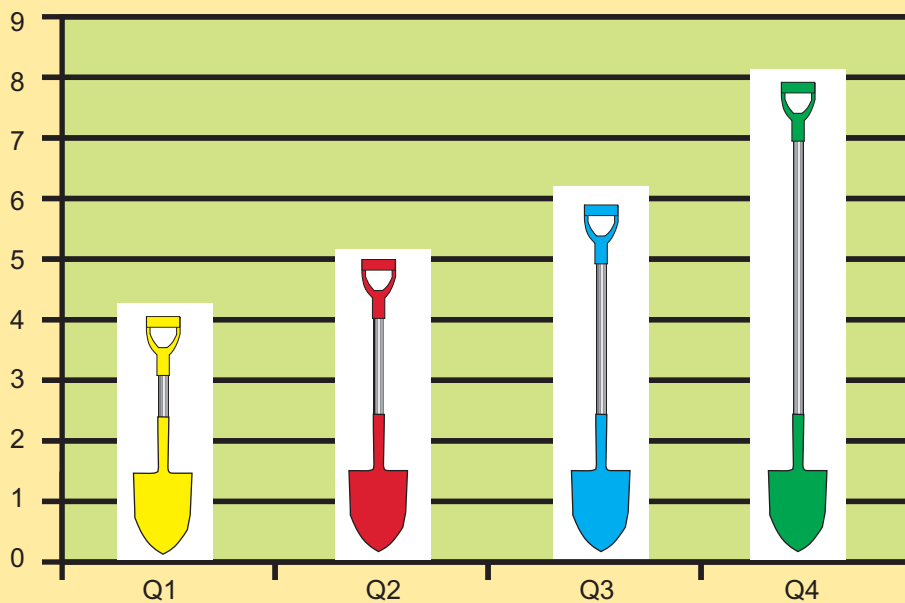




DAMAGE INFORMATION REPORTING TOOL 2008 REPORT ON DAMAGE DATA



PUBLISHED FEBRUARY, 2009

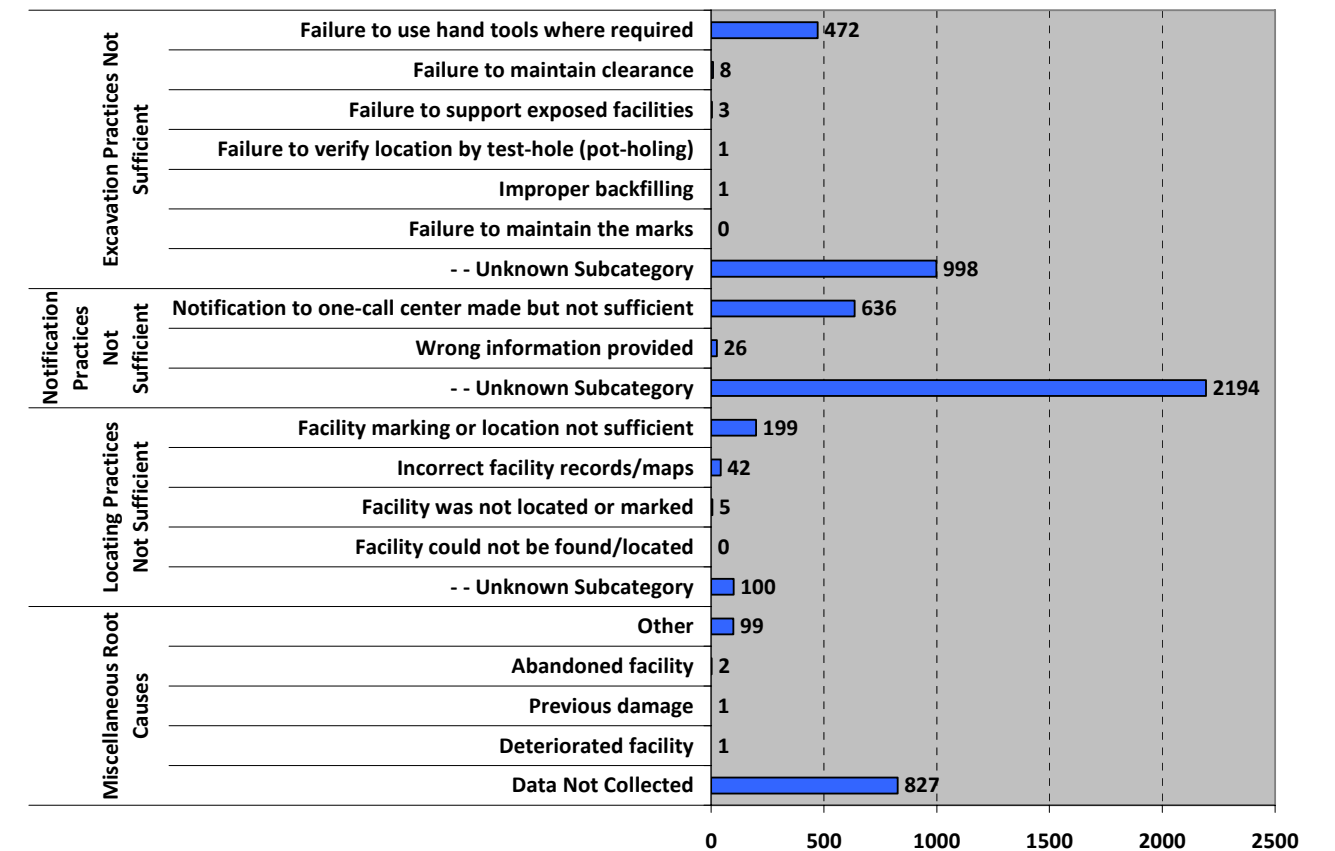
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Appendix A - Reporting & Evaluation Committee Members 2008

