

# Line 21 Segment Replacement Project

Enbridge is committed to continued dialogue with local Aboriginal communities and stakeholders in the interest of sharing Project-related information and identifying and resolving any questions or concerns associated with planned activities.

You can get in touch with us any time:  
 By phone: **1-888-263-3654**  
 By email: **projects@enbridge.com**  
 On the web: **www.enbridge.com/line21**

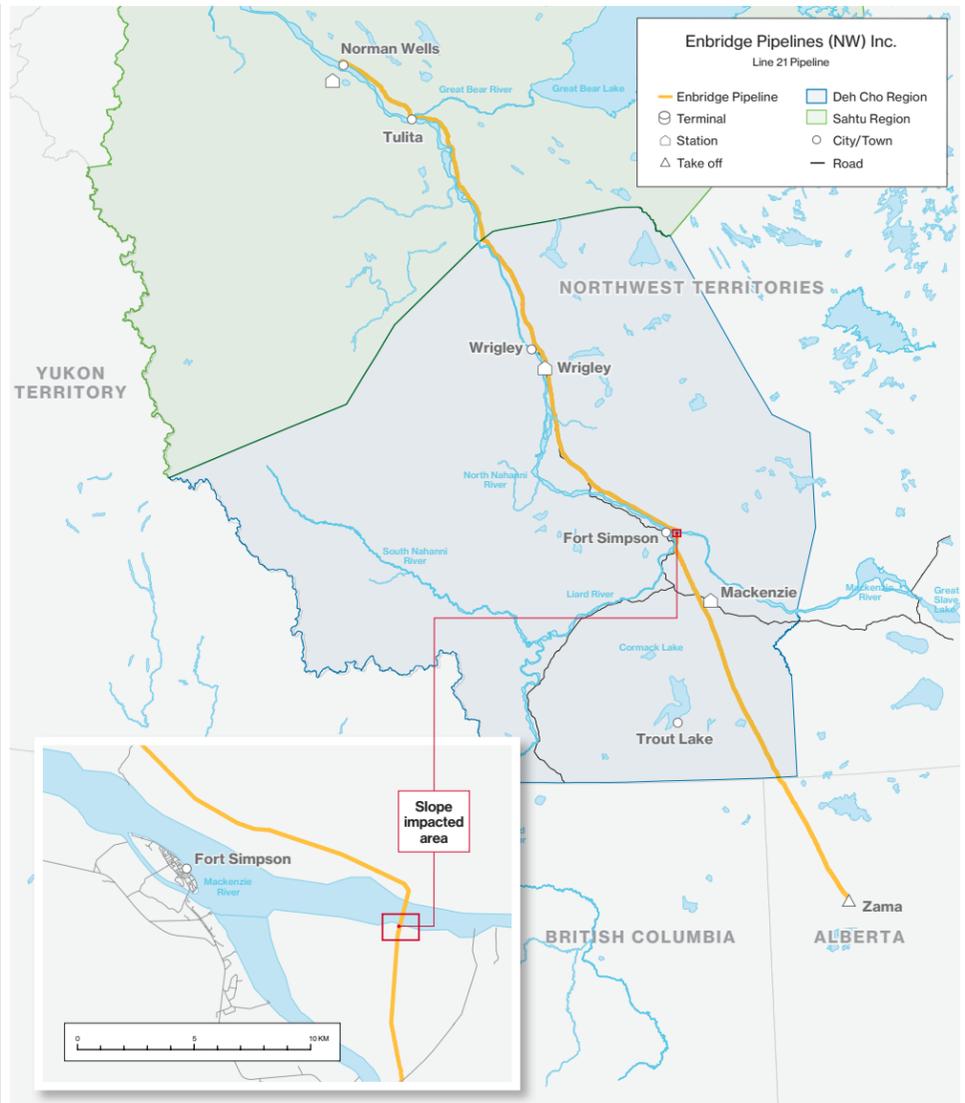


**Keeping You Informed**

## Project Update November 16, 2017

In November 2016, Enbridge shut down Line 21 due to increased rates of slope movement around the south slope of the Mackenzie River crossing. In order to protect the pipeline and the surrounding environment in the event of further slope movement, Enbridge plans to decommission the segment of pipeline in the active slope and install a new section of pipe under the river, by using a horizontal directional drill, so that safe operation of Line 21 may resume. The reason we are doing this work is to protect the environment, protect the water, and protect the land. Pending regulatory approval from the National Energy Board (NEB) and the Mackenzie Valley Land and Water Board, Enbridge hopes to begin work in the first quarter of 2018.

Because Line 21 has not been in operation since late 2016, Enbridge will be submitting a deactivation application to the NEB in the coming weeks. For sections of pipeline that are not operating for periods of 12 months or longer, the NEB expects companies to apply for deactivation – this is a requirement of the NEB’s Onshore Pipeline Regulations. The reason for this requirement is that an improperly deactivated section of pipeline may be a source of risk to the public and the environment. The purpose of the application is to explain the rationale for the deactivation and describe the measures that Enbridge is employing to maintain the integrity of the pipeline and protect the public and the environment. Monitoring of Line 21 will continue as if the line were operating – this includes 24/7 pressure and leak detection monitoring by the Control Centre, monitoring instrumentation, slope monitoring, thaw depth monitoring, bi-weekly aerial patrols, and cathodic protection monitoring.



