

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

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 34 of 2015, which covers the period from 16 – 22 August 2015.

**1. OPERATION SUMMARY:**

a. Daily average river flows ranged from 133.7 to 149.5 kcfs. Daily average powerhouse forebay elevation ranged from 75.6 to 76.2 msl. Daily average project tailwater ranged from 12.2 to 13.3 msl. Secchi disk measurements remained at 7.0' or greater. Daily average water temperature remained at 72°F this week.

b. Summer spill started on 16 June. Daily average spill ranged from 89.8 to 97.7 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
7	0943 on 29 Jul	---	5-year overhaul
8	0904 on 15 Aug	---	Annual maint, servo, bank 7/8
18	0710 on 3 Aug	0746 on 20 Aug	Wicket gate seals and cooler

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) F2 was placed in standby to float trash from 2203 on 22 Aug until 0500 on 23 Aug. F1 was already in standby for lamprey operations.

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

Date	F1	F2
8/16	---	---
8/17	0.5	0.5
8/18	0.3	0.3
8/19	0.2	1.2
8/20	0.6	1.3
8/21	1.5	0.7
8/22	1.0	6.0

**2. ACTIVITIES:**

- a. Auxiliary Water System Closures. None
- b. STS/VBS inspections. No inspections occurred this week.
- c. Dewatering and Fish Salvages.

(1) On 17 August, Project Biologists inspected the Unit 18 draft tube as part of the unit dewatering. No fish were found.

**3. RESEARCH:**

- a. CRITFC – AFF. Modified high temperature sampling continues. Sampling occurred 18-19 August this week.
- 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. High-temperature sampling protocols were initiated on 28 June. Gas Bubble Trauma (GBT) evaluations began 21 April; due to high temps GBT sampling has been reduced to once a week. This week’s results: not enough fish available for sufficient analysis. No fallbacks were recorded crossing the separator bars. More details can be found on the [FPC web page](#).

**4. FISHWAYS:**

- a. Project biologists inspected 16 – 22 August.
- b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
<b>BRADFORD ISLAND – See below</b>				
<b>CASCADES ISLAND – See below</b>				
8/17,19-20	CI entrance	Entr differential < 1.0'	FV5-4 OOS	See 4.b.6
<b>WASHINGTON SHORE – See below</b>				

(2) WG-1, one of the south PH1CC entrances, experienced a gate failure on 17 November. Divers recovered the gate’s picking beam on 04 August. Repairs on ongoing. The gate is estimated to return to service fall 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, had a bad motor. It was removed on 27 July and has been repaired. It's waiting reinstallation, likely to occur during the 2015/16 winter maintenance. 4N is closed and 4S is 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.

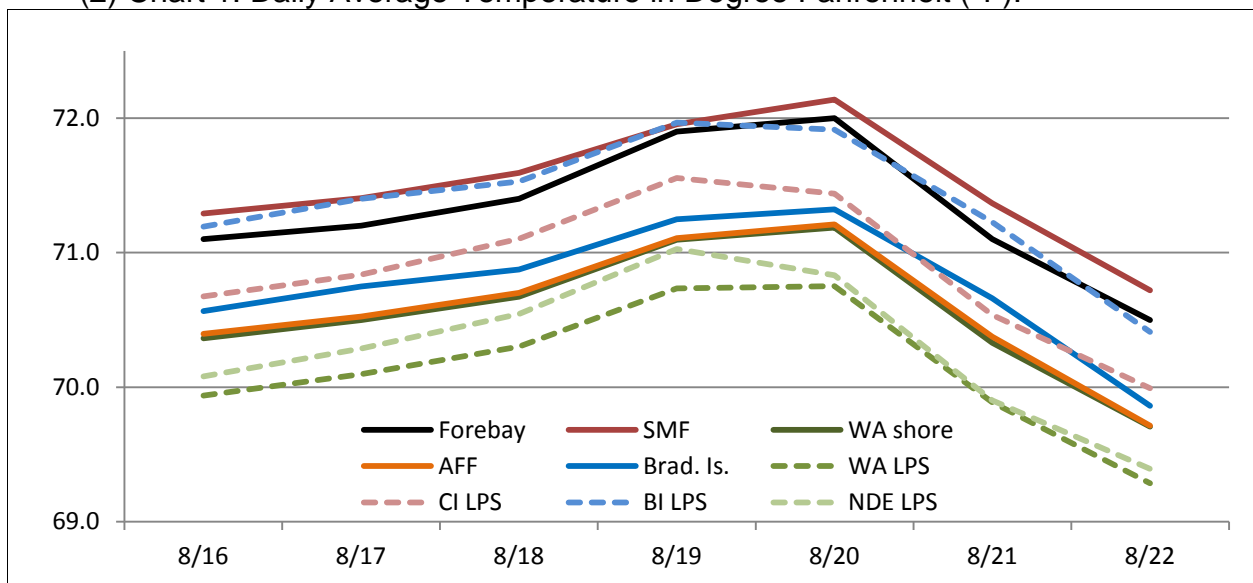
(6) FV5-4 was discovered to have mechanical problems on 21 April. It is currently closed and in manual. Diffusers FG3-9 through 15 are open and in manual to compensate. Repairs have been coordinated for October. See [15BON03](#).

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
8/16	71.1	70.6	70.4	70.4	71.3	71.2	69.9	70.7	70.1
8/17	71.2	70.7	70.5	70.5	71.4	71.4	70.1	70.8	70.3
8/18	71.4	70.9	70.7	70.7	71.6	71.5	70.3	71.1	70.5
8/19	71.9	71.2	71.1	71.1	72.0	72.0	70.7	71.6	71.0
8/20	72.0	71.3	71.2	71.2	72.1	71.9	70.8	71.4	70.8
8/21	71.1	70.7	70.3	70.4	71.4	71.2	69.9	70.5	69.9
8/22	70.5	69.9	69.7	69.7	70.7	70.4	69.3	70.0	69.4

(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	Wh. Pelicans	Grebes
8/16	0	0	0	0	0
8/17	0	3	0	0	0
8/18	0	9	0	0	0
8/19	0	15	0	0	0
8/20	0	2	0	0	0
8/21	0	9	0	0	0
8/22	0	0	0	0	0

f. Adult Fishways.

(1) Calibration occurred on 21 August.

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

(3) All SLEDs are removed.

(4) All fishways are in salmon mode except for the Cascade Island ladder, which is in shad mode to provide extra water to the CI entrance until FV5-4 is repaired. See [15BON03](#).

g. Juvenile Fishways.

(1) The ITS was returned to service at 1535 on 10 August.

(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 8 April defines the spring and summer spill operations to be used from 10 April through 31 August.
- c. A teletype sent on 13 August requests that BON pool operate within a 1.5' band, hard constraint, from 7 August through 12 September for the periods and times listed within for treaty fishing.
- d. A teletype sent on 18 August requests that BON pool be maintained above 75.0', hard constraint, from 1000 to 1600 on 22 – 23 August for paddle boarding in Hood River.

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