Member	Organization
Chris Flood	Bell (Co-chair)
Biké Balkanci	Enbridge Gas Distribution (Co-chair)
Cora Cheng	Enbridge Gas Distribution
Adrienne Clarke	AECON Utilities
Brad Gowan	G-Tel
John Harris	Union Gas Limited
Wendy Lebskin	ClaimsPro
Ian Mitchell	Hydro One Telecom
Dwight Reid	Technical Standards and Safety Authority
Bill Welch	Hydro One Networks
Amy Lafreniere	Garson Pipe Contractors
Scott Needs	Pioneer Construction
Christine May	Accu-Link Call Centres

Appendix B – Root Causes for 2008 Damages



Conclusions and Recommendations

In developing concluding statements on the 2005-2008 DIRT information, a corresponding set of recommendations is provided.

	Conclusion	Recommendation
1	Primary contributors of DIRT data were the natural gas, telecommunications and excavator stakeholder groups.	More wide-spread participation by other stakeholder groups is preferable. In as far as infrastructure owners are concerned; perhaps a "sign-off" list of facility owners can be created to better understand what infrastructure groups could be underreported.
2	Damage events decreased in the 2005-2008 study period.	Continue to monitor this trend.
3	No Locate Damages continue to represent 39% of all damages.	Continue efforts to promote Call Before You Dig and One Call Legislation to reduce this percentage.
4	DIRT data contributors continue to utilize the "catch all" categories for describing excavation, locating and notification practices when describing their damage events.	Additional training to data contributors, as well as in-field staff making the assessments of damage root cause so that the other specific categories of root cause are better utilized.
5	The Green Industry had the highest percentage of no-locate damages (70%) among all industry types. Occupants had the highest percentage of no-locate damages among all excavators (74%).	Improved engagement of the green industry (landscaping, fencing, irrigation and agriculture) and occupants (largely homeowners) through targeted programs or promotion of Call Before You Dig.
6	A large number of damages were caused by backhoe, and many of these were in situations where hand tools should have been used.	Greater training on the appropriate use of hand tools for digging and enforcement of this requirement where dictated by law.
7	There are 4 years of data present in DIRT, some of which may or may not be fully representative. However, trends are starting to emerge.	Continued review and analysis of DIRT information for longer time periods.
8	DIRT is somewhat limited in its description of damage events.	Aspects not well covered in DIRT include: <ul style="list-style-type: none"> • Number of damages occurring to service lines (private property) versus main lines (public right of ways) • Impact statements of occurring damages, e.g. Number of customers affected or dollar value of repair

Summary

The Common Ground Alliance developed the Damage Information Reporting Tool, which is an on-line database application used to capture information pertaining to underground infrastructure damage. In 2005, the tool was modified to accept information in Canadian provinces, and the Ontario Regional Common Ground Alliance (ORCGA) has promoted the use of DIRT among its stakeholders.

