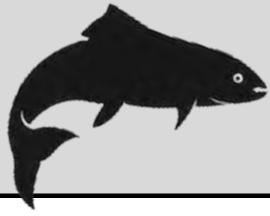


# BIG BAR LANDSLIDE UPDATE

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## WINTER WORK IN FULL SWING AT BIG BAR



**ABOVE:** Equipment sorting shot rock and riprap material at the Razorback. This material will be used to create temporary access and construct the embankment for the permanent fishway.

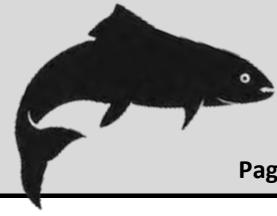
Winter work is in full swing in multiple areas at the Big Bar landslide site, as momentum builds for the construction of the permanent fishway. Over the past two weeks, as river levels continue to recede, crews have made strong progress while working through high winds and heavy rainfall.

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At the Razorback area, crews are removing the topsoil following the completion of an archeology assessment in advance of upcoming rock blasting. These reviews are completed by professional archeologists and assistants from local Indigenous communities before work is authorized to proceed at Big Bar, thus ensuring that all artifacts are appropriately identified and preserved. The rock taken from this area will be used as the base of the concrete fishway. The mid and upper benches of the Razorback rock are being fragmented into shot rock or riprap which will be incorporated into additional components of the project.

Work continues on preparing the riverbed where the fishway foundation will be built in the coming months. Crews are able to access this area with heavy machinery as low winter water levels have exposed the riverbed, which is submerged during the rest of the year.

A large drilling rig that will be used to install piles has been delivered to KM96. Once assembled, this heavy equipment will be “walked” 13 km to the work site. Due to the very slow movement of the rig, it will take four days for the machine to reach its destination at West Beach.

A new office site and maintenance area are being established at Beach One to accommodate the nearly 70-person crew engaged at Big Bar each day. The prime contractor Peter Kiewit Sons ULC continues to take all necessary health and safety precautions throughout the evolving COVID-19 situation, including tightening site access to limit the risk to workers.

Upcoming work will include:

- loading, hauling and placement of riprap;
- minor blasting of rock along the canyon wall to clear the way for constructing the fishway base upstream; and,
- further rock stabilization to complement the vertical mesh installation that is already in place along the cliff face.



**TOP:** Crews and equipment at the site of archeological work on the Razorback.

**BOTTOM:** Crews preparing the riverbed where the concrete fishway foundation will be installed. This area is regularly under 6m or more of water in the spring and summer.

Offsite, the design of the permanent fishway continues and a series of key drawings are either complete or nearing completion, including those required for positioning the foundation and exit of the fishway.

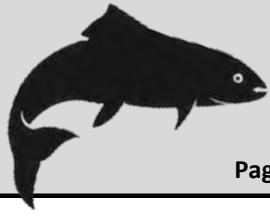
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## PLANNING UNDERWAY FOR 2021 “TRAP AND TRANSPORT” OPERATIONS

As work on the permanent fishway continues, an in-river “nature-like” fishway will also be installed for the 2021 Fraser salmon migration season to provide a pathway for fish during moderate flows. It will be built on top of the permanent fishway base and then removed before the construction of the concrete structure. The “nature-like” fishway will be built using large boulders and is similar to the one constructed for the 2020 migration season, which proved successful at moderate flows.

Alternative fish passage systems or “trap and transport” systems, including fish wheels, are also being incorporated into this year’s operations to help move fish past the slide when flows exceed the upper threshold of the “nature-like” fishway. Four task groups have been established to advance the development of a comprehensive “trap and transport” strategy this summer.

Each task group, led by a facilitator, comprises Indigenous technical experts from the Gitksan Watershed Authorities, Upper Fraser Fisheries Conservation Alliance, High Bar First Nation and Stswecem’c Xgat’tem First Nation, as well as contractors and DFO staff. Each group is responsible for planning and designing one of four key areas of the “trap and transport” operations: West Beach, fish wheel, trucking and the French Bar release site.

The primary goal of the 2021 “trap and transport” program is to minimize fish handling to avoid injury and stress, which reduces migration and spawning success. Some of the measures to support this goal include:

- facilitating water-to-water transfer using upgraded lifting, loading and unloading systems;
- using larger vehicles with increased holding capacity; and,
- improving road conditions.



**PICTURED:** The fish wheel will be critical to this year’s “trap and transport” operations, which will support both monitoring and emergency enhancement efforts.

The “trap and transport” operations will be key to supporting the passage of early-timed Chinook and sockeye through Big Bar as they make their way upstream to their natal spawning grounds.



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