

# National Report on Damage to Underground Infrastructure

## DAMAGE PREVENTION SYMPOSIUM



### Highlights 2014, 2015 and 2016

The Common Ground Alliance (CGA) created the Damage Information Reporting Tool (DIRT) in 2003 to document damages to underground infrastructure. Six Canadian regions currently report damages to the CCGA's Damage Reporting and Evaluation Committee.

### INTERPRETING THE DATA

This report contains preliminary findings for 2016. A comprehensive report will be published online in October.

- Reporting in DIRT is voluntary; therefore, the data analyzed is not representative of all damages that have occurred.
- Percentages are calculated on totals of reported damages omitting data where the response was "not collected".

	Number of reported damages			Damages per business day*			Population 2016**	Damages per 1,000 locate requests	Damages per 1,000 notifications
	2014	2015	2016	2014	2015	2016			
Alberta	2,934	2,645	4,356	12	10.4	17.1	4,252,900	10.8	2.7
Atlantic	-	21	17	-	0.8	.07	2,385,000	1.0	0.6
B.C.	1,315	1,131	1,270	5	4.5	5.0	4,751,600	7.0	1.6
Saskatchewan	682	788	632	3	3.1	2.4	1,150,600	4.8	1.6
Ontario	3,809	4,434	4,563	15	17.5	17.9	13,413,700	4.6	0.6
Quebec	1,198	1,088	1,151	5	4.8	4.5	8,326,100	5.0	2.2
<b>TOTAL</b>	<b>9,938</b>	<b>10,107</b>	<b>11,989</b>	<b>40</b>	<b>40</b>	<b>47</b>	<b>34,279,900</b>	<b>6.3</b>	<b>1.0</b>

\* 254 business days per year \*\*Source: Statistics Canada

## 2016 AT A GLANCE

The number of reported damages across Canada increased in 2016. However, the CCGA attributes the escalation in reports to greater awareness of the benefits of the DIRT tool across all sectors.

As more stakeholders participate, the number of reports rises, moving the number of reports closer to a more accurate reflection of the actual number of damages. There are still only a fraction of the damages occurring being reported in DIRT.

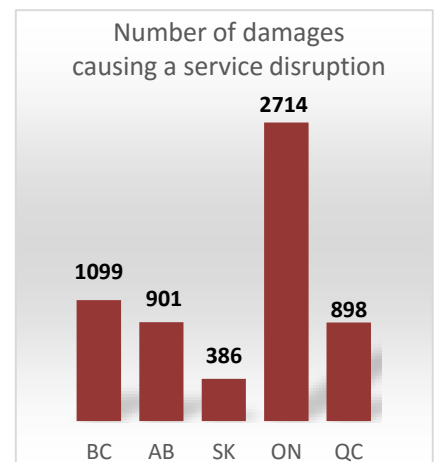
The ratio of the number of damages per 1,000 notifications can be compared between the reporting provinces. The reference criteria used for the comparison illustrates, for example, that while the number of damages are higher in Ontario, the ratio of damages to excavation activity is lower than that of other provinces.

## SOCIETAL COSTS IN CANADA WERE ESTIMATED AT \$975 MILLION.

Significant impact of damage to underground infrastructure relates to societal costs including, emergency response, evacuation, environmental contamination, down-time, interruption / loss of production and sales, and redirection of safety services such as 9-1-1.

In each case, Responders are deployed to the incident initiating a cost to the community tax base. CIRANO (Center For Interuniversity Research and Analysis for Organizations –

cirano.qc.ca/en) developed a cost-calculation tool for Info-Excavation. When applied to Canada-wide data, the result gives a conservative estimate of the annual cost of damages to underground infrastructure. The societal costs are likely much higher when we consider that not all damages are reported into DIRT and likely are well in excess of 1 billion dollars.



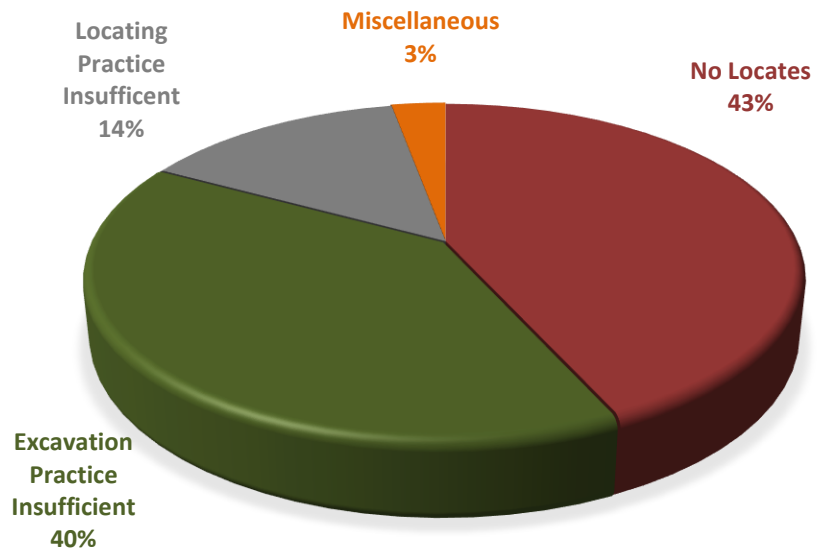
## 43% OF DAMAGES WERE THE RESULT OF NO LOCATES

Failure to request locates and insufficient information provided to the One Call Centre are the most common causes for damage to occur during excavation.