If you have any questions about the Line 21 Segment Replacement Project or the deactivation, please reach out to us at **1.888.263.3654** or [projects@enbridge.com](mailto:projects@enbridge.com)

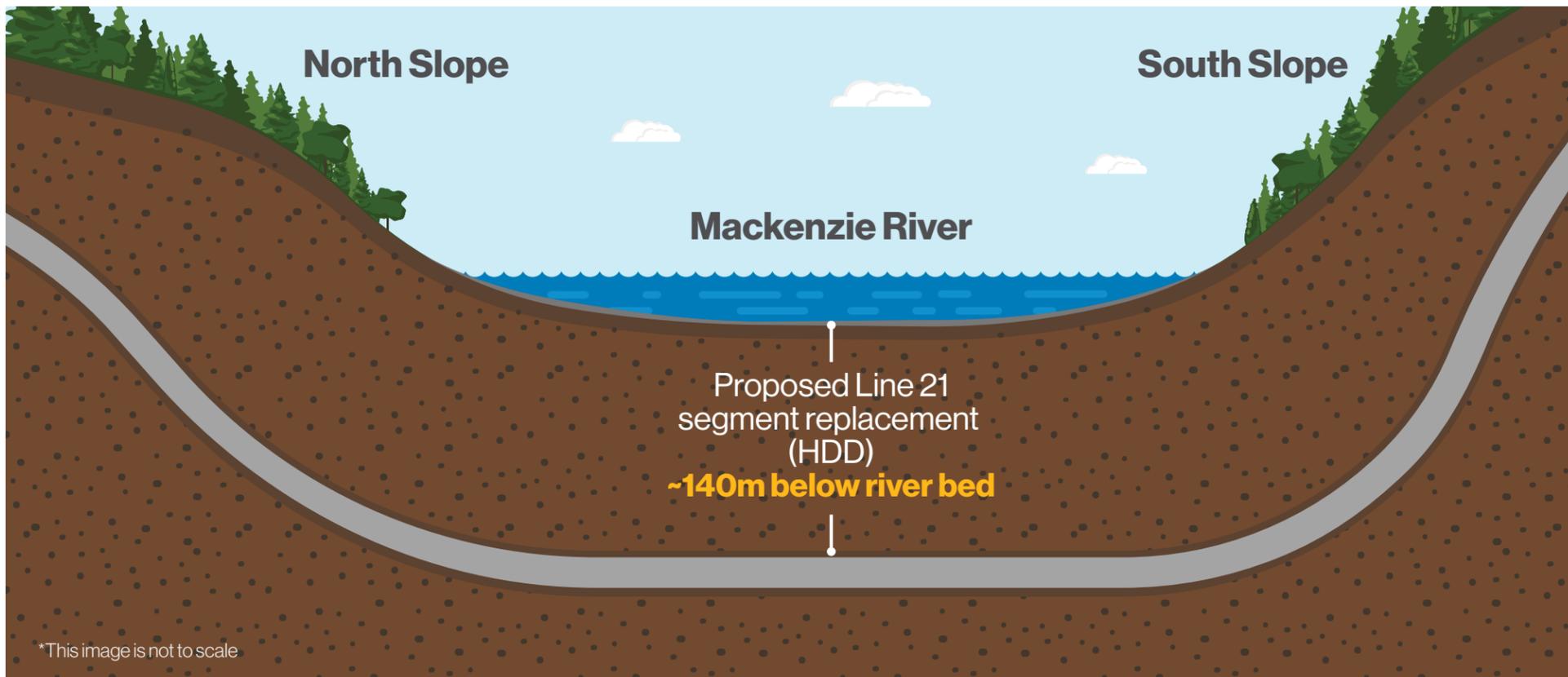
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Construction

## Horizontal Directional Drilling

Specialized construction for large waterways and sensitive areas

Horizontal directional drilling (HDD) is recognized as an industry best practice crossing method that minimizes environmental risk to waterbodies through construction and ongoing operation. In addition to being among the least intrusive options available, HDD is the safest and most technically feasible means of installing the replacement segment of pipe deep below the Mackenzie River. This construction technique involves drilling a tunnel under the river, and pulling the replacement pipe through the drilled underground tunnel.



Line 21 is currently located approximately 4 meters under the Mackenzie River. The Line 21 Segment Replacement Project will locate the pipeline approximately 140 meters under the Mackenzie River.

Environment

## Our Commitment

Taking care to minimize environment impact



The safety of people and protection of the environment, are our top priorities at Enbridge. Whether we're planning, building, maintaining, or operating a pipeline, we take special care to minimize our environment impact.

When we plan a pipeline project, we take care to minimize our potential impact on the environment in a variety of ways. Some of the steps we undertake include:

- Using environmental field survey crews to evaluate environmentally sensitive areas;
- Employing proven wildlife protection strategies;
- Minimizing ground disturbance by using existing access routes to and from construction sites, and minimizing temporary workspace; and
- Consulting with Aboriginal groups and stakeholders to understand and address any concerns into project planning.

Enbridge has committed to providing opportunities for local cultural, environment, wildlife, and turbidity monitors on site during the construction phase of the Project.

Pipeline Protection

## Leak prevention and detection

Critical components to pipeline safety

Pipelines are the safest and most reliable way to move the energy we all use. Still, at Enbridge, we believe all incidents can be prevented. Our focus on prevention — with vigorous monitoring, maintenance and inspection programs — keeps our pipelines fit for purpose. We take a number of steps to ensure the safety and reliability of our pipeline system, including the following:

- In-line inspections, corrosion prevention, and preventative maintenance digs;
- Monitoring our pipeline network 24/7 using highly-trained operators and multiple, overlapping computerized modelling systems;
- We invest heavily in leading-edge tools and technologies to ensure our system is safe;
- Enbridge has a strong commitment to monitoring its pipelines through aerial surveillance, and talking to those who live and work near the right-of-way through our ongoing Public Awareness Program.

**Aerial patrols are scheduled twice a month to fly over the entire Line 21 right-of-way.**

