

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 31 of 2015, which covers the period from 26 – 01 August 2015.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 126.7 to 157.5 kcfs. Daily average powerhouse forebay elevation ranged from 74.3 to 75.4 msl. Daily average project tailwater ranged from 11.4 to 13.8 msl. Secchi disk measurements remained at 7.0' or greater. Daily average water temperature ranged from 71 to 73°F this week.

b. Summer spill started on 16 June. Daily average spill ranged from 81.5 to 99.8 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
5	0001 on 20 Jul	1540 on 30 Jul	Bank 5/6 outage, annual maint
6	0001 on 20 Jul	1540 on 30 Jul	Bank 5/6 outage, annual maint
7	0800 on 27 Jul	1200 on 27 Jul	Microwave trip testing
7	0943 on 29 Jul	---	5-year overhaul
8	0800 on 27 Jul	1200 on 27 Jul	Microwave trip testing
8	1006 on 30 Jul	1540 on 30 Jul	Bank 5/6 testing & U7 switching

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) F1 was in placed in standby from 1002 to 1511 on 29 Jul for an ROV inspection.

(2) F2 was in placed in standby from 1001 to 1512 on 29 Jul for an ROV inspection.

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

Date	F1	F2
7/26	0.2	0.2
7/27	0.2	0.5
7/28	0.5	0.4

7/29	0.1	0.2
7/30	0.5	0.7
7/31	1.1	0.5
8/1	0.3	0.6

2. ACTIVITIES:

a. Auxiliary Water System Closures

- (1) FV1-1 was closed from ~1000 to 1200 on 27 Jul for an ROV inspection.
- (2) FV3-7 was closed from ~1000 to 1200 on 27 Jul for an ROV inspection.
- (3) FV4-3 was closed from ~0900 to 1000 on 27 July for an ROV inspection.
- (4) FV4-4 was closed from ~0900 to 1000 on 27 July for an ROV inspection.
- (5) FV5-3 was closed from ~1030 to 1200 on 28 July for an ROV inspection.

b. STS/VBS inspections. No inspections occurred this week.

c. Dewatering and Fish Salvage.

(1) On 30 July, the Unit 7 draft tube was dewatered and inspected by Project Biologists. No fish were found.

3. RESEARCH:

a. CRITFC – AFF. Modified high temperature sampling resumed on 24 July.

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. Fallbacks recorded crossing the separator bars: one salmon. More details can be found on the [FPC web page](#).

d. USDA – Sea lion and avian hazing. Land-based hazing concluded on 31 July.

4. FISHWAYS:

a. Project biologists inspected 26 July – 1 August.

b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
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BRADFORD ISLAND – See below				
CASCADES ISLAND – See below				
7/26-29,8/1	CI entrance	Entr differential < 1.0'	FV5-3 OOS	See 4.b.6
WASHINGTON SHORE – See below				

(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.

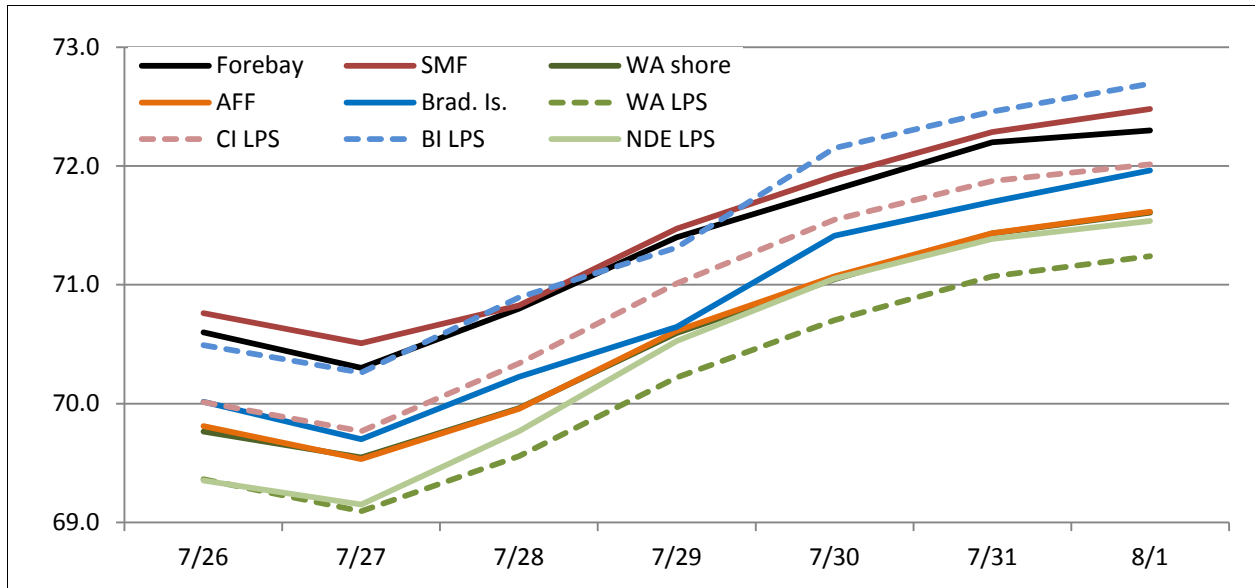
(6) FV5-4 was discovered to have mechanical problems on 21 April. It is currently closed and in manual. Diffusers FG3-9 through 15 are open and in manual to compensate. Repairs have been coordinated for October. See [15BON03](#).