This report is the second annual DIRT damage report, which summarizes the information that has been submitted by ORCGA stakeholders for damage events occurring from 2005 through 2008.

Two positive trends in the data are 1) between 2007 and 2008 damage events have declined in this time period by 5.6%, and 2) requests for locates reported by Ontario One-Call have increased by 8.7%. Since 2005, damage events have declined by 23%.

Root causes of damages have been categorized by stakeholder group, but no-locate continues to be a primary root cause, attributed to almost 40% of all damages. The percent of no-locate damages continues to be highest in the homeowner/occupant group at 74% and lowest amongst utilities at 24%.

The ORCGA commits to on-going review and analysis of data as well as continued promotion of DIRT utilization among its stakeholders.

The ORCGA would like to acknowledge the work of our Reporting & Evaluation Committee Members in preparing this report, in particular the major contributions from Biké Balkanci, John Harris and Chris Flood.

In addition, we would like to recognize our editorial consultant, Tatjana Rmus for her outstanding work in preparing the entire report.

What is the ORCGA?

The Ontario Regional Common Ground Alliance (ORCGA) is a non-profit organization promoting efficient and effective damage prevention for Ontario's vital underground infrastructure. Through a unified approach and stakeholder consensus, the ORCGA fulfils its motto of "Working Together for a Safer Ontario".

We are a growing organization with over 265 organizations as active members and sponsors, and represent a wide cross section of stakeholders including:

Oil & Gas Distribution	Equipment & Suppliers	Landscape/Fencing
Transmission Pipeline	One-Call	Telecommunications
Road Builders	Insurance	Excavator
Safety Organization	Regulator	Municipal & Public Works
Homebuilder	Locator	Electrical Distribution
Engineering/Land Surveying	Railways	Electrical Transmission

For over a decade these stakeholder groups have been active in promoting "Call Before You Dig" and other good damage prevention practices individually, or through smaller separate organizations. In 2003, these groups amalgamated under the ORCGA name to provide a single voice representing the damage prevention community in the province. The ORCGA is a regional chapter of the Common Ground Alliance (CGA) based in Alexandria, Virginia, which was formed in 2000 to further damage prevention efforts in North America.

The ORCGA welcomes comments and new members on its various committees. In order to submit a suggestion, or to join a meeting, please visit www.orcga.com to learn about the scope of the various committees. General inquiries about the ORCGA can be made at:

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Email: orcga@cogeco.ca

To learn more about ORCGA visit: www.orcga.com, and to learn more about the CGA, visit: www.commongroundalliance.com.

ORCGA Activities

Throughout 2008 the ORCGA has been active in its efforts to spread damage prevention communications, conduct outreach with industry, and coordinate damage prevention training. The following are highlights from some of the significant efforts undertaken through the course of 2008, which are also supportive to the recommendations made in the 2007 DIRT report.

DIRT Training

Within 2008, the ORCGA conducted 2 Webinar training sessions on the utilization of DIRT that had up to 40 participants. This effort was focused on providing greater understanding to those entities currently supplying DIRT with damage information, as well as encouraging new participation in the DIRT process.

Industry Outreach

In addition to the annual symposium, in 2008 the ORCGA conducted excavator awareness sessions that drew approximately 1,000 participants from across Ontario. The Alliance also hosted the first ever Locate Rodeo in Canada. This event which drew 80 participants and volunteers raised the importance of the role of the locator in damage prevention.

Industry Training

In 2007 the ORCGA launched its Damage Prevention Technician Training in conjunction with Humber College, and to date has graduated over 175 participants. To date, 75 have been certified as a Damage Prevention Technician, DPT. Over time it is expected that damages associated with faulty locating practices will be reduced even further.

