



16591
21 Feb 2019

MEMORANDUM

From: Shelly Sugarman
Chief, Bridge Permits and Policy
Division (CG-BRG-2)

Reply to: CG-BRG-2
Attn of: S. Sugarman
(202) 372-1521

To: Marshall Williams, USFWS
Northern Idaho Field Office
11103 East Montgomery Drive
Spokane, Washington 99206

Subj: BNSF SANDPOINT CONNECTOR PROJECT – RESPONSE TO REQUEST FOR
ADDITIONAL INFORMATION REGARDING PILE DRIVING

Ref: (a) USFWS email to CG-BRG-2 dated 7 February 2019

1. Reference (a) is your request for additional information regarding the proposed minimization measures during pile driving for the temporary work bridge at Bridge 3.9. Through further discussions with the project team and the U.S. Fish and Wildlife Service, it was agreed upon that an unconfined bubble curtain will be utilized during impact pile driving of piles associated with the temporary work bridge for Bridge 3.9. Unconfined bubble curtains and turbidity curtains will be used for all piles during impact driving when water is greater than 2-feet deep, even at the temporary work Bridge 3.1. Previous correspondence listed this depth at 3 feet, which was incorrect and inconsistent with the Biological Assessment.
2. Utilization of an unconfined bubble curtain will minimize impacts to bull trout during impact driving at the temporary bridges. Unconfined bubble curtains are assumed to result in a 3-decibel reduction in underwater sound pressure levels. At your request, we have revised the U.S. Fish and Wildlife Service bull trout impact calculations (attached) and are summarizing the revised distance thresholds herein.
3. The onset of injury zone associated with the temporary work bridges has been revised to 61 meters (0.04 mile). The disturbance zone associated with the temporary work bridges has been revised to a maximum 5,412 meters (3.4 miles). Revised impact calculators for temporary Bridges 3.1 and 3.9 are provided in Enclosure (1).
4. The onset of injury zone associated with the temporary work bridges has been reduced by 31 linear meters or 0.02 mile. The previous (August 2018) bull trout impact calculators and August Biological Assessment stated that the temporary bridges would result in a 97-meter (0.06 mile) zone where physical injury to fish weighing greater than or equal to 2 grams could occur. This has been revised using unconfined bubble curtains with assumed attenuation of 3 decibels. The revised bull trout impact calculators indicate that the area of onset of physical injury to fish weighing greater than or equal to 2 grams has been reduced to 61-meter (0.04 mile) zone.

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5. The disturbance zone associated with the temporary work bridges has been revised to 5,412 meters (3.4 miles). The disturbance zone associated with the temporary work bridges has been reduced by 3,165 linear meters or 2.0 miles.
6. On December 21, 2018, we provided (via email) revised threshold distances and areal extents of disturbance and injury to assist with estimating the area of effect for each pile-driving activity. We have revised that information based on the use of an unconfined bubble curtain during the temporary pile installation at work Bridges 3.1 and 3.9. The revised table is included as Enclosure (2). Please note the original table utilized 0.60 mile as the zone of injury, which was not correct; the zone of injury was 0.06 mile, now reduced to 0.04 mile.
7. Thank you for your review. Please contact me at 202-372-1521 if you have any questions.

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Enclosure: (1) Revised Impact Calculators
 (2) Revised table estimating area of effect for pile-driving