

The Costs of Underground Infrastructure Damages

In a dense urban neighbourhood, an excavator makes a rash decision to perform a 30-m bore shot without obtaining locates, which results in an 8-in. natural gas line puncture.

This poor decision sets off a cascade of events. The loud hissing sound signals the release of gas into the air. Fire, rescue and police services are alerted. Traffic is diverted to avoid potential danger, snarling traffic for both the morning and evening rush hours. Local businesses are shutdown; schools and households are evacuated. Electricity in the area is immediately cut off. The Technical Standards and Safety Authority (TSSA) and natural gas facility personnel quickly arrive onsite to assess the damage. Ontario One Call is notified and dispatches an emergency locate. Gas crews are brought in to cap the leak. And before they can return, homeowners and businesses must have their gas appliances relit.

Underground infrastructure damages, as described in the scenario above, have societal costs that go well beyond the direct cost of repairs.

Direct costs arise from repairing the damage and are related to the:

- Costs of replacement materials used;
- Costs of materials used;
- Labour costs; and,
- Administrative costs needed to rehabilitate the damaged infrastructures.

Indirect costs arise from the damage and its economic assessment of all resulting disruptions. They are varied and can cover a wide range of areas, such as:

- Service disruption following damages to infrastructures;
- Intervention of emergency services;
- Evacuating businesses and residential sectors;
- Risk of injury and death;
- Loss of product;
- Environmental impact;
- Economic impact on businesses and companies;
- Work delays;
- Administrative and legal costs;
- Negative impact for owner companies;
- Disturbances to neighbouring lands and infrastructures; and,
- Traffic disturbances.

In addition, there are direct and indirect costs that are related to employees, such as:

- Noncompliance fines and penalties;
- Reputation of company hurt by bad publicity;
- Poor morale and reduced productivity, particularly after an incident;
- Poor employee retention leading to increased new hires, onboarding, and training costs; and,
- Employee sick leaves and increased volume of illnesses and injuries.

Investing and participating in underground infrastructure damage prevention can reduce the cost of doing business and build a healthy bottom line for all underground infrastructure stakeholders.

Dig Safe Month

The Ontario Regional Common Ground Alliance (ORCGA) and its members have designated April as Dig Safe Month in Ontario. This month is dedicated to raising awareness of safe digging practices across the province to improve safety and reduce damages to underground infrastructure.

Dig Safe Month is designed to coincide with the unofficial start of spring digging season and to serve as a reminder to homeowners and contractors that they need to call or click before they start digging. Ensuring the safety of those who work or live in the vicinity of underground facilities and protecting vital services is everyone's responsibility.