

70 YEARS STRONG

Ensuring Safe and Reliable Pipeline Operations

This fall we're celebrating an important milestone: 2023 marks seven decades of safe and reliable operations of the Trans Mountain pipeline system.

During 70 years of operations, we've developed and evolved a mature suite of programs that maximize pipeline safety and focus on protecting the safety of the public, the environment, our employees and the communities where we operate. These include 24/7 monitoring and leak detection from our control center, corrosion protection, inline inspections, leak detection, right-of-way patrols and emergency preparedness.



24/7 Monitoring and Leak Detection

The Trans Mountain Control Center monitors the pipeline around the clock using the Supervisory Control and Data Acquisition (SCADA) and Leak Detection Systems.

These systems monitor the pipeline continuously for changes in operating parameters that would indicate a possible leak.

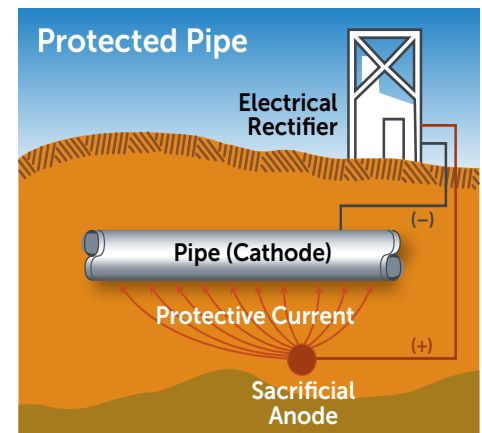
The SCADA system monitors the pipeline's flow rate, pressure, temperature and product density. The Leak Detection System then compares the parameters to an idealized flow model, looking for any deviations from the norm that would point to an issue. If a deviation is detected, it triggers an alert to Control Center operators who take steps to investigate and, if required, to shut down the pipeline.



Corrosion Protection

Throughout its lifespan, a steel transmission pipeline buried in the soil is exposed to oxygen and water. Without protective measures the pipe will corrode and weaken as the metal surface deteriorates.

Trans Mountain takes the necessary precautions to prevent corrosion in our infrastructure. All pipelines have corrosion-resistant external coating and are further protected with impressed current cathodic protection systems. Cathodic protection uses a piece of sacrificial metal, called a sacrificial anode, installed near the pipeline. When corrosion occurs, it is drawn towards the anode using an electrical rectifier and cables to keep the pipeline protected.



70 Years Strong: Ensuring Safe and Reliable Pipeline Operations, cont'd.



Inline Inspections

Internal inspection tools, also called smart pigs, are hi-tech devices inserted into the pipeline to identify any potential issues, such as gouges, dents or flaws in the metal. Inline inspections form the foundation of anomaly investigation and repair programs and are integral to the continued safe operation of the pipeline.



Integrity Digs

When necessary, the outcomes of an inline inspection are verified by an integrity dig, when a segment of pipe is dug up and examined using non-destructive testing techniques. If required, repairs are completed, the site is backfilled and restored to its original condition or better.

Integrity digs require careful planning and preparation, which may include environmental evaluations and permission from landowners, Indigenous communities and municipal officials.

Damage Prevention and Right-of-Way Patrols

The Pipeline Protection (PLP) team ensures the safety of people living and working near the Trans Mountain pipelines, and the protection of surrounding areas. PLP implements several effective controls to prevent damage incidents, identify hazards and proactively mitigate risks along our pipeline. These controls include right-of-way patrol, identifying and reporting unauthorized activities, One Call response, proximity (crossing) permits, ground disturbance standards, pipeline signage and land use monitoring.



Emergency Preparedness

The most critical and responsible emergency management strategy is incident prevention. However, should an incident occur, we are ready to respond promptly with detailed emergency procedures, response equipment and trained personnel.

We regularly update our emergency response plans, maintain and update response equipment and provide extensive personnel training, including tabletop exercises and field deployments.

