



# Maintenance digs

A critical component in preventing pipeline incidents

**Our goal at Enbridge is, and will always be, the prevention of all incidents. Prevention is a key element of our multi-pronged approach to pipeline and facility safety—and preventative maintenance digs are a critical component of our prevention program.**

# 873

In 2019, we conducted 873 preventative maintenance digs across our crude oil pipeline infrastructure.

This ongoing preventative maintenance program is the most extensive in the history of the North American pipeline industry.

In the four-year period from 2016 through 2019, we spent C\$5.6 billion on programs that help us to maintain the fitness of our pipeline infrastructure across North America.

## **Why is a maintenance dig initiated?**

Ultra-high-tech inspection tools monitor both the interior and exterior of our pipes. When data from these inspections indicate a change, or anomaly, that requires a closer look, we undertake a maintenance dig to physically examine the integrity of the pipe segment and determine if a repair or other action is needed. Anomalies that have been known to require repair in the past include damage from third party excavation, corrosion, cracking or denting.

## **What happens during a maintenance dig and how long does it take?**

See the reverse of this fact sheet for a step-by-step depiction of the maintenance dig process. Depending on the results of the physical inspection, a maintenance dig can take from two days to two weeks to complete.

## **If a maintenance dig is required, what will the community see?**

Communities can expect to see construction activities and additional traffic on local roads as we stage equipment and resources to support the maintenance dig. Traffic plans and appropriate signage will be in place if needed.

## **How do you notify landowners of a maintenance dig?**

An Enbridge representative will seek to contact the landowner a minimum of

seven days in advance of any work being conducted. We'll then work with the landowner to arrange for land access, discuss estimated compensation for potential impacts, determine a preferred work schedule, review environmental and safety considerations, provide Enbridge contact information, address other questions and property-specific concerns. In certain areas, temporary workspace next to the permanent easement may be required for equipment or soil storage. If so, Enbridge will discuss arrangements with the landowner in advance of work activities. Our goal is to return all lands back to their original state once work is completed. In situations where the pipeline requires immediate attention—and attempts to contact landowners in advance are unsuccessful—access and work will proceed in order to minimize potential hazards.

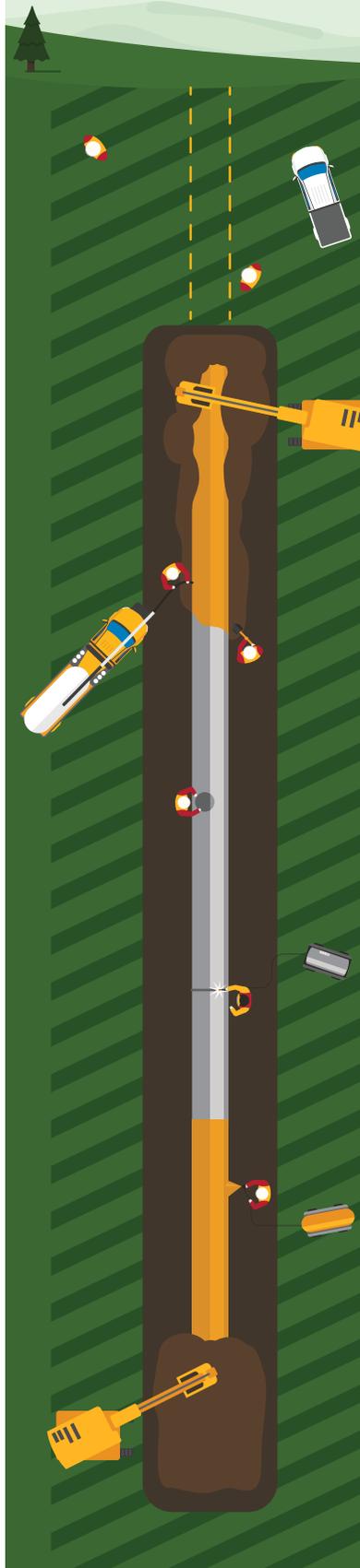
## **How does Enbridge protect the environment?**

We conduct an environmental assessment on all dig locations prior to starting work and develop measures to minimize or eliminate environmental impact. An assessment is also completed one year after site reclamation, to ensure the land has been returned to its original condition.

# The Seven Steps of a Maintenance Dig

Sophisticated inspection tools monitor both the interior and exterior of our pipes. When data from these inspections indicate a change, or anomaly, that requires a closer look, we undertake a preventative maintenance dig to physically examine the integrity of the pipe segment and determine if a repair or other action is needed.

Here are the steps involved in this critical maintenance process:



1

## Marking the dig site

Temporary markers identify the access route and location of the excavation. The area is stripped of topsoil, which is stored separately from the subsoil.



2

## Excavation

Using machinery such as a backhoe, the subsoil surrounding the pipeline is carefully removed and stored.



3

## Cleaning and coating removal

A crew cleans the pipe and removes its protective coating to prepare for a detailed visual inspection.



4

## Inspection

Qualified technicians inspect the pipe to determine if repairs are required.



5

## Maintenance and repair

If needed, repairs are made to the exposed section of pipe. These range from cleaning, to halt early signs of corrosion, to replacing sections of pipe. Once this work is complete, welds are tested and the section inspected to ensure repairs meet government and industry standards.



6

## Recoating

Once the pipe is repaired, it is recoated to protect against corrosion from water and soil.



7

## Backfill and cleanup

The excavation is backfilled and the affected landscape restored. Depending on the time of year the work is completed, restoration may have to wait. The site will be monitored for about one year after project completion and additional remediation may be performed to ensure the landscape is fully restored.

