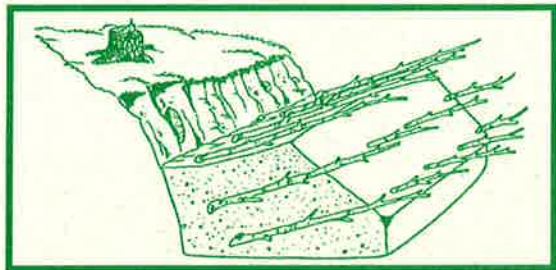


### **SITE 5: ROOTWAD COVER & DEFLECTOR LOG**

Large logs and roots (large woody debris) naturally find their way into streams. Past forest harvesting along the stream has removed the available supply of large woody debris. By adding wood, we are helping to re-establish complexity in the stream. Root-wads provide cover for juvenile fish. They also attract insects on which the young rainbow trout feed.

### **SITE 6: ARCH CULVERT**

Before restoration efforts, the stream flow through the culvert would dry up when water levels were low. This created a barrier to fish passage, since the two ends of the stream became disconnected from each other. Restoration at this site included restoring flow through the culvert and building brush layers to prevent road material from falling into the stream.



*Brush Layering*  
(Drawing courtesy of David Polster)

### **SITE 7: LOG WEIR**

As water flows across a log weir, it carves out a pool downstream and makes the upstream pool deeper. Pools are safe places where young trout rest, feed and grow.

### **SITE 8: LATERAL COVER LOG**

This log was placed along the edge of the creek to mimic wood that is naturally found in streams. It is called a “cover” log, because it helps protect fish by providing shade and hiding spots from predators.

### **SITE 9: CATTLE CROSSING & ROCK WEIR**

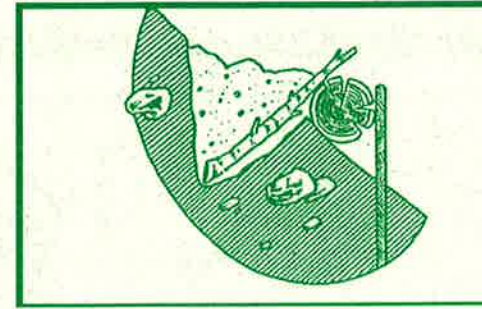
Free range cattle use the creek for water and shade. When they approach or cross the stream, they trample stream banks, causing sediment to enter the stream. To prevent this from happening, the approaches were armoured with rock. Log and debris corrals were built to encourage cattle into this area to reduce trampling in other parts of the stream. A rock weir was also constructed at this site, to create a watering pool for the cows.

### **SITE 10: FALLS**

As you look out over the stream, you can see the landscape begin to change. This section of the creek is a barrier to fish passage upstream because the gradient becomes steeper and the creek drops off suddenly at the falls. Fish found above the falls come from Fire Lake.

### **SITE 11: BIOENGINEERING**

This is the site of a former road crossing. The gully was re-shaped to its original slope, and bioengineering structures were installed. These structures use live plant material, like willow and cottonwood cuttings, to stabilize and strengthen the bank.



*Modified Brush Layer*  
(Drawing courtesy of David Polster)

### **SITE 12: BOULDER COVER**

Like logs and roots, boulders provide places for fish to hide, while searching the water for food. They also slow down the flow of water, and provide ideal “resting” places for small rainbow trout.

### **SITE 13: THE END OF THE TRAIL**

Before you look at the sign, see if you can spot a rock weir. What other structures can you find in this pool?



For further information contact:  
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## **RAINBOW TRAIL**



This project was made possible by:



