

## Removing Fish Barriers – Crescent Creek Culverts

**Objective:**

To remove the fish barrier on Crescent Creek created by the culverts under the 24P Road.

**FRBC Region:**

Cariboo – Chilcotin

**Author:**

Alan Hunter, RPF, TFL Forester, West Fraser Mills Ltd., Quesnel

**Proponent:**

West Fraser Mills Ltd., Quesnel

**Watershed:**

Crescent Creek, a Tributary of the Willow River

**Location:**

The fish barrier is located at the point where the 24P Road crosses Crescent Creek. The site is 250 m from the junction of the 24P Road with the 2400 Road at 29 km of the 2400 Road.

**Introduction:**

Two 60 inch (1525mm) culverts were installed on Crescent Creek in the late 1970's when the road was built. The water velocity inside the culverts and the drop at the outlet prevented upstream movement of immature fish.

**Prescription:**

Remediation of this problem was identified as a priority by Ministry of Environment staff several years ago. Approval to remove the culverts and replace them with a 17 m bridge was given in the summer of 1999. Because of the inability to have design work and fabrication done in time to install the bridge in the July-August fish window, approval was given by MELP and DFO for installation in early October. A sediment fence was installed downstream of the culverts, and a fine-mesh net

was installed upstream of the culverts. Electroshocking was done between the barriers, and collected fish were released downstream of the sediment fence.

**Past Rehabilitation Work:**

None

**Rehabilitation Work:**

Two 60 inch (1525mm) culverts were removed and replaced with a 17 m prefabricated concrete bridge. The bridge is mounted on steel piles. The stream channel and banks were lined with rip-rap to prevent scourings and to mimic, as closely as possible, a natural stream bed.

**Cost Summary:**

Bridge:	\$69,200
Installation: (contracted)	\$ 8,000
Site preparation: (hauling and installing riprap, removing culverts)	\$18,630
Labour	<u>\$ 1,300</u>
	\$89,930

**Outputs:**

7 km. of stream above the bridge is now accessible for migrating fish. (Tributaries and two lakes are not included in this estimate)

**Production Estimates:**

Unknown

**Proposed work:**

None on this tributary.

**Further Information:**

Alan Hunter, RPF, TFL Forester, West Fraser Mills Ltd., Quesnel (Ph. 250-992-0888; e-mail. [ahunt@westfrasertimber.ca](mailto:ahunt@westfrasertimber.ca))



**Figure 1 Silt fence downstream**



**Figure 2 Diversion into one culvert**



**Figure 3 Lifting first culvert**



**Figure 4 Rip-rap placed on top of geotextile**



**Figure 5 Prepared stream bed after culvert removed**



**Figure 6 Bridge installed, channel completed**