

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 16 of 2015, which covers the period from 12 - 19 April 2015.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 146.7 to 196.1 kcfs. Daily average powerhouse forebay elevation ranged from 74.7 to 75.5 msl. Daily average project tailwater ranged from 13.5 to 16.3 msl. Secchi disk measurements ranged from 5.0' to 6.5'. Daily average water temperature remained at 50°F this week.

b. Spring Spill started on 10 April. Daily average spill ranged from 99.0 to 100.6 kcfs.

c. Unit Operation. Powerhouse two 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
1	0814 on 15 Apr	0850 on 15 Apr	ROV inspection of Unit 0 trash racks
2	0814 on 15 Apr	0850 on 15 Apr	ROV inspection of Unit 0 trash racks
16	0001 on 13 Apr	1159 on 16 Apr	Annual maintenance

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
4/12	0.8	0.5
4/13	1.0	0.7
4/14	0.5	0.5
4/15	0.5	0.5
4/16	0.5	0.5
4/17	0.2	0.3
4/18	0.5	0.6

2. ACTIVITIES:

a. Auxiliary Water System Closures.

(1) FV1-1 was closed for cleaning from 0706 to 0730 on 13 April.

b. STS/VBS inspections. STS run hours were not reset during installation; run hours will not be available until next month. The inspection equipment broke prior to the unit 18 inspection and is undergoing repair.

(1) Table 3. STS inspection dates and run hours.

Unit	Date	Run Hours	Comments
11	4/14	N/A	OK
12	4/14	N/A	OK
13	4/14	N/A	OK
14	4/14	N/A	OK
15	4/14	N/A	OK
16	4/14	N/A	OK
17	4/14	N/A	OK
18	---	N/A	---

c. Dewatering and Fish Salvage. No dewaterings or salvages occurred this week.

3. RESEARCH:

a. CRITFC – AFF. Adult salmonid sampling is scheduled to began on 15 April.

b. CRITFC – Sea Lion hazing. Hazing by boat began on 06 March and will continue through May.

c. Fisheries Field Unit – Sea Lion Observations. Observations commenced on 13 January and will continue through 29 May.

d. NOAA – FGE testing. Biological testing of the flow control plate installed in the Unit 15-A gateway began on 1 April using sub-yearling Chinook. Testing in 15-C will occur in May. Review the FFDRWG update form [here](#).

e. Normandeau – Fish Counting. Video monitoring continued until 01 April, when visual counting commenced.

f. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. No research fish were collected this week. SbyC is active for NOAA and USFWS. These fallbacks were recorded crossing the separator bars: 48 Steelhead and 2 Salmon. More details can be found on the [FPC web page](#).

g. USDA – Sea lion and avian hazing. Land-based hazing began on 18 March.

4. FISHWAYS:

- a. Project biologists inspected 12 - 18 April.
- b. Fish passage plan observations.

(1) Table 4. FPP out of criteria items.

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
4/18	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.

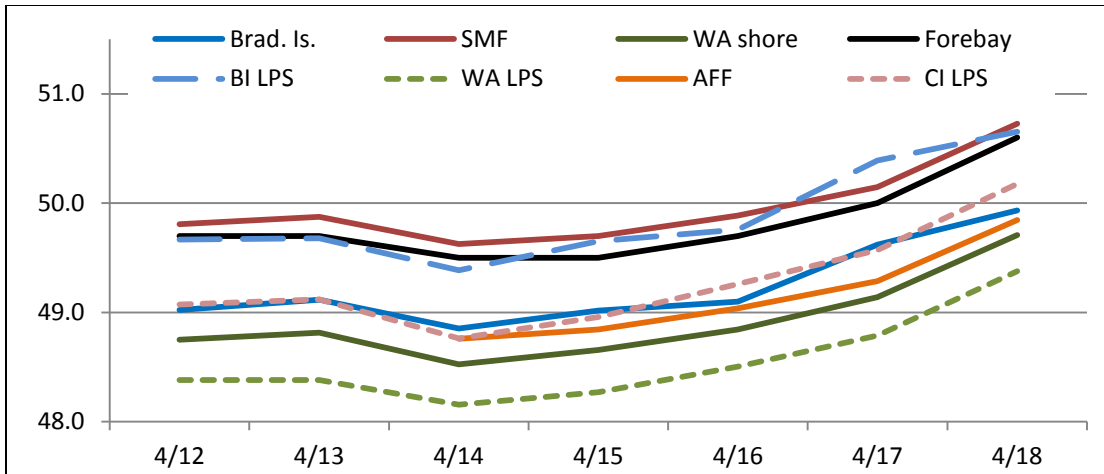
(4) PH2CC diffuser A2 was unable to be repaired during winter maintenance and remains closed. The gate for diffuser B5 was removed for repairs and therefore cannot be closed.

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

(1) Table 5. Daily Average Temperature in Degree Fahrenheit (°F).

Date	Forebay	Fishways				Lamprey		
		Brad. Is.	WA shore	SMF	AFF	BI LPS	WA LPS	CI LPS
4/12	49.7	49.0	48.7	49.8	OOS	49.7	48.4	49.1
4/13	49.7	49.1	48.8	49.9	---	49.7	48.4	49.1
4/14	49.5	48.9	48.5	49.6	48.8	49.4	48.2	48.8
4/15	49.5	49.0	48.7	49.7	48.8	49.7	48.3	49.0
4/16	49.7	49.1	48.8	49.9	49.0	49.8	48.5	49.3
4/17	50.0	49.6	49.1	50.1	49.3	50.4	48.8	49.6
4/18	50.6	49.9	49.7	50.7	49.8	50.7	49.4	50.2

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



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

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

(1) Table 6. Counts of tailrace foraging piscivorous birds.

Date	Gulls	Cormorants	Terns
4/12	3	1	0
4/13	N/A	N/A	N/A
4/14	12	0	0
4/15	11	0	0
4/16	10	0	0
4/17	9	0	0
4/18	6	0	0

f. Adult Fishways.

(1) Calibration occurred on 17 April.

(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.

g. 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.

h. Lamprey Fishways.

(1) The Bradford Island, WA AWS, and Cascades Island LPS's remain in service.

(2) The PH2 NDE LFS/LPS remains out of service.

5. CONSTRUCTION:

a. CRITFC successfully installed two PIT antennas in the AFF fishway the week of 05 April, one at the entrance and one at the downstream end of the return pool channel.

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

7. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 30 March updates the spill caps and lack of load conditions to be used from 0000 on 01 April until further notice.

b. A teletype sent on 31 March states that effective 01 April through ~04 June, operate PH2 units 14 and 15 as defined in the schedule for the PH2 gateway evaluation. Test period dates may be adjusted by the researchers as necessary with coordination with the BON control room. Normal unit operations will resume during non-test periods.

c. A teletype sent on 08 April defines the spring and summer spill operations to be used from 10 April through 31 August.

d. A teletype sent on 17 April states that effective 0800 on 21 April through 0800 on 27 April, from 0800 to 2100 each day operate the forebay at 71.5' to 73.0', hard constraint, and 71.5' to 73.0' as a soft constraint. This operation is to maintain a low project head for the purposes of FGE testing (see section 3.d, above).

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