

OFFICIAL COORDINATION REQUEST FOR NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE- 14BON08 BI Bridge overlay

COORDINATION DATE- 30 April 2014

PROJECT- Bonneville Lock and Dam

RESPONSE DATE- 8 May 2014 (FPOM)

Description of the problem

The Bonneville Bradford Island Mainstem Fish Ladder Bridge is a cast in place concrete bridge constructed in 1937. The deck has undergone serious deterioration within the top 3-4 inches of concrete, which reduces the load capacity. Currently, a steel plate is over the area as a temporary solution. Several inspections have been conducted between 1992 and 2012, with the latest inspection and analysis showing a de-rating of the bridge. The current recommended load rating for the bridge is 24 tons for Type 3 (single axle), 33 tons for type 3S2 (double axle), 39 tons for type 3-3 (tandem axles) vehicles. This affects the following traffic:

1. Motor Coaches w/ luggage bays, 25 tons
2. All single unit trucks with 3 or more axles, special haul vehicles, tractor trailer rigs, 33 tons or more
3. All unlimited and limited permit loads (Includes several AT cranes)
4. All RT cranes over 19 tons GVW.

Repair of the bridge deck (980 sq.ft.), span of about 50 ft, and full depth patches (3) to the underside is necessary. This repair work will help to preserve the bridge, improved the driving surface and reduce maintenance-related lane closures, by removing 3-4 inches or more of the bridge deck and repave with a longer-lasting, rapid-set latex-modified concrete. This bridge is considered mission critical. It connects all tourist, construction and project personnel traffic from the south side of the project to the Bradford Island Visitor Center. There is no alternate means to reroute traffic at this site. If this repair work is not done, the deck will continue to deteriorate resulting in more load restrictions and higher repair costs. The deck will not be able to remain unposted. Repair of the deck will restore the bridge to a condition where no load restrictions will be required for normal traffic.

Type of outage required: Operations and visitors need at least 1 lane open during the day, so work will need to occur at night. The contractor will work at night with the whole bridge area blocked off and then plate one lane for daytime traffic. During the day, we will have flaggers controlling the one lane of traffic.

Impact on facility operation: The bridge repairs will occur at night. One lane of the bridge will need to be closed at a time during the day. This will affect traffic and will need constant flagging. This will allow for passage of personnel, the public, and security during daytime hours. Bridge work will occur between 1700 – 0700 and will require lighting due to the season of operation.

Flaggers will be provided by the Bonneville Project. Signage will be needed at night and will also be provided by the Bonneville Project.

Dates of impacts/repairs: 10 – 28 November 2014.

Length of time for repairs: Approximately 3 weeks.

Expected impacts on fish passage:

Downstream migrants: no expected impacts as this work is over the fish ladder and not near the downstream passage routes.

Upstream migrants: The impacts to fish passage are expected to be minimal as the work will take place while the Washington Shore ladder is still operational (prior to the in-water work period) and Powerhouse 2 is the priority powerhouse.

Equipment such as jackhammers will be used to remove the deck. There may be noise or vibration impacts, however, the work will occur at night, when fish are less likely to be migrating through the ladders. The Bradford Island ladder will remain operational throughout the work period. Table 1 below shows daily fish passage totals and averages for the past 10 years for the Bradford Island ladder during the proposed work window.

Table 1. 10 year average fish passage at BON for November 2004-2013

Date	All Chinook	All Steelhead	All Coho	Sockeye	Chum	Pink
1-Nov	192	93	265	0	5	0
2-Nov	163	99	221	0	4	0
3-Nov	200	91	198	1	5	0
4-Nov	207	93	174	0	5	0
5-Nov	178	92	174	0	6	0
6-Nov	168	107	151	0	6	0
7-Nov	74	84	126	0	3	0
8-Nov	55	63	108	0	4	0
9-Nov	53	44	76	0	4	0
10-Nov	50	56	56	0	2	0
11-Nov	67	65	59	0	4	0
12-Nov	53	76	58	0	4	0
13-Nov	52	85	55	0	3	0
14-Nov	36	74	69	0	3	0
15-Nov	36	57	57	0	3	0
16-Nov	24	68	59	0	4	0
17-Nov	20	60	45	0	4	0
18-Nov	22	63	41	0	2	0
19-Nov	20	60	31	0	2	0
20-Nov	17	60	37	0	2	0
21-Nov	15	41	18	0	2	0
22-Nov	12	48	17	0	2	0
23-Nov	10	36	14	0	2	0
24-Nov	11	29	6	0	2	0
25-Nov	7	32	8	0	1	0
26-Nov	5	27	4	0	1	0
27-Nov	5	29	3	0	0	0
28-Nov	8	31	3	0	1	0
29-Nov	6	30	2	0	1	0
30-Nov	7	27	2	0	0	0

Bull Trout: This work will occur outside the periods when bull trout have been reported at BON. Impacts are expected to be minimal to non-existent.

Five distinct population segments (DPS) of bull trout are listed as threatened by the USFWS. The Columbia River DPS (listed in 1998) is the only one of the five 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 COE 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 (CRM 143) and one in 2005 at the Bonneville Dam Smolt Monitoring Facility (CRM 144). Upstream of the dam, one bull trout was found at Cascade Locks (CRM 149), two at Drano Lake (CRM 162), two at the mouth of the Klickitat River (CRM 180.5), one in 2002 at the John Day Dam Smolt Monitoring Facility (CRM 215), and one sighting at Dog Creek Falls by a reputable WDFW creel sampler who observed 18-24" 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 (COE, unpublished) show three sightings of bull trout moving through the fish ladders for 2000 through 2012 during the fish counting season (April 1st through October 31st). This occurred from 5/30/09 through 6/2/09 and was reported as 12 inch bull trout moving upstream through count window on each occasion.

Lamprey: This work will occur after the bulk of the lamprey migration season. Impacts are expected to be minimal to non-existent.

Comments from agencies

8 May 2014 FPOM meeting - 14BON08 BI bridge overlay. Fredricks suggested halting bay 18 attraction flow and delaying work until after daylight (starting after sunrise) to allow fish to pass or not work weekends (this gives fish time to move through the ladder unimpeded by construction noise/activity). PH2 will be the priority powerhouse. Fredricks also noted he would like to see the fish numbers broken out by species. *Pending. Need to know if the proposed changes can be adopted.*

Final results- FPOM concurred at the 12 June 2014 meeting.

Please email or call with questions or concerns.

Thank you,

Tammy

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