.5
3/23	46.2	45.9	47.0	46.8
3/24	46.3	46.0	47.1	46.9
3/25	46.6	46.3	47.4	47.2
3/26	46.9	46.6	47.6	47.4
3/27	47.2	46.9	47.9	47.7
3/28	47.6	47.3	48.3	48.2

(2) Chart 1. Daily Average Temperature in Degree Fahrenheit (°F).



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

e. Adult Fishways.

(1) Calibration occurred on 27 March.

(2) 11 of 12 floating orifice gates (FOGs) are installed; one gate is out for maintenance. FOG SLEDs are installed.

(3) All SLEDs remain installed.

f. Juvenile Fishways.

(1) The south end gate of the Ice and Trash Sluiceway (ITS) was removed for repairs. Plating has been placed over the bottom of the guide slot to minimize fish impacts. Reinstallation dates are currently being coordinated for August, 2015.

(2) The hydro-cannon remains in service.

(3) The B2CC remains open.

(4) The DSM remains in service.

g. Lamprey Fishways.

(1) All LPSs remain out of service.

5. CONSTRUCTION:

a. Contractors replaced the flow-control plate in the gatewell of Unit 15A on 25 February. A new flow-control plate in the gatewell of Unit 15B was completed on 11 March. Review the FFDRWG update form [here](#).

b. The Navigational Lock went out of service at 1029 on 09 March for annual maintenance. It was returned to service at 1550 on 19 March.

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

7. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 16 January provides updated BON tailwater operations for Chum incubation. Effective 1500 on 19 December until further notice, operate to maintain a minimum tailwater of 13.0' at all hours. This operation negates previous Chum tailwater operation teletypes.

b. A teletype sent on 23 March updates the spill caps and lack of load conditions to be used from 0000 on 24 March through 2359 on 31 March.

c. A teletype sent on 24 March requests that effective 0700 on 25 March until 1200 on 27 March, maintain BON forebay no lower than 74.5', hard constraint. From 1800 on 25 March until 0700 on 26 March, maintain BON forebay no lower than 75.0', hard constraint. This operation is for barge docking and offloading below TDA.

d. A teletype sent on 26 March terminates the previous teletype as of 1830 on 26 March due to completion of the barge offload.

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