

**OFFICIAL COORDINATION REQUEST FOR NON-  
ROUTINE OPERATIONS AND MAINTENANCE**

**COORDINATION TITLE-** 15BON02 *T11 and T12 outage schedule changes*

**COORDINATION DATE-** 12 March and 9 April 2015

**PROJECT-** BONNEVILLE Lock and Dam

**RESPONSE DATE-** 9 April 2015 (FPOM)

**Description of the problem-** T11 and T12 outages in 2015 and 2016 were coordinated in MOC 14BON13, 14BON59, and 14BON82. There is a need to revisit the outage dates.

Coordinated T12 Outage: 1 September 2015 through 06 November 2015 (MOC 14BON59)

Coordinated T11 Outage: 1 September 2016 through 31 October 2016 (MOC 14BON59)

Proposed T11 Outage: 1 September 2015 through 10 November 2015

Proposed T12 Outage: 16 November 2015 through 21 November 2015 and  
6 September 2016 through 06 November 2016

BON Project needs approx. one week for clearance and preparation of each transformer before turning it over to the Contractor. The Contractor will need approx. four weeks to complete their refurbishment work for each transformer. BON Project needs an additional 3-4 weeks for re-connecting each refurbished transformer, clean-up work, completing their transformer digital relay and annunciator work, and final testing/commissioning to get the transformer and generating units back online. The later start date of September 6, 2016 instead of September 1, 2016 is due to Labor Day falling on September 5, 2016. Consequently, September 1, 2016 falls on a Thursday which is the last day of the regular work week for the BON Maintenance crews. The week long T12 outage following the T11 outage in 2015 is for bushing inspections recommended by HDC to occur on a 6 month interval in order to track failing bushings.

**Type of outage required-** The outages will take four units (U11-14 or U12-18) out of service at a time.

**Impact on facility operation-** Four units at PH2 will be unavailable during the transformer outage. Units at PH1 will be operated instead during these outages.

**Dates of impacts/repairs-** early September – early- mid November in 2015 and 2016.

**Length of time for repairs-** Up to nine and a half weeks.

**Expected impacts on fish passage-**

Bull Trout- Occurrence in Action Area. Of the five distinct population segments (DPS) of bull trout listed as threatened by the USFWS, the Columbia River DPS is the only one that is likely to occur in the vicinity of the proposed project. Historically, bull trout of the Columbia River DPS likely ranged through much of the Columbia River Basin with spawning and rearing occurring in the coldest creeks, often at higher elevations. Presently, bull trout of the Columbia River DPS are distributed in a more fragmented pattern throughout the Columbia River Basin with fewer adult migratory fish and fewer, more compressed spawning reaches than historically occurred.

WDFW and Corps personnel provided a list of anecdotal sightings/captures of bull trout in the mainstem Columbia River. From 2000 through 2012 there were eleven bull trout reported. Three were downstream of Bonneville Dam, with two at the mouth of Hamilton Creek (RM 143) and one in 2005 at the Bonneville Dam Smolt Monitoring Facility (RM 144). Upstream of the dam, one bull trout was found at Cascade Locks (RM 149), two at Drano Lake (RM 162), two at the mouth of the Klickitat River (RM 180.5), one in 2002 at the John Day Dam Smolt Monitoring

Facility (RM 215), and one sighting at Dog Creek Falls by a reputable WDFW creel sampler who observed 18- to 24-inch cuts or dollies working old redds below the splash pool over the course of two weeks.

Fish passage data from the Bonneville Dam fish ladders (Corps, unpublished) show only three sightings of bull trout moving through the fish ladders for 2000 through 2011 during the fish counting season (April 1 through October 31). These sightings occurred between May 30, 2009 and June 2, 2009 and were reported as '12-inch bull trout moving upstream' through the count window on each occasion.

Downstream passage- T11 and T12 shall be in service for the duration of spill season and B2CC operation. T11 (U11-14) shall be in service during the T12 Refurbishment work between 1 September 2015 through 6 November 15 for attracting fish to the South PH2 Collection Channel entrance. T12 (U15-18) shall be in service during the T11 Refurbishment work between 6 September 2016 through 10 November 2016 for attracting fish to the North PH2 Collection Channel entrance.

PH1 units would remain in service and in FPP criteria during this time.

Upstream passage- Below are two tables showing the five year average adult fish passage (by species) for each transformer outage. Also noted are the high passage years and the low passage years.

**Table 1. Bonneville Bradford Island 5-year average Fish Passage Numbers for 2008 – 2012 During T11 and T12 Proposed Outages.**

Date		All Chinook	Clipped Steelhead	Unclipped Steelhead	All Coho	Sockeye	Chum	Pink
8 Sep - 6 Nov	Average	76617.2	16310	5573.2	30326.4	2	11	128
T11 outage (U11-14)	High/year	133852 2011	20212 2011	7345 2011	47832 2011	7 2008	16 2010	632 2011
	Low/year	32759 2009	12985 2010	4634 2010	14651 2012	0 2010-12	3 2012	0 2008,12

**Table 2. Bonneville Washington Shore 5-year average Fish Passage Numbers for 2008 – 2012 During T11 and T12 Proposed Outages.**

Date		All Chinook	Clipped Steelhead	Unclipped Steelhead	All Coho	Sockeye	Chum	Pink
8 Sep - 6 Nov	Average	160070.2	31501.4	9949.4	69763.4	2.6	32.4	475.8
T11 outage (U11-14)	High/year	233320 2010	45314 2009	14110 2009	124658 2009	5 2008,10	52 2010	2326 2011
	Low/year	93585 2008	33164 2010	7505 2012	24083 2012	0 2009,2011	4 2011	0 2008,2010

**Comments from agencies**

**NOAA Fisheries** - -----Original Message-----

From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]

Sent: Tuesday, December 16, 2014 12:10 PM

To: Mackey, Tammy M NWP

Subject: [EXTERNAL] Re: FPOM: Official Coordination - 14BON82 T11 outage in 2016

Tammy, I really don't see much biological difference between the two T11 outage periods. The largest impact of either outage period would be to juvenile fall Chinook. Depending on river flows, splitting flow between the powerhouses may subject turbine and sluiceway passed fish to lower tailrace flows and thus higher potential for predation. This would be the case for either period, however the new, later start date may be ever so slightly better from a run timing perspective. Split flows will likely be good for adult passage by spreading the peak passage of fall Chinook between both powerhouse ladder systems. In any case, it is important that the fishways, bypass and sluiceway remain running as expected. We can discuss

further if necessary at FPOM on Thursday. Thanks, Gary

18 December 2014 FPOM - **14BON82** Updated T11 outages for 2016. *Approved.* Bettin noted that the outage is about a week and a half so it will bump up against chum flows. Spill may be required to meet chum flows.

12 March 2015 FPOM - 14BON82 T11 and T12 outages. T11 and T12 outages will be switched. T11 will be out in 2015 and T12 will be out in 2016. Outages are from early September until late October or first week of November. **FPOM had no issues with this change.**

**9 April 2015 FPOM – 15BON02 T11 and T12 outages.** 15BON02 T11 and T12 outages (updates 14BON82). T12 will need to be out a week after T11 returns in November 2015. **FPOM concurred.**

**Final results- These outages may go forward as coordinated.**

Please email or call with questions or concerns.

Thank you,

Tammy

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