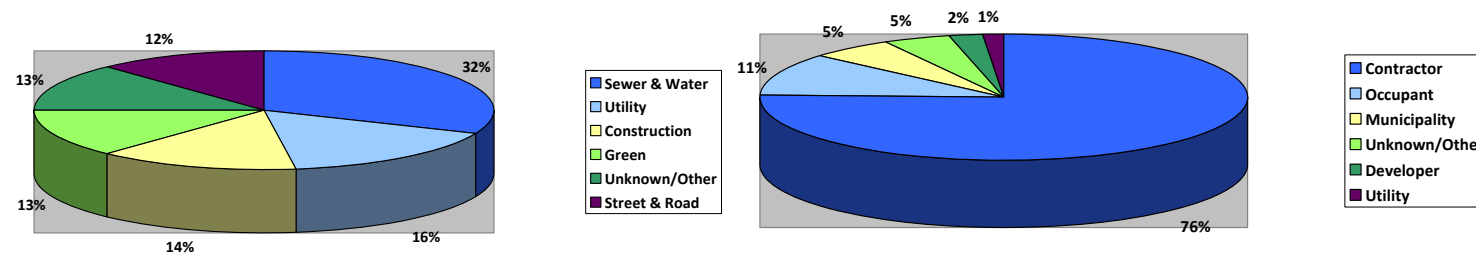
One-Call Legislation

The ORCGA continues to move forward with its support of legislation that would require underground facility owners to participate within a one call system for locate notifications.

Who Are the Heavy Hitters?

The following chart breaks down the types of work being completed for 2008 damage events.

Figure 10: Damages by Industry and Damages by Excavator Type (2008)



In addition to describing what percent of damages are attributable to industry and excavators, the two pie charts side by side provide a visual insight on the major role of contractors in industry.

The Green industry represents various types of excavation work for landscaping, fencing, irrigation and agriculture.

The Sewer & Water industry segment is the one accounting for the highest portion of damages, at 32%, and this has been consistent from 2005 through 2008. This segmentation has not varied substantially over the study period, with the exception that the Construction industry has gone from 5% to 14% of damages between 2005 and 2008. However, this corresponds to and is offset by a similar sized decrease in the Unknown/Other category, which has gone from 24% to 13% in the time period, which is an indicator of better classification practices by DIRT reporters.

Within each industry root causes were reviewed. No Locate continues to be the top reason for each of the industry segments varying from 24% for the Sewer and Water industry to 70% for the Green industry.

The second most prevalent root cause in the 2008 data after No Locate was Excavation Practices Not Sufficient, which is consistent with the 26% shown in Figure 8.

The Role of Equipment

In 2008, 67% of damage events occurred by backhoe, 18% by hand tools and 7% by drilling equipment, including boring and augering equipment. These percentages continue to be flat year over year in the study period. The root cause category “failure to use hand tools where required” (472 damages in 2008) is attributed to the high percentage of backhoe equipment damages, and is an improvement opportunity.

DIRT and the Role of the Reporting and Evaluation Committee

The Reporting and Evaluation Committee is one of four Committees of the ORCGA. This committee is responsible for the collection, development and management of damage information. A list of the members of the 2008 Reporting and Evaluation Committee is available in Appendix section of this report.

In 2003, the CGA developed DIRT, the Damage Information Reporting Tool, which is a secure web application designed to collect and report underground facility damage event information on a US and Canada-wide basis.

The objective of DIRT is to provide a resource to capture damage event information and to identify the root causes of events, with the underlying goal of reducing the number of events through public education, focused damage prevention programs and improved practices in industry.

For additional detail on the specifications of DIRT, or to use DIRT to report underground damages for your organization, visit: www.cga-dirt.com.

About This Report

Stakeholders throughout the US and Canada have voluntarily submitted facility events data into DIRT. An analysis of the data is available on a calendar year basis through www.cga-dirt.com.

This report pertains to that data submitted strictly within the province of Ontario, for the study period, calendar years 2005-2008.

This report provides a limited and high-level analysis of the 25,018 damage events that occurred in the study period. While many stakeholders did provide data, it should be noted that it is highly likely that there are damages not accounted for, and therefore the data herein can not represent 100% of events that actually occurred in Ontario in the study period.

It must be stressed that the data in DIRT is:

- Submitted by stakeholders voluntarily
- Reported on an aggregate basis
- Anonymous and confidential with respect to detailed events and identities of parties
- Not intended to be used for enforcement purposes or to determine liabilities

With this in mind, the ORCGA anticipates that stakeholders will utilize DIRT information to create positive transformation within their damage prevention efforts. The ORCGA also commits to continued promotion of DIRT utilization among stakeholders and an on-going review of the data submitted by contributors.

Damage Findings, Year Ending 2008

Who Submitted Data?

Understanding where the DIRT data comes from is the key to providing the context for data analysis. As data submission is voluntary, and the majority of data is being provided by the natural gas, telecommunications and excavator groups, it is reasonable to surmise that the entire population of damage events in Ontario is not being captured within DIRT.

