



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
BONNEVILLE LOCK AND DAM PROJECT
PO BOX 150
CASCADE LOCKS OR 97014-0150

CENWP-OD-B

2 July 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 26 of 2014, which covers the period from 22 – 28 June 2014

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 264.7 to 285.4 kcfs. Daily average project tailwater ranged from 20.7' to 21.6' msl. Daily average powerhouse forebay elevation ranged from 73.8' to 74.9' msl. Daily average water temperatures ranged from 62° to 63°F. Secchi disk measurements ranged from 4.5' to 6.5'.

b. Spill Bays 01 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Spring spill operations congruent with FPP section 2.2.3 took effect on 10 April. Daily spill ranged from 90.9 to 101.8 kcfs this week.

c. Unit Operation. Split flow powerhouse operations went into effect on 23 June.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
3	0000 on 16 Jun	1529 on 23 June	Bank 3/4, annual maintenance
4	0814 on 21 Apr	---	Stator cleaning
11	0900 on 09 Sep 2012	---	High thrust bearing temps
14	1029 on 23 June	1135 on 23 June	STS failure

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 on Tuesdays and more frequently as needed.

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

Date	F1	F2
6/22	0.4	0.6
6/23	0.4	0.8
6/24	0.5	0.3
6/25	0.4	0.6
6/26	0.3	0.3
6/27	0.3	0.4
6/28	N/A	N/A

2. ACTIVITIES:

a. Auxiliary Water System Closures. The following closure occurred this week:

(1) FV 3-7 was closed for cleaning from 1532 to 1557 on 26 June.

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

c. Dewatering and Fish Salvage. The following dewatering or salvage activities occurred this week:

(1) Starting on 19 May, Project Biologists began recovering Pacific Lamprey from the Cascade Island AWS lamprey traps. A total of 68 fish were returned to the forebay this reporting week, all in good condition.

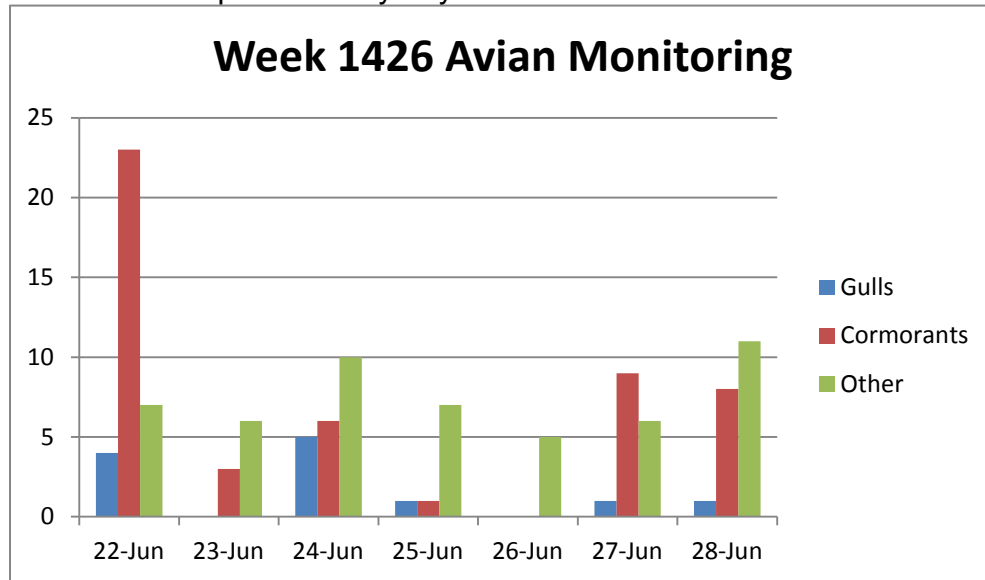
(2) On 26 June, Project Biologists recovered 2 steelhead, 8 Pacific lamprey, 12 sculpin, 6 crawfish, and 3 suckers from the Unit 4 tail logs. All fish were returned to the forebay in good condition.

