

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. 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. Homeowners and businesses have their gas appliances relit before being allowed to return.

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
- 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
- Traffic disturbances.

Indirect costs are difficult to quantify and rarely considered when making decisions related to excavation work or damage prevention.

For this reason, the Canadian Common Ground Alliance commissioned the Centre for Interuniversity Research and Analysis of Organizations (CIRANO), to develop a societal cost formula and tool. When applied to DIRT Report data, this formula would provide a defensible estimate of the costs society bears in relation to damaged underground infrastructure.

The ORCGA Reporting and Evaluating Committee will begin to utilize the data extracted from the CIRANO tool to highlight Ontario issues for the 2017 DIRT Report.

	2015	2016	2017
Reported Damages	4695	4597	5149
Reported Outage reported	119	114	65
Socio-Economic Cost	\$747,844,718	\$618,986,353	\$666,030,845
% of Damages with Outages	2.5%	2.5%	1.3%

If you are interested in the methodology, please refer to the study titled:

“A Socio-Economic Cost Assessment Regarding Damages to Underground Infrastructures”, found here:

<https://orcga.com/publications/dirt-report/>