

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 32 of 2015, which covers the period from 02 – 08 August 2015.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 128.7 to 154.2 kcfs. Daily average powerhouse forebay elevation ranged from 74.8 to 76.7 msl. Daily average project tailwater ranged from 12.0 to 13.7 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 85.1 to 95.9 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
1 - 10	0745 on 3 Aug	---	ITS work. See 14BON84 .
18	0710 on 3 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) Table 2. Fish unit drawdowns, in feet.

Date	F1	F2
8/2	0.5	0.5
8/3	0.3	0.9
8/4	0.5	0.9
8/5	0.6	0.8
8/6	1.0	0.6
8/7	1.0	2.0
8/8	0.2	0.7

2. ACTIVITIES:

a. Auxiliary Water System Closures

(1) FV1-1 was closed from ~1000 on 4 August to 1405 on 6 August for the WG-1 recovery dive. See 14BON84.

(2) FV3-7 was closed from 0749 to 0839 on 4 August to place a PH1CC transverse bulkhead and from 0723 to 0931 on 6 August to remove the bulkhead as part of the WG-1 recovery dive.

(3) FV3-9 was closed from 0817 to 0931 on 6 August for the above-mentioned transverse bulkhead removal.

b. STS/VBS inspections. Table 2a.

Unit	Date	Run Hours	Comments
11	8/3	625	OK
12	8/3	81	OK
13	8/3	24	OK
14	8/3	10	OK
15	8/3	12	OK
16	8/3	12	OK
17	8/3	65	OK
18	8/3	619	OK

c. Dewatering and Fish Salvage.

(1) On 03 August, Project Biologists removed 10 White Sturgeon, 2 Pacific Lamprey, and 1 sculpin from the Unit 18 draft tube. All fishes were returned to the forebay in good condition.

3. RESEARCH:

a. CRITFC – AFF. Modified high temperature sampling occurred 24 – 30 July and resumed again on 4 August.

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 2 – 8 August.

b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND – See below				
8/2,6,8	A-branch	Water level > 1.1'	FV3-7 conduit leak	None
CASCADES ISLAND – See below				
8/3,8	CI entrance	Entr differential < 1.0'	FV5-3 OOS	See 4.b.6
WASHINGTON SHORE – See below				
8/2	Weir 38	Water level < 0.9'	Unknown	Ops adjusted

(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. The gate is estimated to return to service the week of 10 August.

(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.

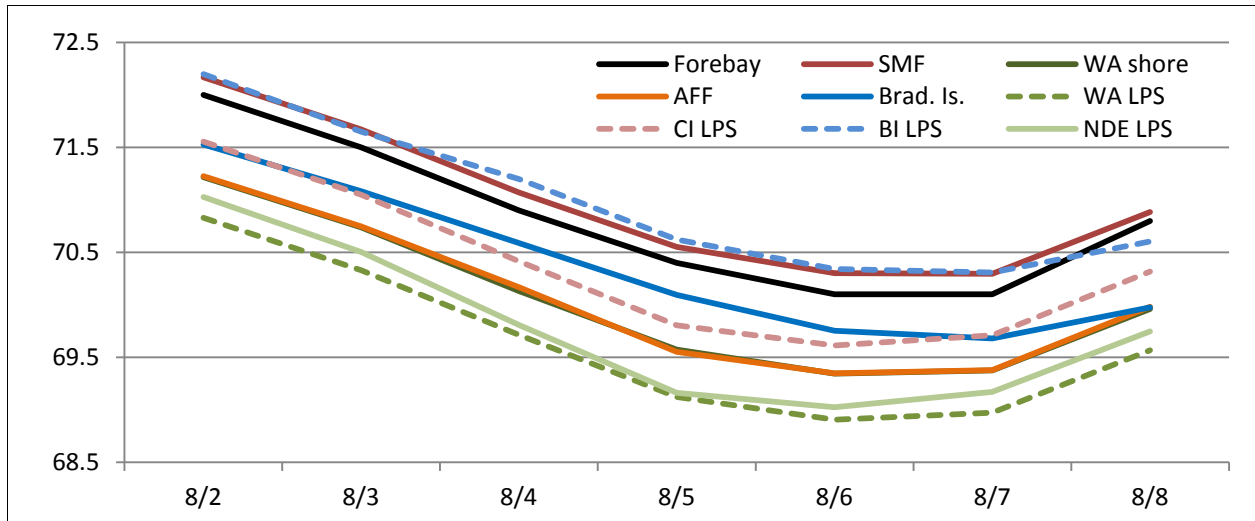
(6) FV5-4 was discovered to have mechanical problems on 21 April. It is currently closed and in manual. Diffusers FG3-9 through 15 are open and in manual to compensate. Repairs have been coordinated for October. See [15BON03](#).

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	Forebay	Fishways				Lamprey			
		Brad. Is.	WA shore	AFF	SMF	BI LPS	WA LPS	CI LPS	NDE LPS
8/2	72.0	71.5	71.2	71.2	72.2	72.2	70.8	71.6	71.0
8/3	71.5	71.1	70.7	70.7	71.7	71.6	70.3	71.0	70.5
8/4	70.9	70.6	70.1	70.2	71.1	71.2	69.7	70.4	69.8
8/5	70.4	70.1	69.6	69.6	70.6	70.6	69.1	69.8	69.2
8/6	70.1	69.8	69.3	69.3	70.3	70.3	68.9	69.6	69.0
8/7	70.1	69.7	69.4	69.4	70.3	70.3	69.0	69.7	69.2
8/8	70.8	70.0	70.0	70.0	70.9	70.6	69.6	70.3	69.7

(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
8/2	0	0	0	0	0
8/3	0	0	0	0	0
8/4	0	1	0	0	0
8/5	0	0	0	0	0
8/6	0	0	0	0	0
8/7	0	0	0	0	0
8/8	0	0	0	0	0

f. Adult Fishways.

(1) Calibration occurred on 7 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) Reinstallation of the Ice and Trash sluiceway (ITS) gate began on 03 August.

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.

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 5 August 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.

f. 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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