The following chart demonstrates the number of damage events that were submitted by these stakeholders for the study period.

Figure 1: Damage Events Submitted by Stakeholder Groups, 2006-2008

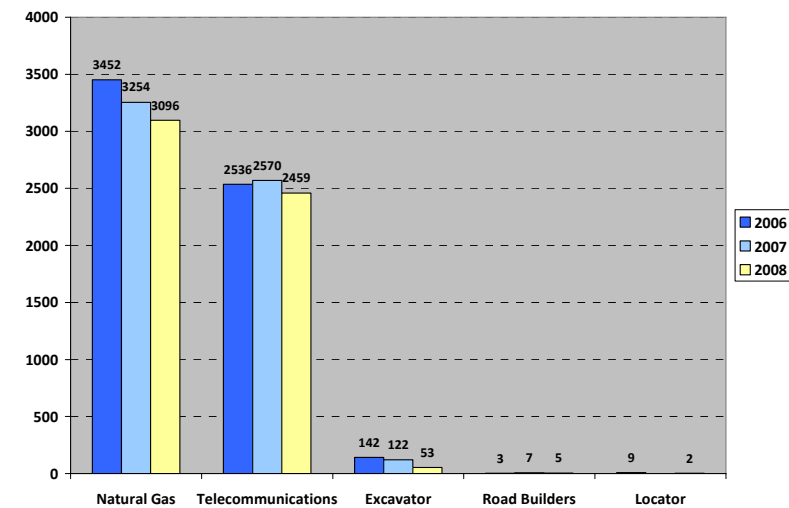
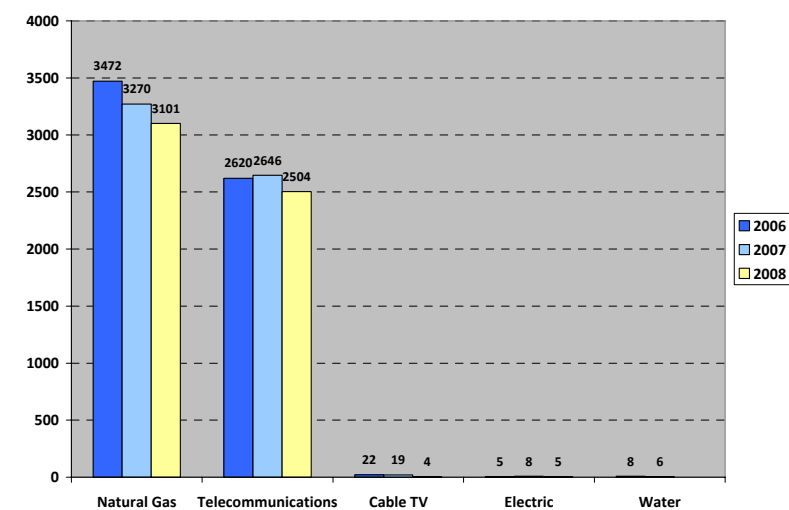


Figure 2, Damages by Facility Type, demonstrates what facilities were damaged in the study period, but it should be noted again that these may or may not represent the actual number of damages occurring to all the facility types listed.

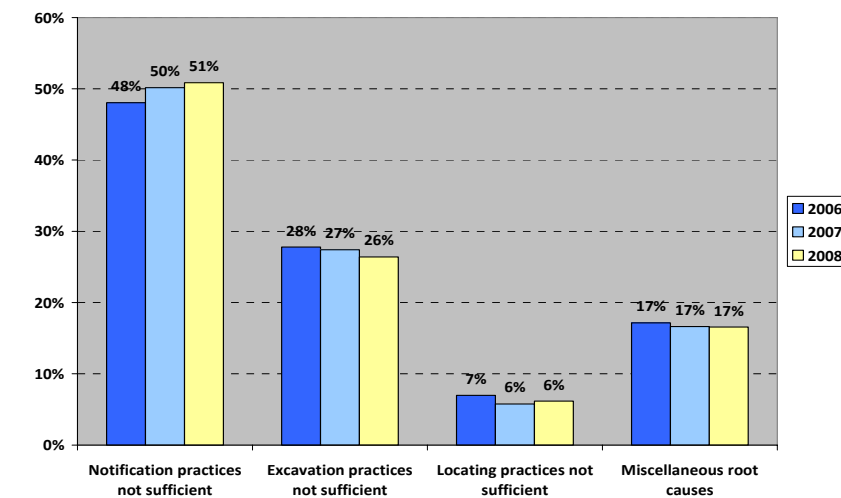
Figure 2: Damages by Facility Type 2006-2008



Damages Resulting from Other Root Causes

DIRT captures approximately 20 different root cause entries for damage events, as demonstrated in Appendix B. To simplify the analysis, the root cause types have been aggregated into groups as per the following chart.

