

# Welcome

*We respectfully acknowledge that the Blackwater Road at Knickerbocker Road Project is taking place on the territories of Lhtako Dene Nation, Nazko First Nation and the Tsilhqot'in National Government.*

## Blackwater Road at Knickerbocker Road Project Public Information Session

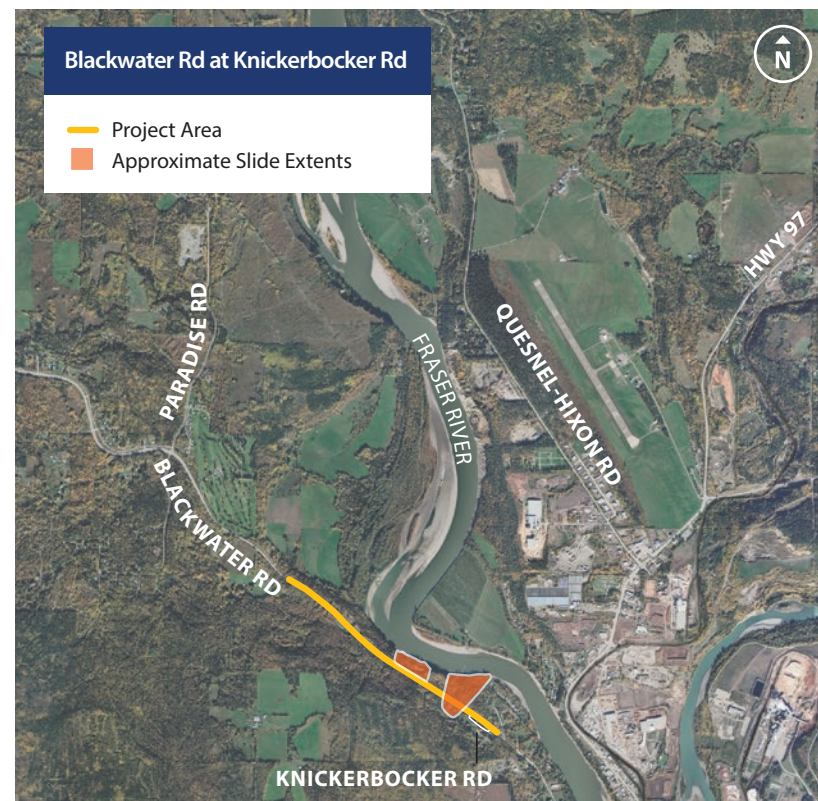
This Public Information Session is being held to provide you with information regarding the Blackwater Road at Knickerbocker Road Project and the opportunity to ask questions to project team members.

To provide your feedback or submit enquiries to the project team, contact Reid Drummond, Project Manager, at:

 Email: [Black.Water@gov.bc.ca](mailto:Black.Water@gov.bc.ca)

 Phone: **250-299-1494**

 Website: [gov.bc.ca/cariboo](http://gov.bc.ca/cariboo)



# About the Cariboo Road Recovery Projects

Changing weather patterns have hit the Cariboo particularly hard in recent years, contributing to hundreds of slides and road washouts in 2020 and 2021.

