Lotic Environmental Ltd.
101 Kootenay Street N.
Cranbrook, BC V1C 3T5
P. 250.421.7802
www.lotic.co

Ministry of Environment & Climate Change Strategy
#401 - 333 Victoria St., Nelson, BC
V1L 4K3

February 28, 2022

Attn: Albert Chirico

Memorandum: Fish collection permit CB21-639190 Bugaboo fish salvage summary

Background

Lotic Environmental Ltd. (Lotic Environmental) was retained by BC Ministry of Forests, Lands Natural Resource Operations, and Rural Development (FLNRORD) to provide environmental services for the bridge installation and culvert replacement at 33.3 km on the Bugaboo Forest Service Road (FSR), which crosses an unnamed tributary. The crossing was located immediately upstream of the unnamed tributary's confluence with Bugaboo Creek.

The unnamed tributary has historically been altered by the road. The creek doglegged east along the road for approximately 50 m and then flowed beneath the road in an undersized 0.5 m diameter by 9 m long culvert. In order to improve fish habitat/migration and water conveyance, the project involved:

1. Installing a bridge upstream of the culvert to convey the streamflow in a more natural and direct manner across the road in what was likely the original stream bed, into Bugaboo Creek 20 m downstream.
    a. The bridge was an 8 m concrete slab bridge on concrete inverted "T" abutments.
    b. Downstream of the bridge, the channel was reconstructed (e.g., brushing, grubbing out a high point).
2. Replacing the original culvert with a new 0.5 m diameter by 14 m long culvert to convey flood flows.

For projects where the substrates are planned to be disturbed, a fish salvage is an important part of the pre-implementation process. Lotic Environmental thus submitted a fish collection permit application to conduct the salvage. This memo documents the outcome of the salvage as required by the terms of the fish collection permit.

Methods

A fish presence/absence survey was planned, as there were no past records for fish sampled in the Unnamed Tributary. However, the creek was dry at the time of construction (week of September 21) thus this was not possible. A fish salvage using electrofishing and dip netting methods was also planned for any areas that would be dewatered as a result of the project. Since the creek was dry, the fish salvage was not required.

Results

All construction works were able to be conducted in the dry, therefore no fish salvage was conducted.

Closing

I hope this letter suitably summarizes the salvage findings. Please let me know if you have any questions.

Sincerely,

Lisa Lasmanis (BSc)
Aquatic Biologist
250.777.3568
lisa.lasmanis@lotic.co