## RAINBOW TRAIL

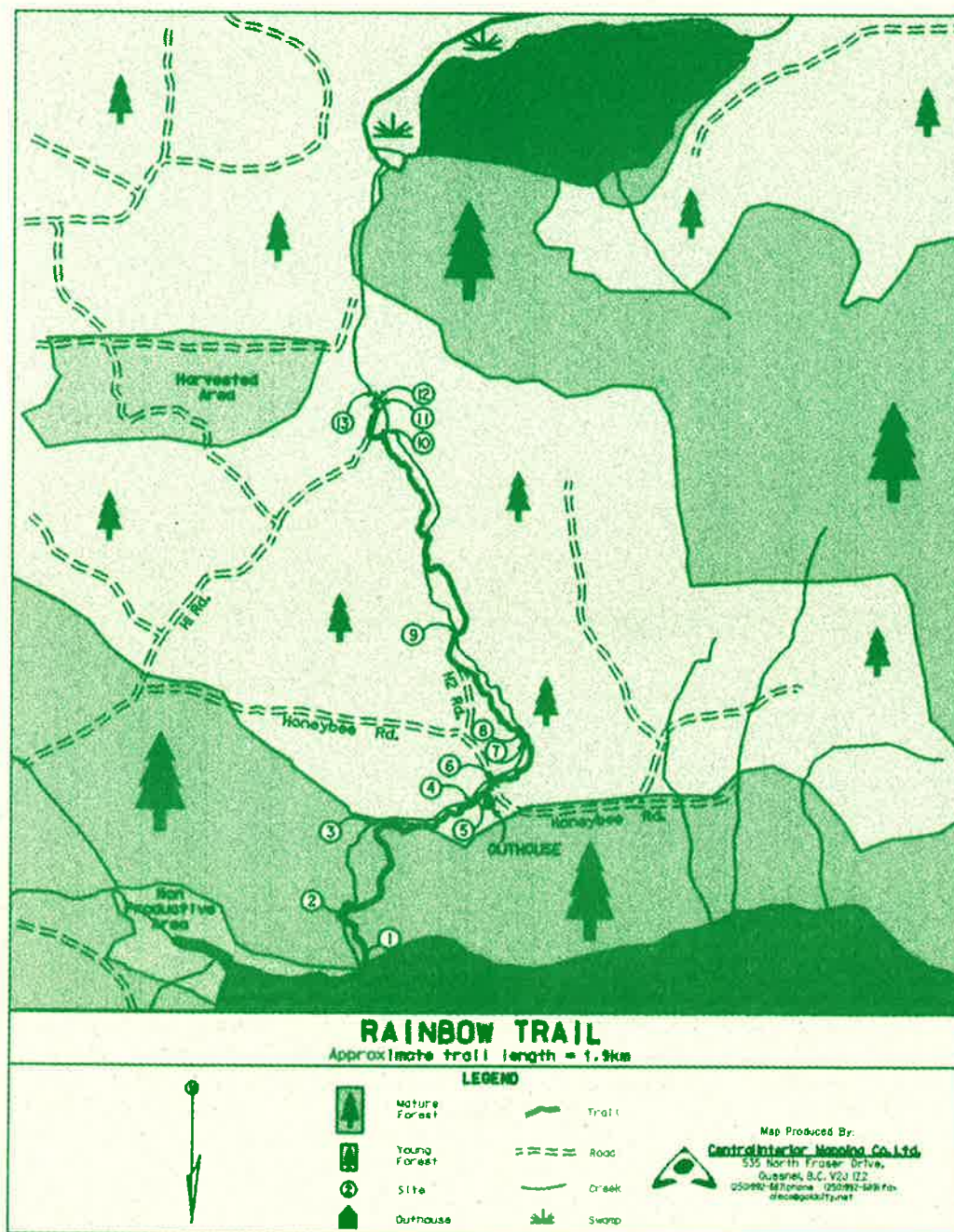
This creek is a 1.8 km tributary that flows between Fire Lake and Gavin Lake. Past forestry activities and free range cattle grazing have negatively impacted important rainbow trout habitat in this creek. Fish inventory and habitat assessments were conducted on the entire stream. From this study, restoration prescriptions were developed and implemented in the fall of 2000.



Rainbow Trout (*Oncorhynchus mykiss*)

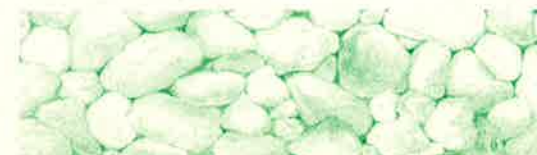
### SITE 1: TRAIL HEAD

This is where the creek flows into Gavin Lake. Adult rainbow trout living in the lake, enter the stream here when they are ready to reproduce.



### SITE 2: SPAWNING HABITAT

In spring, adult rainbow trout migrate from the lake upstream into the creek to spawn. The females dig nests (called redds) in the gravel of the stream bottom. After they lay their eggs among the stones, the male fish fertilize them. The females then bury the redds with gravel and the mated pair guard the nest for a short period of time, before returning to the lake.



### SITE 3: REACH BREAK

A section of stream with similar characteristics, like gradient, riparian (streamside) vegetation and stream bed material, is called a reach. Reach breaks are points along the stream where one or more of the characteristics significantly changes. This site represents a reach break because the stream gradient becomes steeper here.

### SITE 4: UPSTREAM V-WEIR

Along this section of the creek, there were not many pools or large pieces of wood in the stream channel. By constructing an upstream V-weir, we are helping the creek scour out more pools.