3. RESEARCH:

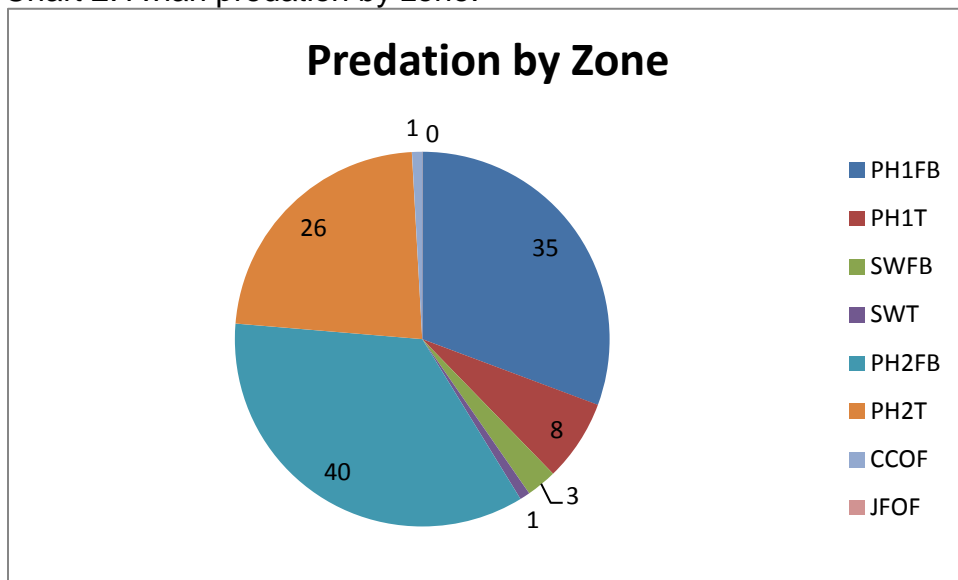
a. Avian Monitoring. Avian abundance is documented daily during fishway inspections by a Project Biologist. Due to low bird populations at the dam during winter months, bird numbers are recorded 7 days a week between the dates of 01 April and 31 October. Avian monitoring occurs as often as possible outside of these dates and during the non-fish passage season.

(1) Hazing Effectiveness. Bird numbers are low. There was a single observation on 22 June with quite a few cormorants in the PH2FB. Grebes and a few Osprey are the primary species observed in the PH1FB. Included this week is a tailrace maximum count of avian presence. This table (Table 3) reflects all zones at Bonneville Dam EXCLUDING forebay areas.

(2) Chart 1. Avian predation by day.



(3) Chart 2. Avian predation by zone.



(4) Table 3. Tailrace Counts of Foraging Piscivorous Birds.

Date	Time	Gulls	Cormorants	Terns
22 June	0830	0	0	0
23 June	0900	0	1	0
24 June	0830	0	4	0
25 June	0730	0	1	0
26 June	1430	0	0	0
27 June	1330	1	4	0
28 June	1100	1	7	0

(5) Figure 1. Avian Predation Map.



b. CRITFC – AFF. Sampling continues.

c. NOAA Fisheries. An impedance counter is currently being tested at the WA Shore AWS LPS. Lamprey trapping at the AFF in conjunction with University of Idaho continues.

d. Normandeau – Fish Counting. Visual counting continues.

e. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. No research fish were collected this week. Separation by Code is active for NOAA studies. Fallbacks recorded crossing the separator bars this reporting week: no steelhead, 7 salmon, and 2 unknown salmonids. Results of this week’s Gas Bubble Trauma (GBT) examinations: 200 subyearling Chinook examined, with no GBT symptoms observed. More details can be found on the [FPC web page](#).

CENWP-OD-B

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 26 of 2014, which covers the period from 22 – 28 June 2014

- f. USDA - Avian Hazing. Avian hazing continues.
- g. University of Idaho – AFF. USACE-funded adult salmonid sampling continues. Lamprey trapping at the AFF in conjunction with NOAA continues.

4. FISHWAYS:

- a. Project biologists inspected 22 – 28 June.
- b. Fish Passage Plan Observations.

(1) Table 4. FPP Out of Criteria items.

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
6/22	B-branch	FG3-23 not open	In manual	Ops adjusted
CASCADES ISLAND				
6/22	UMT	Gauge < 1.2	Unknown	None
WASHINGTON SHORE				
6/29	Unit 14 STS	“A” slot STS failure	Power supply issues	Repaired

(2) PH2CC diffuser A2 is stuck closed, and the gate to B3 has been removed for repairs. Diffusers B7 and B8 have been closed until repairs to their diffuser motors can be performed. The next possible time period will be 2014/15 winter maintenance.

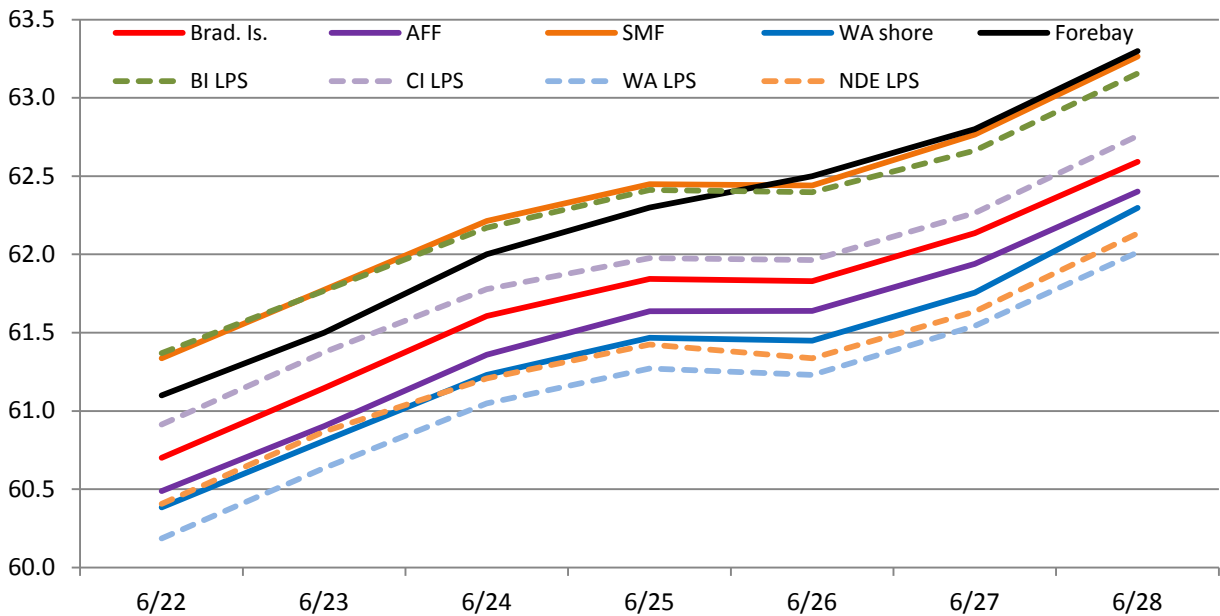
(3) Spill bay 17 experienced a hoist brake failure on 11 March. The gate is currently dogged off at 2.9 ft.

