



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
BONNEVILLE LOCK AND DAM PROJECT
PO BOX 150
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CENWP-OD-B

22 December 2014

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 51 of 2014, which covers the period from 14 - 20 December 2014.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 162.9 to 199.8 kcfs. Daily average project tailwater ranged from 14.4 to 17.3 msl. Daily average powerhouse forebay elevation ranged from 72.6 to 73.1msl. Daily average water temperatures ranged from 44° to 45°F. Secchi disk measurements ranged from 6.0' to 7.0'.

b. Spill Bays 01 and 18 provide attraction flow for Cascades Island and B-branch, respectively. Spill bay 01 was closed on 01 December coinciding with the dewatering of Cascades Island for winter maintenance. Daily average spill remained at 0.5 kcfs this week.

(1) Due to a failed hoist brake, spill bay 17 has been operated manually since 11 March. Parts are on order. It's expected to return to service in late January.

c. Unit Operation. Powerhouse one became the priority powerhouse on 01 December. Main unit draw downs are measured every Monday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
04	0702 on 15 Dec	1728 on 15 Dec	(PO) Repair Turbine Bearing
11	0900 on 09 Sep 2012	---	High thrust bearing temps
F1	0001 on 01 Dec 2014	---	2 year overhaul
F2	1000 on 15 Dec	---	Synch Wiring

d. Unit 11 is estimated to return to service March 2015.

2. ACTIVITIES:

a. Auxiliary Water System Closures.

- (1) FV1-1 closed for cleaning from 0726 to 0735 on 15 Dec.
- (2) FV1-1 closed for cleaning from 1319 to 1330 on 15 Dec.
- (3) FV1-1 closed for cleaning from 0758 to 0805 on 17 Dec.
- (4) FV3-9 closed for cleaning from 0741 to 0748 on 16 Dec.
- (5) FV3-9 closed for cleaning from 1005 to 1015 on 20 Dec.
- (6) FV3-7 closed for cleaning from 1000 to 1005 on 20 Dec.

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

c. Dewatering and Fish Salvage.

(1) On 16 December, Project Biologists removed 15 Pacific Lamprey from the FG6-6 and FG6-7 diffuser pits within the Cascades Island fish ladder. All fish were returned to tailrace in good condition.

(2) On 17 December, Project Biologists removed approximately 250 suckers, pikeminnow, and peamouth from the Cascades Island AWS channel. All fish were returned to the forebay in good condition.

3. RESEARCH:

a. Normandeau – Fish Counting. Video monitoring continues.

4. FISHWAYS:

a. Project biologists inspected 15-18 December.

b. Fish passage plan observations.

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

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				
12/15-18	A-branch	Differential >1.1'	Unknown	NA
12/15	WG-02	Submergence <8.0'	WG-01 OOS/open, raised to improve entrance differential	None
12/16-18	SCCH	Differential <1.0'	WG-01	NA
12/17-18	NCCH	Differential >2.0'	Unknown	NA
CASCADES ISLAND – Dewatered				
WASHINGTON SHORE – Dewatered				

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(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. A response is being evaluated.

(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.

c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November.

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

e. Adult Fishways.

(1) Calibration occurred on 15 December.

(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.

f. 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 April, 2015.

(2) The DSM remains in service.

(3) The hydro-cannon remains out of service.

(4) The B2CC closed at 0000 on 16 December. It had been open since 1200 on 13 November. See [teletype e](#), below.

g. Lamprey Fishways.

(1) All LPSs remain out of service.

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5. CONSTRUCTION:

a. Navigational lock mooring dolphin. Installation by a contractor is currently scheduled for January. During that time the lock will need to be briefly shut down.

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

7. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 29 August provides the spill caps and lack of load conditions to be used from 1 September through 31 December.

b. A teletype sent on 18 December updates BON tailwater operations for Chum. At all hours, operate tailwater from 11.5' – 12.5'. If necessary, tailwater may be operated up to 13.0' at any time, returning to original range when possible. A nighttime tailwater of 16.5' concentrating at 2400 hours is possible, moving to 18.5' if necessary. If outflows demand, operate tailwater at 13.0' – 16.5' during daytime and up to the maximum within ramp rate limits during nighttime. This updates is to

c. A teletype sent on 24 November provides updated hours for chum spawning operations (above).

d. A teletype sent on 10 November states that in order to keep the latest tailwater range for Chum spawning, effective 01 November until spawning is declared complete or no later than 2400 on 15 January (whichever first), BON Project outflows may be decreased to as low as 58 kcfs as long as at least a minimum stage of 3.0 at the Vancouver gauge is met. This change has been incorporated into the BON Water Control Manual.

e. A teletype sent on 12 November states that effective immediately until further notice, BON is authorized to remove STSs from PH2 turbine units due to high debris loading. The B2CC will be opened prior to operating any unscreened units.

f. A teletype sent on 18 December states that effective 0800 – 1400 on 19 December, maintain a tailwater elevation of 11.5' to 12.5' for a WDFW trap removal on Duncan Creek.

g. A teletype sent on 18 December states in order to facilitate the removal of a WDFW fish trap on Duncan Creek (see teletype f, above), BON forebay is allowed to drop below its minimum elevation of 71.5', with a hard constraint minimum of 71.0'. This operation is effective 0000 – 0700 on 19 December.

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h. A teletype sent on 18 December provides BON tailwater operations for Chum incubation. Effective 1500 on 19 December until further notice, operate to maintain a minimum tailwater of 13.0' at all hours. This operation should begin after the completion of the Duncan Creek trap removal (teletypes f and g, above) and negates previous Chum tailwater operation teletypes.

i. A teletype sent on 18 December provides the spill caps and lack of load conditions to be used from 1 January until further notice.

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