

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 23 of 2015, which covers the period from 07 – 13 June 2015.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 154.7 to 197.0 kcfs. Daily average powerhouse forebay elevation ranged from 72.8 to 74.7 msl. Daily average project tailwater ranged from 13.7 to 16.5 msl. Secchi disk measurements ranged from 5.5' to 7.0' or greater. Daily average water temperature ranged from 65 to 67°F this week.

b. Spring Spill started on 10 April. Daily average spill ranged from 99.0 to 101.1 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
11	0458 on 12 Jun	0510 on 12 Jun	Oil pump tripped
11	1423 on 12 Jun	1538 on 12 Jun	Broken flex plate
14	0651 on 08 Jun	---	Wicket gate seal replacement

d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder. From 01 June – 31 August, units may be placed in standby or the output reduced during nighttime spill hours to reduce entrance velocities for lamprey.

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

Date	F1	F2
6/7	0.4	0.6
6/8	0.4	0.4
6/9	0.5	0.6
6/10	0.4	0.6
6/11	0.1	0.2
6/12	N/A	N/A
6/13	0.2	0.4

2. ACTIVITIES:

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

(1) On 09 June, Project Biologists recovered 6 juvenile salmonids and 6 sculpin from the Unit 14 draft tube. All fish were returned to the tailrace in good condition.

3. RESEARCH:

- a. CRITFC – AFF. Adult salmonid sampling began on 15 April and continues.
- b. Normandeau – Fish Counting. Visual counting continues.
- c. 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. Gas Bubble Trauma (GBT) evaluations began 25 April. This week’s results: 93 yearling Chinook and steelhead examined with no GBT symptoms. These fallbacks were recorded crossing the separator bars: 10 steelhead, 6 salmon, 2 unknown salmonids. More details can be found on the [FPC web page](#).
- d. USDA – Sea lion and avian hazing. Land-based hazing began on 18 March.

4. FISHWAYS:

- a. Project biologists inspected 07 – 13 June.
- b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
6/4	A-branch	Water level > 1.4'	FV3-7 conduit leak suspected	None
CASCADES ISLAND				
6/7,10	UMT	Water level < 1.2'	Unknown	None
WASHINGTON SHORE – Nothing to report				
6/9,13	Weir 38	Water level < 1.2'	Unknown	None

(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) B-branch gate 4N, adjacent to the fish entrance, is broken and closed. 4S is currently open in its place.

(5) 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.

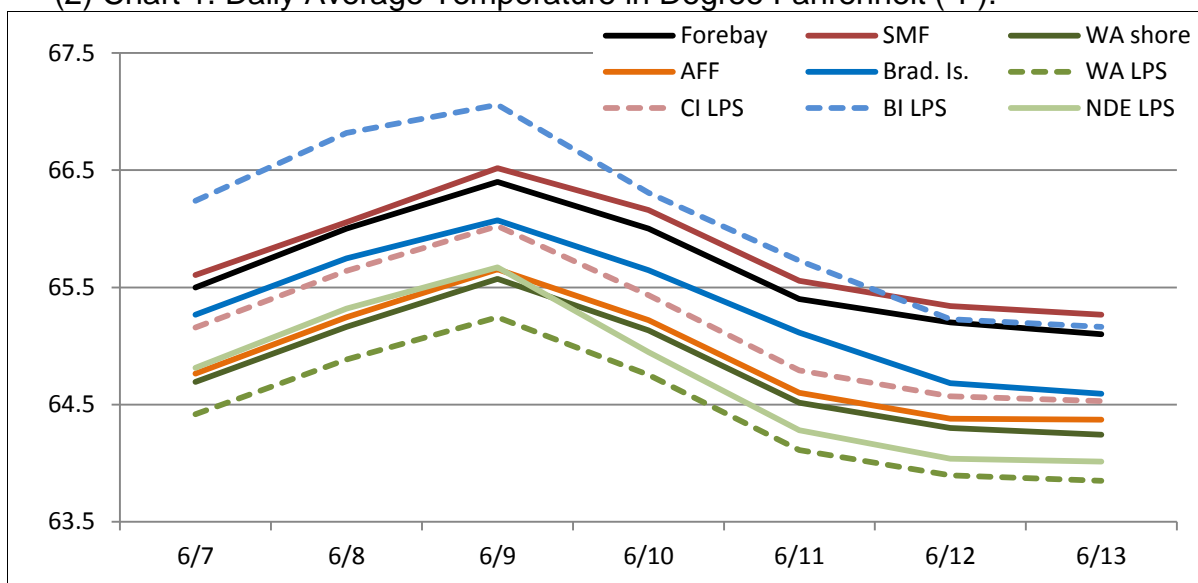
(6) FV5-4 was discovered to have mechanical problems on 21 April. It is currently closed and in manual. Diffusers FG3-9 through 15 are open and in manual to compensate. Repairs have been coordinated for October. See [15BON03](#).

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					Lamprey			
	Forebay	Brad. Is.	WA shore	AFF	SMF	BI LPS	WA LPS	CI LPS	NDE LPS
6/7	65.5	65.3	64.7	64.8	65.6	66.2	64.4	65.2	64.8
6/8	66.0	65.7	65.2	65.2	66.1	66.8	64.9	65.6	65.3
6/9	66.4	66.1	65.6	65.7	66.5	67.1	65.2	66.0	65.7
6/10	66.0	65.6	65.1	65.2	66.2	66.3	64.8	65.4	64.9
6/11	65.4	65.1	64.5	64.6	65.6	65.7	64.1	64.8	64.3
6/12	65.2	64.7	64.3	64.4	65.3	65.2	63.9	64.6	64.0
6/13	65.1	64.6	64.2	64.4	65.3	65.2	63.8	64.5	64.0

(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 5. Counts of tailrace foraging piscivorous birds.

Date	Gulls	Cormorants	Terns	White Pelicans	Grebes
6/7	0	8	0	0	0
6/8	0	5	0	0	0
6/9	0	7	0	0	0
6/10	1	7	0	0	0
6/11	0	0	0	0	0
6/12	0	52	0	0	0
6/13	0	25	0	0	0

f. Adult Fishways.

(1) Calibration occurred on 14 June.

(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.

(4) All adult fishways were placed in shad mode on 30 May.

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) All LPS's remain in service.

5. CONSTRUCTION: Nothing to report.

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 08 April defines the spring and summer spill operations to be used from 10 April through 31 August.

c. A teletype sent on 10 June updates a previous teletype, requesting that BON pool operate within a 1.5' band, hard constraint, from 0600 on 09 June through 1800 on 12 June for treaty fishing.

d. A teletype sent on 11 June requests that BON pool operate within a 1.5' band, hard constraint, from 16 June through 02 July during the periods and times described within for treaty fishing.

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