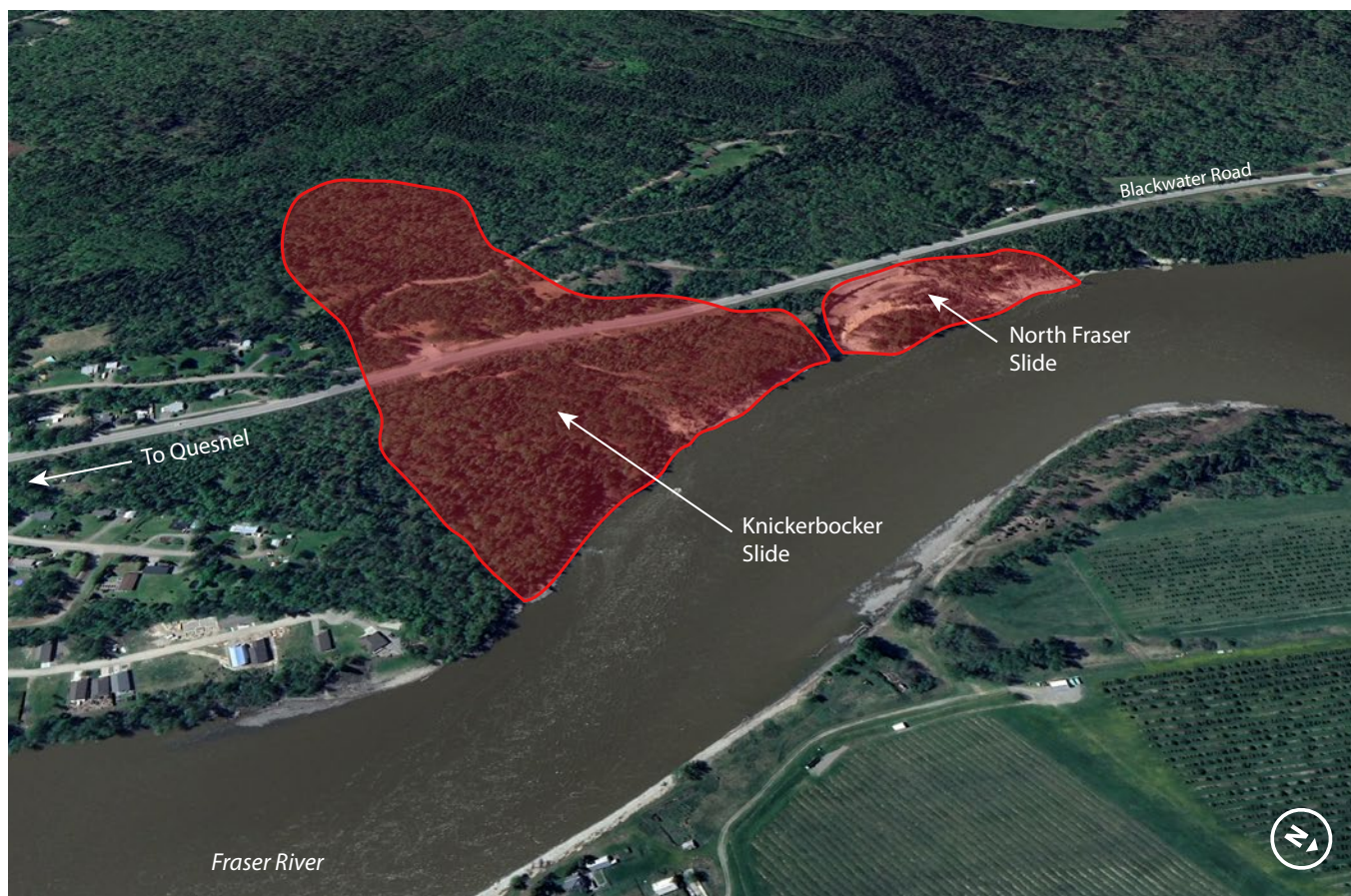
The Cariboo Road Recovery Projects are restoring access where feasible, benefiting tens of thousands of people who use these affected roads and highways.



Aerial view of the North Fraser Slide, one of two active slides affecting Blackwater Road.

## Addressing Two Active Slides

There are two active slides which have impacted Blackwater Road: the North Fraser Slide and Knickerbocker Slide.



# Project Overview

Project construction is anticipated to begin in 2024, starting with the installation of pumping wells to reduce groundwater pressure, similar to the approach used in West Quesnel.

The next phases of work will include the realignment of Blackwater Road and reinforcement of a segment of the riverbank.