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

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

Date	Forebay	Fishways				Lamprey			
		Brad. Is.	WA shore	AFF	SMF	BI LPS	WA LPS	CI LPS	NDE LPS
7/26	70.6	70.0	69.8	69.8	70.8	70.5	69.4	70.0	69.4
7/27	70.3	69.7	69.5	69.5	70.5	70.3	69.1	69.8	69.2
7/28	70.8	70.2	70.0	70.0	70.8	70.9	69.6	70.3	69.8
7/29	71.4	70.6	70.6	70.6	71.5	71.3	70.2	71.0	70.5
7/30	71.8	71.4	71.0	71.1	71.9	72.2	70.7	71.5	71.1
7/31	72.2	71.7	71.4	71.4	72.3	72.5	71.1	71.9	71.4
8/1	72.3	72.0	71.6	71.6	72.5	72.7	71.2	72.0	71.5

(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
7/26	0	5	0	0	0
7/27	0	1	0	0	0
7/28	0	3	0	0	0
7/29	0	1	0	0	0
7/30	0	0	0	0	0
7/31	0	2	0	0	0
8/1	0	0	0	0	0

f. Adult Fishways.

(1) Calibration occurred on 31 July.

(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) The Washington shore fishway was placed back to salmon mode on 08 July, the Bradford Is. ladder on 13 July. The Cascade Island ladder remains in shad mode to provide extra water to the CI entrance until FV5-4 is repaired. See [15BON03](#).

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 is scheduled for 03 – 15 August, 2015. See [14BON84](#).

(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.

(2) Flow testing of the LFS/LPS at the PH2 NDE occurred on 29 July, coincident with the scheduled Project ROV fishway inspection, when F1 and F2 were in standby (section 1.d.). See 15BON45.

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 29 June requests that the BON forebay be maintained at ranges from 74.0 to 76.5 msl, hard constraint, and 75.0 to 76.5, soft constraint, for the dates and times listed within to allow sailboats to be launched and recovered on 6 – 9 August at the Hood River boat launch.

d. A teletype sent on 29 June requests that the BON forebay be maintained at ranges from 74.0 to 76.5 msl, hard constraint, and 75.5 to 76.5, soft constraint, for the dates and times listed within to allow sailboats to be launched and recovered on 14 – 15 August at Cascade Locks and The Dalles.

e. A teletype sent on 28 July updates a request, that BON pool operate within a 1.5' band, hard constraint, from 0600 on 28 July to 1800 on 31 July for treaty fishing.

f. A teletype sent on 29 July updates a request, that BON pool operate between 76.0 and 77.0', hard constraint, from 0500 on 07 August until 1800 on 08 August to

allow for transformer offloading below TDA.

g. A teletype sent on 29 July further refines the previous high forebay request teletype for transformer offload to allow sail boats to be pulled in and out of Hood River from 7 – 9 August. This request is superseded by the transformer offload operations.

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