

## SAFETY IN THE STRAITS:

# Line 5 operations and maintenance

The Straits of Mackinac is a special place, and that's why we take special precautions to continue the safe and reliable operation of Line 5 as it crosses under the Straits. Our robust operations and maintenance program is one of many protective measures that we use to help keep the Straits safe.

### What's involved in operating a pipeline?

It takes thousands of people dedicated to safety. It takes a deep understanding of the pipeline infrastructure, strict quality standards for the products we move, strict adherence to regulatory requirements, and thorough knowledge of operating pressure in order to preserve the pipeline's strength.

### What's involved in maintaining a pipeline?

A robust maintenance program goes hand-in-hand with responsible pipeline operation. It involves harnessing technology to advance our diagnostic strategies, and staying on top of potential issues to ensure the optimal fitness of our pipelines.

### How is Line 5 operated and maintained?

Line 5 operates at less than 25 percent of its maximum pressure capacity, which minimizes stress on the heavy-walled, carbon-steel pipe – while also enhancing safety.

### What about the products Line 5 carries?

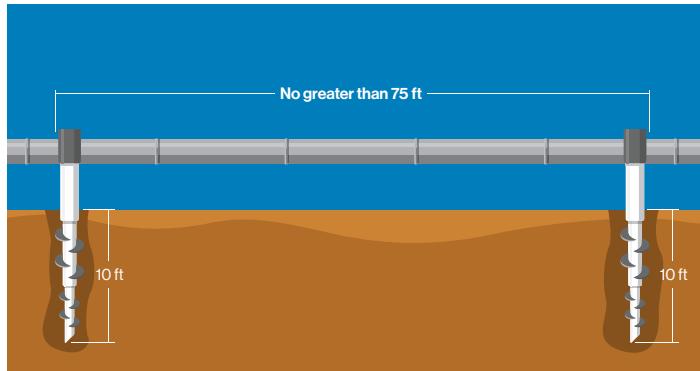
Line 5 carries light oil and natural gas liquids (NGLs) including propane. Every batch of oil that enters our pipeline network has to meet stringent quality standards – for viscosity, density, temperature, and other factors – that are strictly enforced. We also treat the oil we carry in our pipelines to kill any corrosion-inducing microorganisms. Line 5 does not carry heavy oil.

## Bolstering its support system

Since 2002, Enbridge has used a screw anchor support system to secure the twin pipelines running along the bottom of the Straits. These 10-foot-long steel screws are augered into the lakebed on either side of the parallel lines, and hold a steel saddle that permanently supports the lines.

In that time, Enbridge has installed 181 supports for Line 5 at the bottom of the Straits, with plans to install 20 more throughout 2020.

These anchor supports have performed well in enhancing the safety of the line, and are part of Enbridge's ongoing maintenance of Line 5.



► Enbridge has installed 181 supports for Line 5 at the bottom of the Straits, with plans to install 20 more throughout 2020. Our easement agreement with the State of Michigan requires supports to be placed no more than 75 feet apart.

## Low-pressure operation

Line 5 operates at less than 25 percent of its maximum pressure capacity. This preserves the strength of the heavy-walled, carbon-steel pipe that forms Line 5, while also enhancing safety.

To use an analogy from Michigan's auto industry, consider this operation akin to taking care of a well-manufactured car by running the engine at low RPMs.

## Keeping the Straits safe

Enbridge understands how important the Straits of Mackinac are to Michigan residents. The health and protection of this waterway, and the Great Lakes, are essential to the vitality, sustainability, and economic prosperity of the region – and the state of Michigan.

That's why we've developed a suite of protective measures to help keep the Straits safe. Our robust operations and maintenance program is just one of those measures.



► An anchor-screw is prepared for installation on Line 5