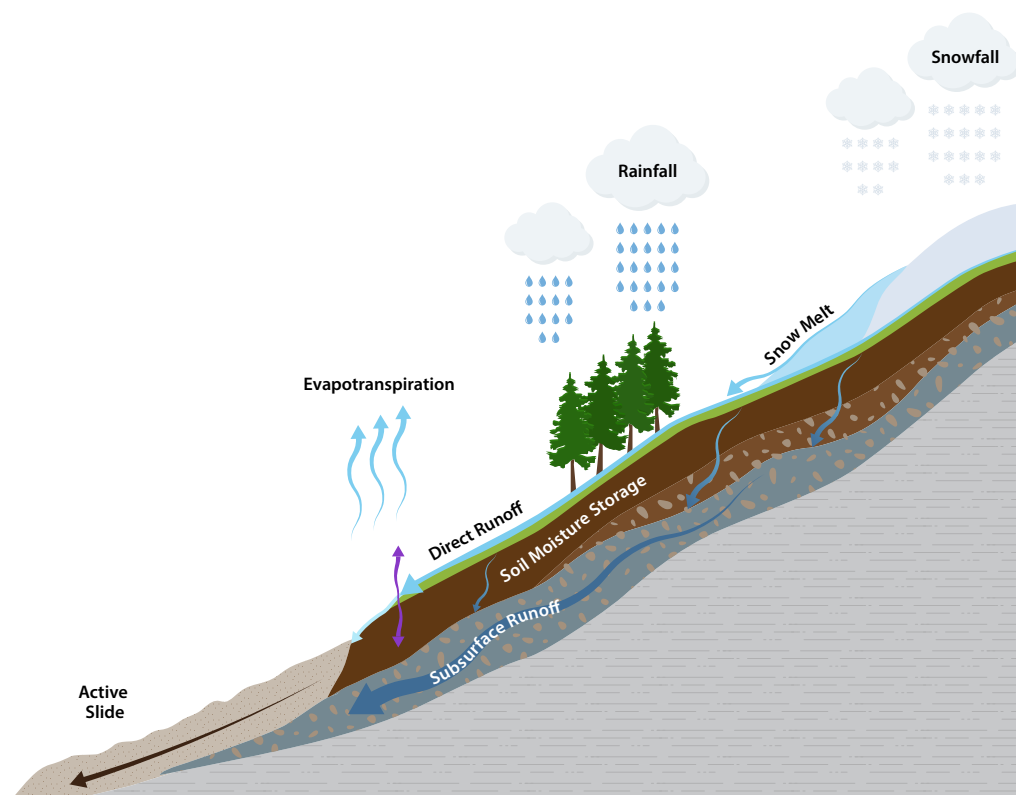
A view of the North Fraser slide from above the Fraser River.

# Project Process

Through a comprehensive and technically driven process, the Blackwater Road at Knickerbocker Road Project team is designing and building transportation infrastructure that is resilient and can withstand the effects of changing weather patterns over the long term.

Work to determine a solution to address issues as a result of these slides included:

- Engineering design and options development
- Onsite investigations
- Environmental reviews and inspections
- First Nations consultation
- Public engagement
- Ongoing monitoring and maintenance of the road



Each slide is complicated due to its unique geotechnical characteristics. Above is a graphic of how water typically impacts movement.

# Onsite Work to Date



### Fall 2021

Temporary resurfacing of Blackwater Road to improve rideability for road users.

### February 2022

Monitoring stations installed, providing valuable information to inform project option analysis.

### May/June 2023

Pumps and other equipment were installed to test depressurization and its effect on the slide.



### June 2023

Temporary resurfacing of Blackwater Road to improve rideability for road users.

