

Line 21 Regional Projects Overview

Enbridge operates the Norman Wells Pipeline (Line 21), which carries crude oil 870 kilometres from Norman Wells, Northwest Territories to Zama City, Alberta, where it enters a third-party pipeline system and is sent on to Edmonton.

The 12-inch-diameter pipeline travels approximately 750 km through the Northwest Territories, with a design capacity of 50,000 barrels per day. Enbridge pipeline assets in the Northwest Territories include pump stations and related facilities at Norman Wells, Wrigley and Mackenzie.

This newsletter provides updates on operational and maintenance activities along Line 21. Additional information can be found on our website at enbridge.com/Line 21.



> Enbridge pipeline maintenance workers on site for the Little Smith Creek Maintenance Project

Little Smith Creek Maintenance Project

Line 21 runs parallel to Little Smith Creek, approximately 67 km southeast of the Hamlet of Tulita. Slope movement has been monitored here since 1985 and recent engineering assessments indicated that due to slope instability from erosion, preventative maintenance on the pipeline was required to avoid any potential future impact to Line 21 from the encroaching bank of the creek.

- Enbridge replaced an approximately 515-metre segment of the pipe during January-March 2021.
- The old pipe segment was removed and on March 4, 2021, the line was returned to service.
- Enbridge has completed demobilization and removed all equipment and infrastructure, including the temporary work camps.
- We have committed to two years of post-construction environmental monitoring, with a focus on natural regeneration of the area.
- Post-construction environmental monitoring inspections will take place in the summer and fall of 2021 and 2022.
 Remediation touch-ups will occur in winter 2022, and if needed, again in winter 2023.
- Enbridge wishes to thank the local communities in the Sahtu region for their support and cooperation during the Little Smith Creek Maintenance Project.



> Muskox in the Tulita area observed during pre-construction monitoring

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Line 21 Community Update

Line 21 Segment Replacement Project

In late 2016, Enbridge shutdown Line 21 as a precautionary measure to investigate and address slope instability near the Mackenzie River crossing, approximately 10 km east of Fort Simpson. After receiving regulatory approval, Enbridge installed a new 2.5-km segment of pipe that crosses the Mackenzie River and decommissioned the old segment.

On completion of this work, Enbridge returned Line 21 to service in September 2018.

What's the latest?

- Enbridge will conduct seven years of post-construction environmental monitoring (PCEM) within the project footprint.
- In 2020, Enbridge completed year two of the PCEM program. Results indicate that the pipeline right-of-way is positively progressing towards pre-construction conditions following the second growing season.
- Vegetation is becoming naturally established (no seeding was completed following construction).
- Soils on the right-of-way were observed to have stabilized and no occurrences of constructionrelated erosion were observed in 2020.
- Year-three PCEM work is expected to occur in summer 2021.





> Line 21 Segment Replacement Project site re-vegetation observed during post-construction environmental monitoring, August 2020.

Preventative Maintenance Program

Our goal at Enbridge is, and will always be, the prevention of all incidents. Prevention is a key element of our multi-faceted approach to pipeline and facility safety. As part of this prevention program, Enbridge conducts periodic in-line inspections to monitor the integrity of our pipelines. When data collected from these inspections meet criteria that requires Enbridge to take a closer look, we will excavate and assess the pipeline and, if necessary, conduct repairs. These excavations are often referred to as integrity digs.

What's the latest?

- Latest generation in-line inspection tools were run the length of Line 21 beginning in fall 2020 and completed winter 2021. These sophisticated tools can detect corrosion, dents, deformations, etc.
- Enbridge conducted seven maintenance digs in the Dehcho region between January-March 2021. All digs occurred on the existing Line 21 right of- way and are part of maintaining a safe and reliable system.
- Repairs were conducted on the pipeline where required.
- With a focus on safety, Enbridge and local communities worked together to ensure safe operations of the winter maintenance program. A multi-layered COVID-19 mitigation plan was effective in ensuring the safety of workers and local residents.
- Enbridge will conduct digs in the Sahtu and Dehcho regions next winter.
- We are in the preliminary planning stages for a sump tank replacement at the Wrigley Pump Station in 2022. More information will be shared with communities as it becomes available.



> Northern lights observed in the Sahtu region, winter 2021.

Safety First

The Line 21 pipeline is buried under the ground and pipeline markers along the right-of-way (a strip of land 20 metres wide) show the approximate location of the buried pipeline. If you notice any unusual activity on or near the pipeline right-of-way, such as an odor like oil or diesel, a hissing or roaring noise, or see a moist patch or pool of black liquid, leave the area and call us immediately toll-free at **1-877-420-8800**. If you are unable to remember our number, call your local emergency number. For more information, refer to this brochure.

The eyes and ears of our pipeline safety program

Inline inspection (ILI) tools move through our pipeline network and used advanced sensor technology to inspect pipe walls millimeter by millimeter. They identify and report even the most minuscule changes that may require follow-up maintenance. For more information, check out this video.



Meet the Team



In 2020, Wesley Hardisty became Enbridge's Manager of NWT Area Operations. Born and raised in the Northwest Territories, Wes started his career with Enbridge in Fort Simpson and later became Area Supervisor out of Norman Wells before moving into his new role.

Sean Evans became Enbridge's Director, Athabasca Region, which includes oversight for the Northwest Territories. Sean has held roles in Enbridge Major Projects, Liquids Pipelines and most recently as the Director of Safety within the Safety and Reliability team.

The COVID-19 pandemic has created challenges for Enbridge personnel to meet in person with community members along Line 21. To stay connected, we've put together put together a video to introduce some of our team, and to answer frequently asked questions about Enbridge's operations in the Northwest Territories. Check out the video.