



SAFETY IN THE STRAITS: Line 5 inspections

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 proactive inspection program is one of many protective measures that we use to help keep the Straits safe.

What is your proactive inspection program?

We regularly examine our entire pipeline system from the inside out – and the Line 5 Straits crossing is the most inspected segment of pipe in our entire North American network.

How do you inspect the inside of the pipe?

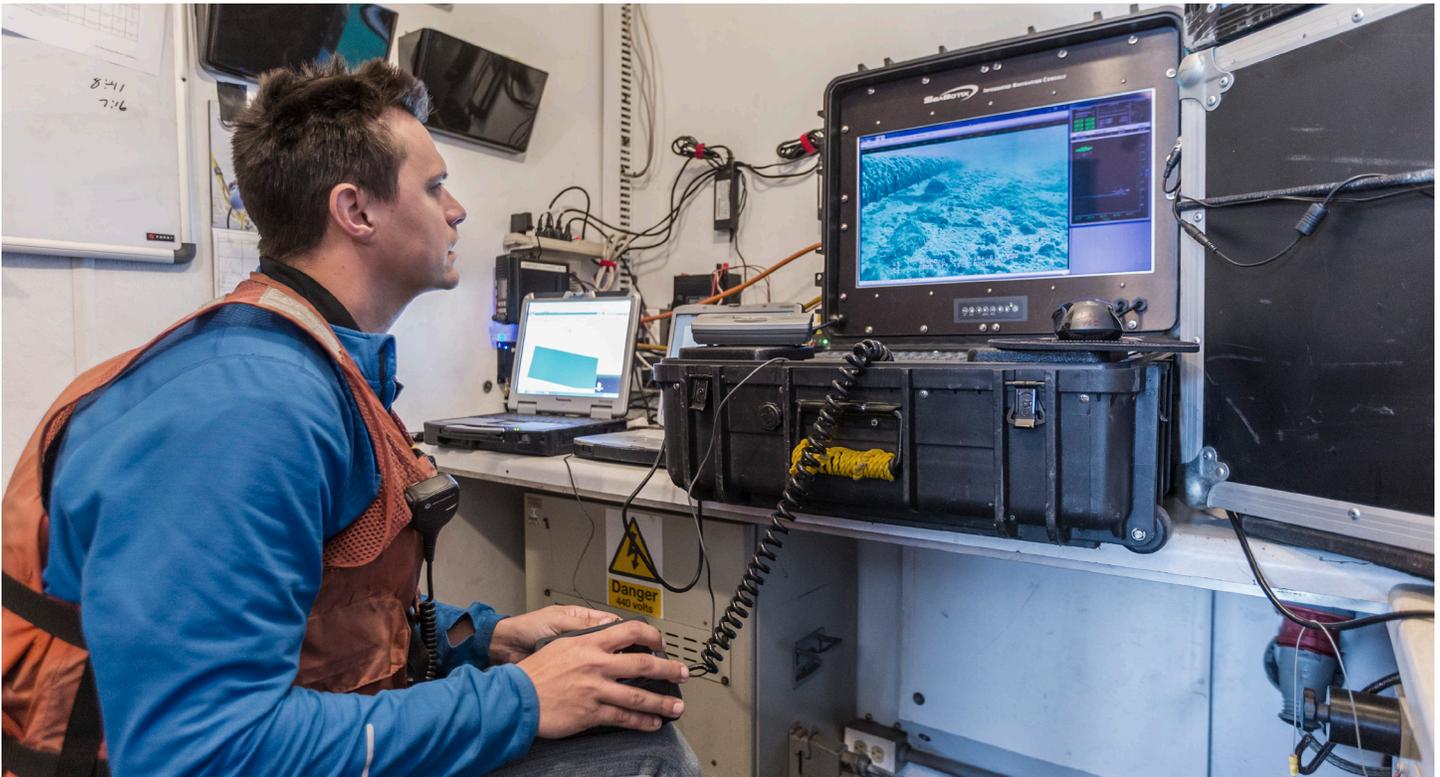
We use inline inspection tools which run through the pipe and examine it from the inside, inch by inch. These tools will alert us to any pipeline features that may require further analysis or maintenance.

What about the outside?

Using expert divers, Remote Operating Vehicles (ROVs), and an Automated Underwater Vehicle (AUV) that maps the bottom of the Straits, we keep a close eye on the pipe and its immediate environment.

How often do you inspect the pipe?

At the Line 5 Straits crossing, we thoroughly evaluate the pipe's interior every five years. In addition, visual inspections of the exterior of the pipe, using a diver and/or remote operated vehicle (ROV), occur every two years – twice as often as federal regulations require.



➤ A Remote Operated Vehicle (ROV) examines the lines beneath the Straits.

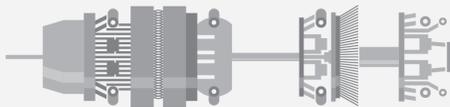
Keeping the Straits safe

Enbridge understands how important the Straits of Mackinac are to Michigan residents. The health and the 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 inspection program is just one of those measures – allowing us to monitor the fitness of our pipelines from both the inside and the outside, with regular inspections that exceed regulatory requirements.

Interior inspections

Our sophisticated inline inspection tools use imaging technology, with a level of detail similar to that of MRIs, ultrasound and X-ray technology in the medical industry, to scan our pipelines on an inch-by-inch basis.



- We conduct some of our in line inspections using highly specialized "smart pigs" that employ either ultrasound technology to detect crack-like features, or Magnetic Flux Leakage (MFL) technology to detect metal loss features that could be corrosion. These tools are similar to MRI machines, and help us determine whether or not further investigation, or preventative maintenance work, is required.

Exterior inspections

We regularly inspect the Line 5 Straits of Mackinac crossing using expert divers who examine and report on the condition of the Line 5 crossing and its underwater supports.

We also use ROVs to examine the twin lines as they travel under the Straits. These inspections offer a thorough examination of the pipe's exterior and its immediate environment. We carry out external inspections of the Line 5 Straits crossing every two years – twice as often as federal regulations require.

We've also partnered with Michigan Technological University to test and enhance an Autonomous Underwater Vehicle (AUV) that maps the bottom of the Straits near the Line 5 crossing – and will help complement and validate the information gathered by the ROVs.

What is Line 5?

Enbridge's Line 5 is a 645-mile, 30-inch-diameter pipeline that travels through Michigan's Upper and Lower Peninsulas, originating in Superior, Wisconsin, and terminating in Sarnia, Ontario, Canada.

Products moved on Line 5 heat homes and businesses, fuel vehicles, and power industry in the state of Michigan.

Built in 1953 by the Bechtel Corporation to meet extraordinary design and construction standards, the Line 5 Straits of Mackinac crossing remains in excellent condition, and has never experienced a leak in more than 60 years of operation. We're working hard to keep it that way.