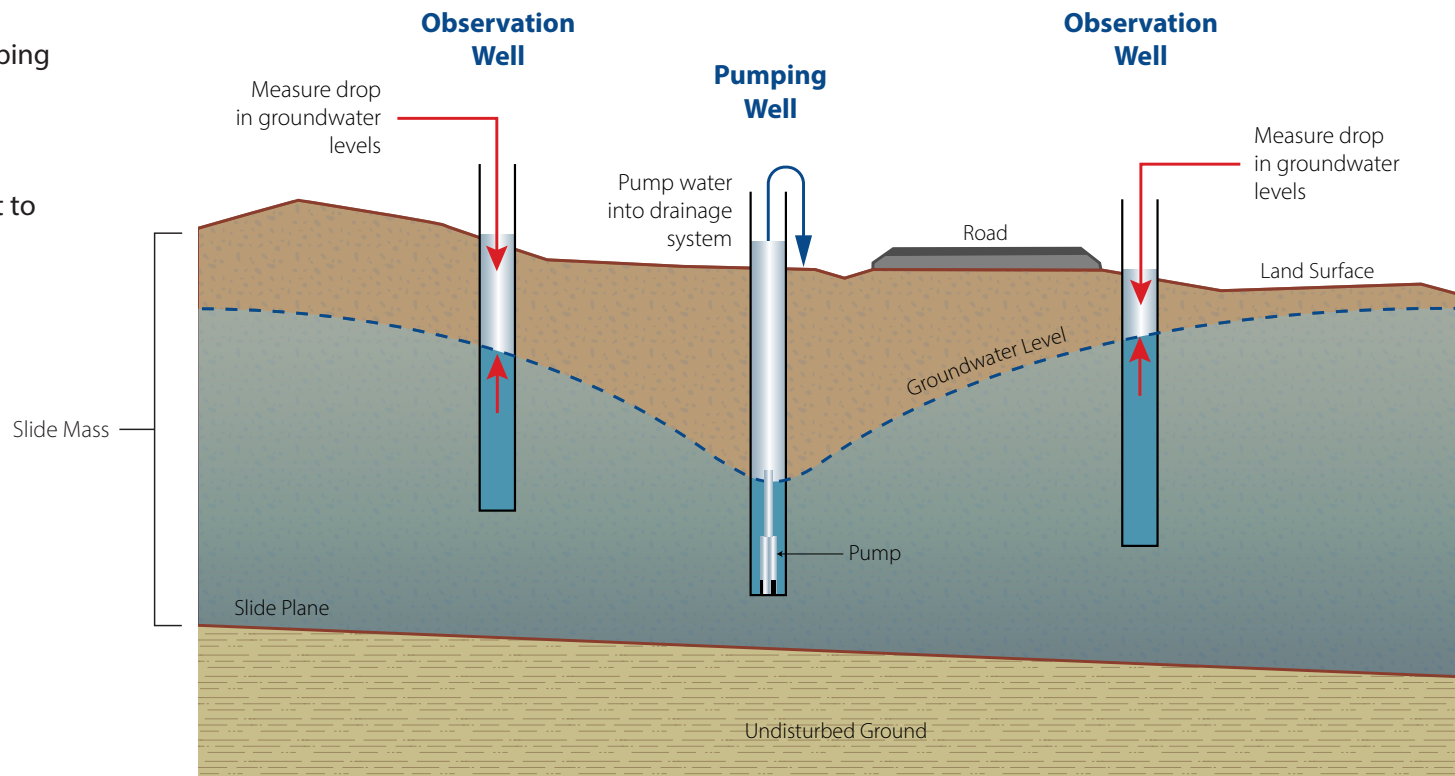
### Summer/Fall 2023

Crews were onsite for environmental and geotechnical testing and research, including drilling, to collect soil and water samples.

# Depressurization

Blackwater Road will be stabilized in three ways. The first includes:

- Groundwater depressurization: pumping wells and pipes will be installed to reduce water pressure, slowing movement of the slide
- The ministry has installed equipment to monitor slides



An illustration of how a pumping well removes water from within a slide mass, lowering pressure and slowing movement of the slide.

# Road Realignment

The second way the road will be made more stable is:

- Realignment of approximately 1.4 km of Blackwater Road away from the top of the slide
- Restoring the lane and shoulder widths of Blackwater Road through the slide, along with repairs at the intersection of Wells Road, shown on the map to the right

The project team is in conversation with affected property owners.



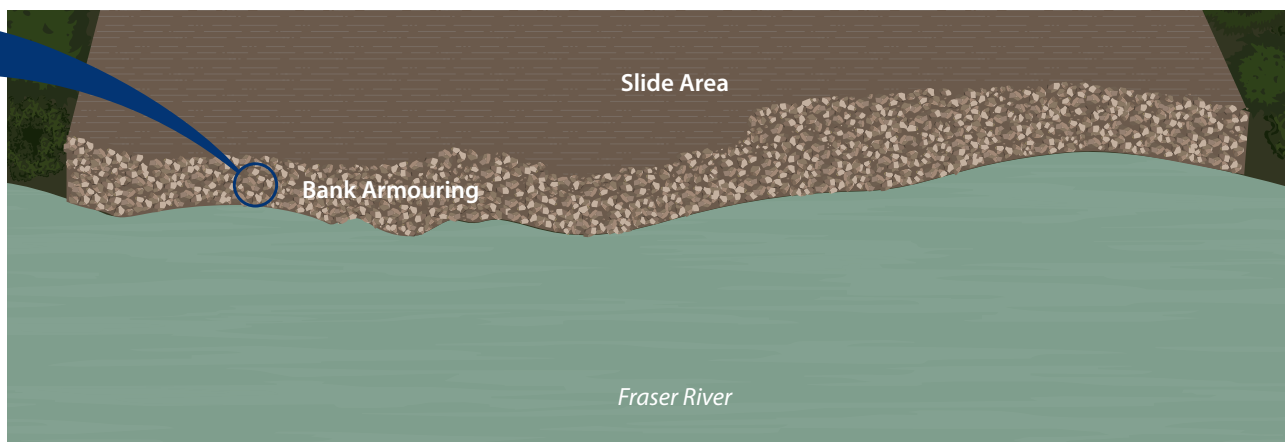
A map highlighting the realignment on Blackwater Road.



