

## WAPITI RIVER BANK STABILIZATION (SOIL BIOENGINEERING) PROJECT

The Wapiti River is the source of regional drinking water for more than 80,000 people so it is imperative that we protect it. One way we are doing this is through bank stabilization, a method of soil bioengineering.

As spring run-off, drought and environmental events cause our water source to shift course, our pumping facilities, storage ponds and water intakes are threatened. If we are unable to pull water from the Wapiti River and must resort to storage ponds, the City of Grande Prairie, Town of Sexsmith, parts of the County of Grande Prairie and, soon, the Town of Wembley, could face water restrictions within just a few days, less in times of high demand.



### PROTECTING OUR RIVER BANK

To protect this water infrastructure, three soil bioengineering techniques were implemented in the fall of 2018 to prevent further erosion and stabilize the river banks: Dense Live Staking, Live Gravel Bar Staking and Rough and Loose Soil Treatment.

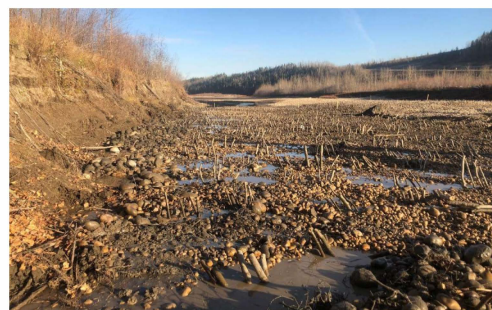
Dense Live Staking is a technique that involves installing sections of green willow and poplar into the steep bank slope above the storage ponds. The green willow and poplar regenerate to remove excess soil moisture and provide soil stabilization through their root network.

Live Gravel Bar Staking is used to mitigate erosion by decreasing water velocities, thereby encouraging sediment decomposition. Inserting sprouted balsam poplar and willow sticks into the ground, we have been able to trap debris and disrupt the flow of water, resulting in the decomposition of sediment and the stabilization of the river bank.

Rough and Loose Soil Treatment is used to control erosion and diversify surface conditions. This technique has allowed us to create ideal conditions to promote re-vegetation and reduce ponding and run-off into our river bank. It also discourages ATV traffic which can cause significant damage through soil compaction.



Installation of cuttings



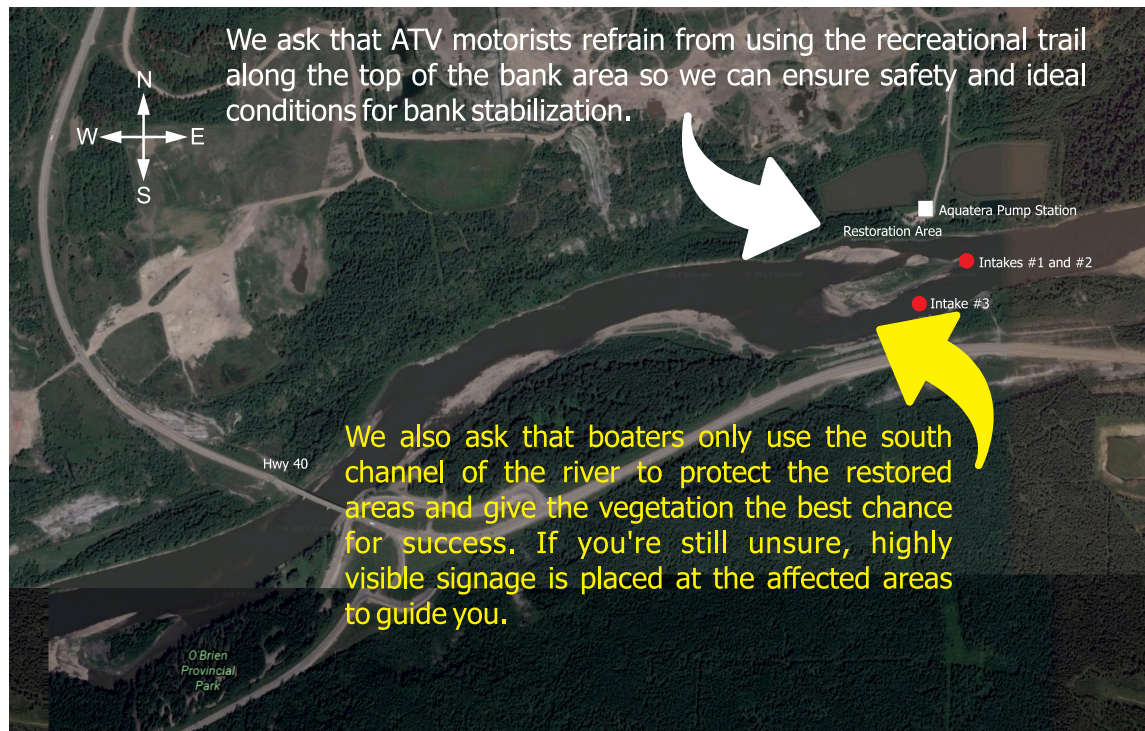
Live gravel bar staking



Completed project



## WE NEED YOUR HELP



## FAQ's

### WHEN WILL THIS PROJECT BE OVER?

This project was completed in the fall of 2018. Though the bioengineering applications are completed, we must work to ensure that the work conducted in 2018 isn't damaged by boat and ATV traffic.

### WHEN WILL I BE ABLE TO USE MY ATV ON THE RECREATIONAL TRAIL AGAIN?

The trails in which the Rough and Loose Soil Treatment were applied should not be used at any point in time, to minimize the risk of damaging the work completed in 2018.

### WHEN WILL I BE ABLE TO BOAT THROUGH THE NORTH CHANNEL AGAIN?

Due to the bioengineering applications, the North Channel will no longer be a viable option for boaters. The Live Gravel Bar Staking will result in a single channel system, meaning boaters will only be able to use the South Channel.

### IF I DON'T FOLLOW THESE INSTRUCTIONS, WHAT IMPACT WILL THAT HAVE?

Damage to either the Live Bar Gravel Staking or Rough and Loose Soil Treatment applications will reduce the success of the project and expose the North bank to potential erosion.

For more information on this project visit [www.aquatera.ca/riverprotection](http://www.aquatera.ca/riverprotection).

We appreciate everyone's assistance with this as we continue working to provide trusted quality, valued service and peace of mind to our customers and communities.