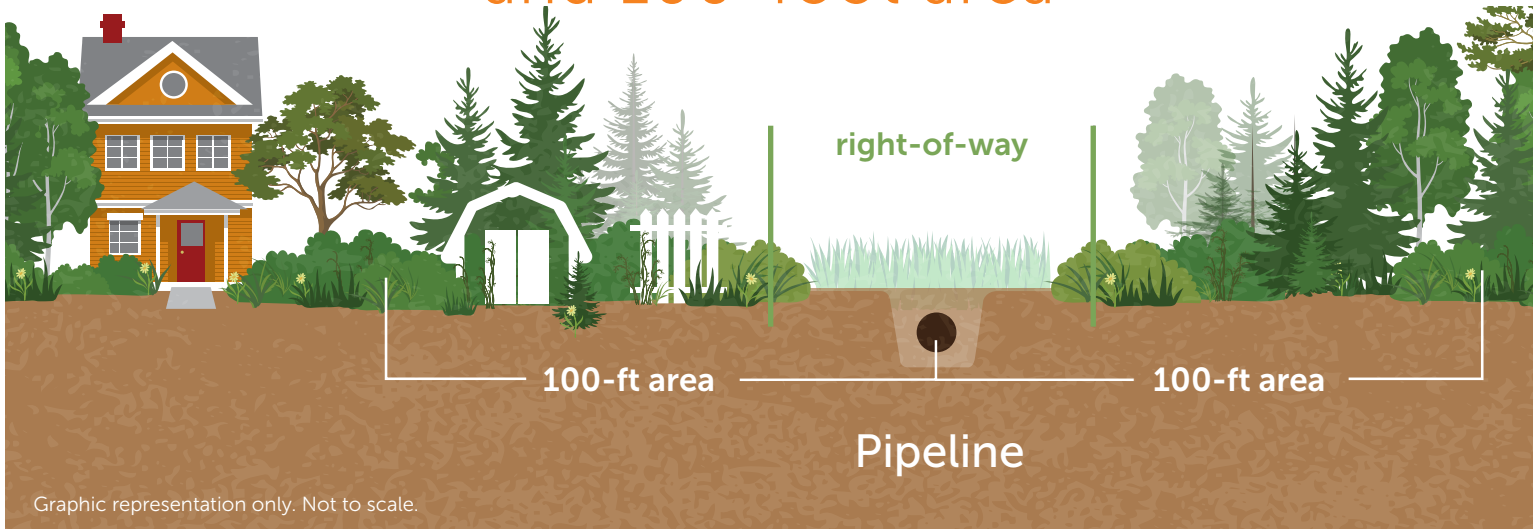
We are prepared for oil releases and other emergencies such as fire, security breaches and natural disasters, including earthquakes, floods, lightning strikes and avalanches. Trans Mountain has firefighting equipment and safeguards in place, including early fire detection system and foam piping on all floating roof tanks, fire pumps, a foam trailer, a large firewater reservoir, hoses, monitors and other equipment.



We continue to enhance our safety programs daily. As we expand the Trans Mountain pipeline system, we make sure enhancements and advances in pipeline technology are fully incorporated. We work with Indigenous communities, landowners, contractors, emergency responders, elected government officials and government employees to ensure the ongoing safe operation of our pipelines and facilities – and if an emergency arises, we're ready to respond rapidly and effectively.

More information can be found at transmountain.com/pipeline-safety.

Pipeline Right-of-Way and 100-foot area



All work within the 100-foot area must be verified by a Trans Mountain inspector and requires a 100-foot permit.

At the planning stage, contact 811 to complete a One Call notification. If your planned activity is near our pipeline, a Trans Mountain representative will contact you within two business days to discuss next steps and, if necessary, arrange a site visit to mark the pipeline.

811 will require information, such as the planned start date of ground disturbance, an overview of your plans, how deep you'll be disturbing the ground, location of work and the duration. The details provided to 811 will be incorporated into the 100-foot permit issued for your proposed work, should a permit be required. If the job scope changes, work should stop and a new One Call placed with an updated job scope.

Any approved work undertaken within 25 feet of the pipe requires one of our Pipeline Protection Inspectors to be on-site to ensure the safety of our pipelines. Our inspectors have the authority to stop any work that may pose an imminent danger to the pipeline.



For everyone's safety, we don't allow certain activities on the right-of-way.

These include but are not limited to:

- Constructing buildings, foundation walls, decks, concrete patios or sheds
- Installing any type of swimming pools or hot tubs
- Using explosives
- Burning waste material
- Storing flammable materials, equipment or bulk goods
- Parking vehicles or RVs on the right-of-way
- Growing or planting large vegetation or trees – for more information about landscaping near our pipeline, please visit our website at transmountain.com/landscaping-guidelines

The mature growth of vegetation on the right-of-way must not exceed three feet within 10 feet of the pipeline and six feet of the remaining portions of the right-of-way.



Damage Prevention is a Shared Responsibility:



Call 811 or Click Before You Dig

digsafewa.com

Conducting Emergency Works

If you need to conduct urgent emergency works involving ground disturbance, always remember to contact your local One Call service and request an emergency locate. Your call will be prioritized accordingly. For normal activities, please be sure to place a regular One Call ticket at least two days in advance of starting work.

Emergency works may include:

- Digging new drainage ditches or cleaning existing ditches
- Dewatering saturated areas or standing water locations
- Trenching, excavation, roadwork, earthwork
- Property cleanup, such as debris removal
- Repairing or building new facilities (e.g., decks, sheds, fences)
- Buried infrastructure repairs or replacement (e.g., water, sewer, irrigation or service lines)



Urban Right-of-Way



Help Keep Our Energy Infrastructure Safe

Report any unusual or suspicious activity near the pipeline right-of-way, including vandalism or abandoned packages, by calling 911 or your local enforcement agency.

Reporting Petroleum Odors

If you live near one of our facilities, you may occasionally smell petroleum odors, which can come from normal operations or routine maintenance. Odors can also indicate a pipeline emergency.