# Bank Armouring

The third way Blackwater Road will be stabilized is:

- Armouring a section of the river bank
- Removing material to reduce weight at the crest (top) of the North Fraser slide to improve safety and increase the stability of the road
- Installing bank armouring (protection) made of rock to withstand the river forces and ensure the river bank materials are held in place



# Environmental Considerations

The project team is working with partners to ensure the protection of aquatic habitat while working on this project. Other elements intended to preserve the environment include:

- Measures to protect wildlife and wildlife habitats
- Practices to protect migratory birds and species at risk
- Limiting the spread or growth of invasive species
- Measures to protect the river bank

Environmental assessments are underway for fish species, bird nesting and endangered species and species at risk in the area.



Photo of the embankment to be stabilized along the Fraser River.

# First Nations Consultation

The ministry is consulting with the following communities on the Blackwater Road at Knickerbocker Road Project.

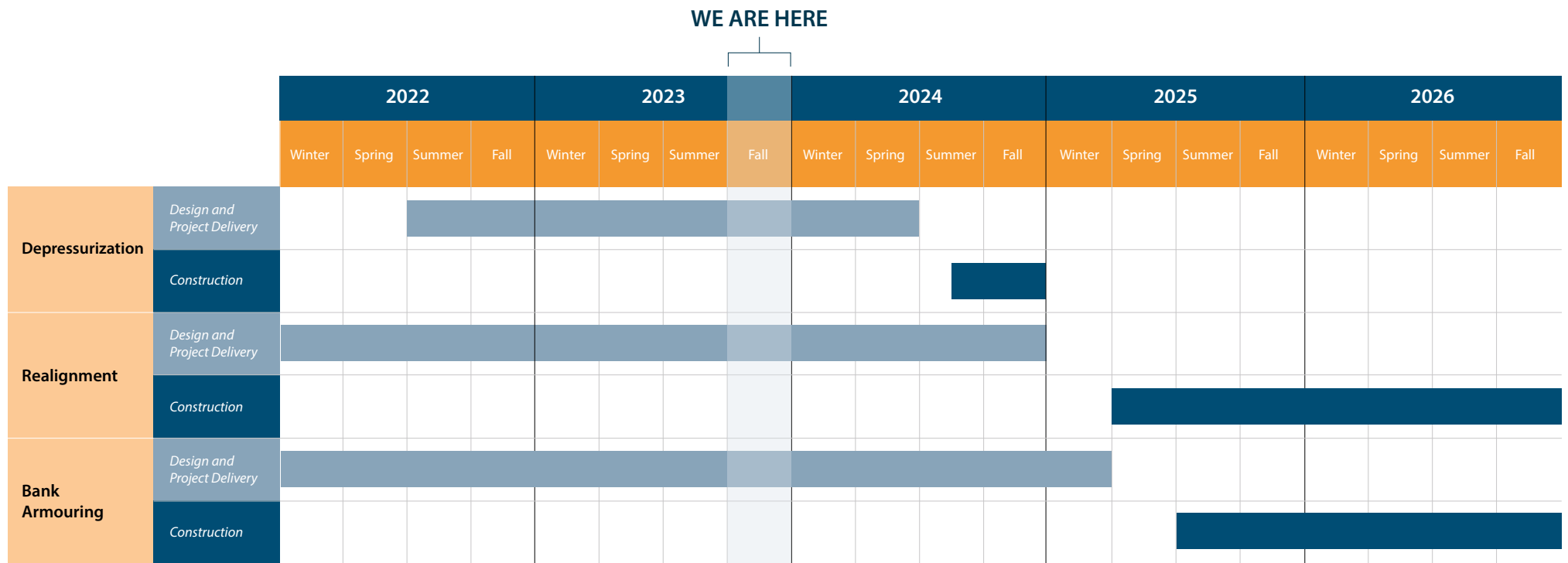
- ▶ Nazko First Nation
- ▶ Lhtako Dene Nation

We are continuing to work with the Nations to better understand if there are any cultural, archaeological or environmental aspects related to the proposed project work.

Consultation and engagement will continue to be ongoing as we proceed forward.

## Project Timeline

The following summary schedule outlines anticipated timelines for project works, including project design, environmental permitting, property acquisition, geotechnical investigation and tendering. Timing is subject to change.



# Thank You for Attending

Thank you for attending this Public Information Session. If you have feedback or would like to submit a question to the project team, contact Reid Drummond, Project Manager, at:



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Project details continue to be refined and confirmed. For the latest information or to learn more about the project, scan the QR code.