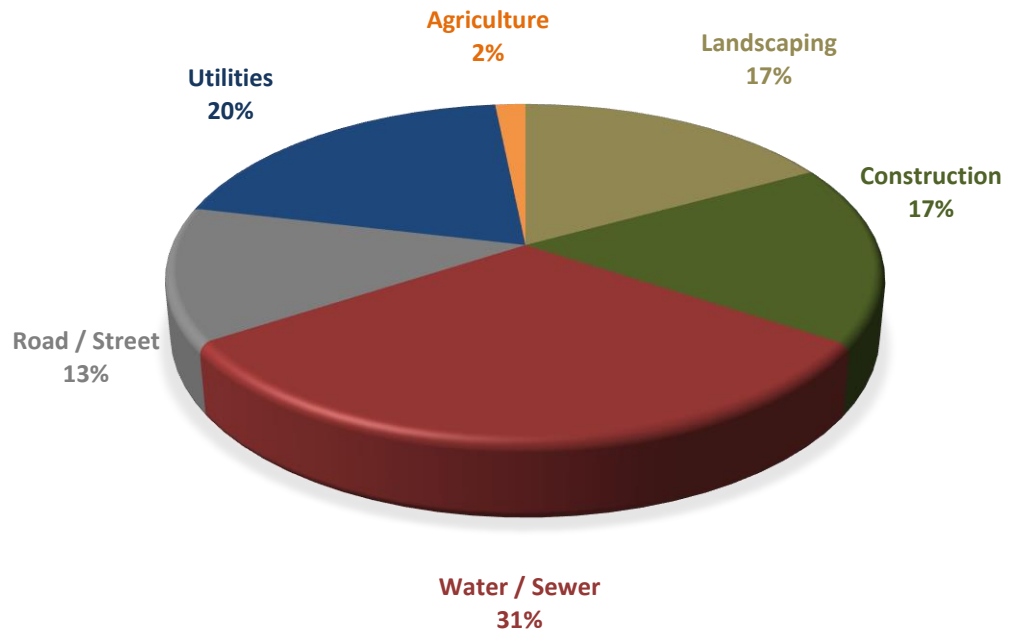
Both Alberta and Ontario reported significant increases in the number of reports where notification to the One Call Centre was insufficient or incorrect information was given to the One Call Centre. Further investigation is required to determine the reason for this change and whether it is a reporting change or the result of a procedural change.

Education of DIRT users continues to be a top priority to ensure consistent and accurate reporting in the Root Cause categories.

## ROOT CAUSE OF DAMAGES



## DAMAGE BY TYPE OF EXCAVATION



## 31% OF DAMAGES OCCUR DURING WATER/SEWER WORK

The most common type of excavation taking place when a damage occurs continues to be Water and Sewer Work. British Columbia reported a significant increase in Water and Sewer and decrease in Construction in this category in 2016. It is unclear if the change is due to an anomaly in how users are entering information into DIRT or a change in how damages are being classified. However, the 2016 reporting percentages do bring BC in line with the other provinces rather than being an outlier.

Backhoes and track hoes remain the excavation equipment most often used in all provinces when damage occurs (53% overall). Hand tools were the second highest most common equipment used when damage occurred (23%).

### Register with DIRT and Be Part of the Damage Prevention Solution

The Canadian Common Ground Alliance (CCGA) invites you to register with Regional Partner Virtual DIRT and report damages to Canada's buried infrastructure. Doing so will allow more thorough analysis and enable damage prevention and safety solutions that will benefit all Canadians

### THE MORE INFORMATION WE HAVE ON DAMAGES, THE MORE EFFECTIVELY WE CAN TARGET OUR DAMAGE PREVENTION EFFORTS.

Alberta: [cga-dirt.com/ab](http://cga-dirt.com/ab)  
 British Columbia: [cga-dirt.com/bc](http://cga-dirt.com/bc)  
 Ontario: [cga-dirt.com/orcga](http://cga-dirt.com/orcga)  
 Quebec: [cga-dirt.com/qcvpd](http://cga-dirt.com/qcvpd)  
 Saskatchewan: [www.cga-dirt.com/scga](http://www.cga-dirt.com/scga)