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	Fishways				Forebay	Lamprey systems			
	Brad. Is.	AFF	SMF	WA shore		BI LPS	CI LPS	WA LPS	NDE LPS
6/22	60.7	60.5	61.3	60.4	61.1	61.4	60.9	60.2	60.4
6/23	61.1	60.9	61.8	60.8	61.5	61.8	61.4	60.6	60.9
6/24	61.6	61.4	62.2	61.2	62	62.2	61.8	61.0	61.2
6/25	61.8	61.6	62.4	61.5	62.3	62.4	62.0	61.3	61.4
6/26	61.8	61.6	62.4	61.4	62.5	62.4	62.0	61.2	61.3
6/27	62.1	61.9	62.8	61.8	62.8	62.7	62.3	61.5	61.6
6/28	62.6	62.4	63.3	62.3	63.3	63.2	62.8	62.0	62.1

(2) Chart 3. Daily Average Temperature in Degree Fahrenheit (°F).



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

e. Adult Fishways.

(1) Calibration was checked on 28 June.

(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 Cascades Island exit was opened on 26 June to allow several salmonids to exit from behind the downstream picket leads. They are thought to have jumped over one of the leads, which has since been netted.

f. Juvenile Fishways.

(1) The south end gate of the Ice and Trash Sluiceway (ITS) remains removed for ongoing repairs. Plating has been placed over the bottom of the guide slot to minimize fish impacts. The ITS will need to be closed for reinstallation once repairs are complete.

CENWP-OD-B

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 26 of 2014, which covers the period from 22 – 28 June 2014

- (2) The DSM remains in service.
- (3) The hydro-cannon remains in service.
- (4) The B2CC remains open.

(5) The B2CC avian array was removed on 09 – 10 October 2013 to facilitate the WA Shore LFS repairs. The anchor line was replaced on 27 March, and the array will be reinstalled after spill season. The PH1, PH2, and spillway avian arrays remain intact.

g. Lamprey Fishways.

- (1) The BI LPS, CI LPS, NDE LPS, and WA Shore AWS LPS remain in service.

5. CONSTRUCTION:

a. WA Shore LPS/LFS Installation. Coordination to install flume vents on the LPS is underway.

b. FGE Gatewell Flow Control. Contractors installed a flow control plate in the Unit 15A gatewell.

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

7. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 17 March states that effective 17 March at 0800 hours, operate the B2CC continuously through 31 August at 2400.

b. A teletype sent on 10 June updates the spill caps and lack of load conditions to be used from 11 June through 31 August.

c. A teletype sent on 12 June requests that BON forebay operate within a 1.5' band as a hard constraint from 16 to 19 June and from 23 to 26 June for treaty fisheries.

d. A teletype sent on 13 June requests BON forebay be maintained from 74.5' to 76.5' hard constraint and from 75.5' to 76.5' soft constraint from 1400 – 2000 on 08 August and from 1500 – 2200 on 09 August so that sailboats can be placed and removed from the water. The request may be cancelled at 1500 on 08 August if high winds occur.

e. A teletype sent on 13 June lists the BON summer spill requirements in effect from 0430 on 16 June until 2400 on 31 August.

CENWP-OD-B

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 26 of 2014, which covers the period from 22 – 28 June 2014

f. A teletype sent on 20 June requests that from 1200 to 1300 on 22 June, maintain the BON forebay at or below 73.0', soft constraint. This request is to allow excavation and removal of a kite board dock buried in the sand at Hood River.

g. A teletype sent on 24 June requests that from 0800 to 2000 on 4 July, operate BON forebay to less than 75.0', hard constraint, and to 74.5', soft constraint. From 0800 to 2000 on 5 – 6 July, operate BON forebay to less than 75.0', soft constraint.

h. A teletype sent on 12 June requests that BON forebay operate within a 1.5' band as a hard constraint from 30 June – 3 July and from 7 – 11 July for treaty fisheries.

JERRY A. CARROLL
Operations Manager
Bonneville Project