Figure 9: Aggregate Root Causes for 2008



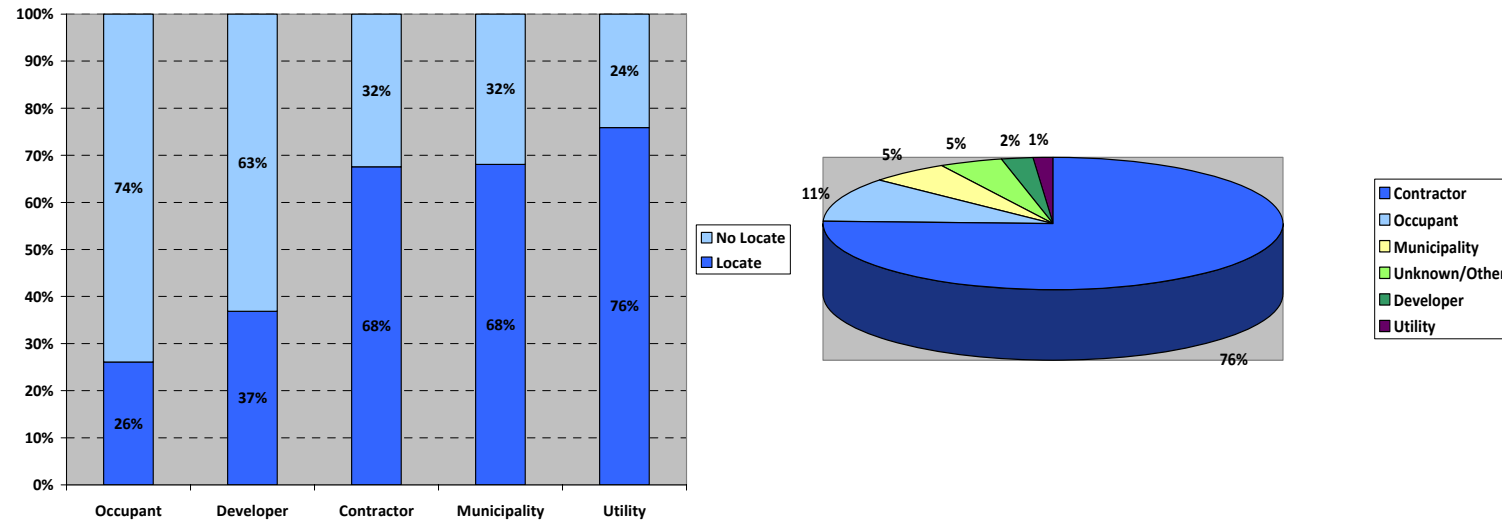
“Excavation practices not sufficient” grouping represents a broad set of excavation-based root cause categories. Within this category, “Failure to use hand tools where required” had a sizeable number of events, at 472 events. Another sizeable subcategory with 998 events was the “Unknown” subcategory which is used when the reporter did not define what specifically the excavation issue was. Overall, the excavation category had a small 2% decline between 2006 to 2008.

Through 2006-2008, the Locating and Notification practices categories had fairly flat trends. Approximately 12% of the Locating root cause grouping were issues associated with infrastructure records, and the remaining percentage associated with issues of the locate itself. Changes in the locating industry, such as more rigour in locator training programs could potentially improve the numbers of damages in this category.

“Notification practices not sufficient” includes those damages for which no locate was requested, but also includes an “Unknown” category that appears to be utilized by data contributors as another “catch all” category. The “Miscellaneous” category is largely damage events where root cause data was not collected, representing just under a thousand damage events.

Over time, DIRT reporting becomes more widespread and data reporters become more familiar with DIRT input screens, it is anticipated that the miscellaneous categories should decrease in the volume of events and that data reporters will provide more definitive descriptions of root causes.

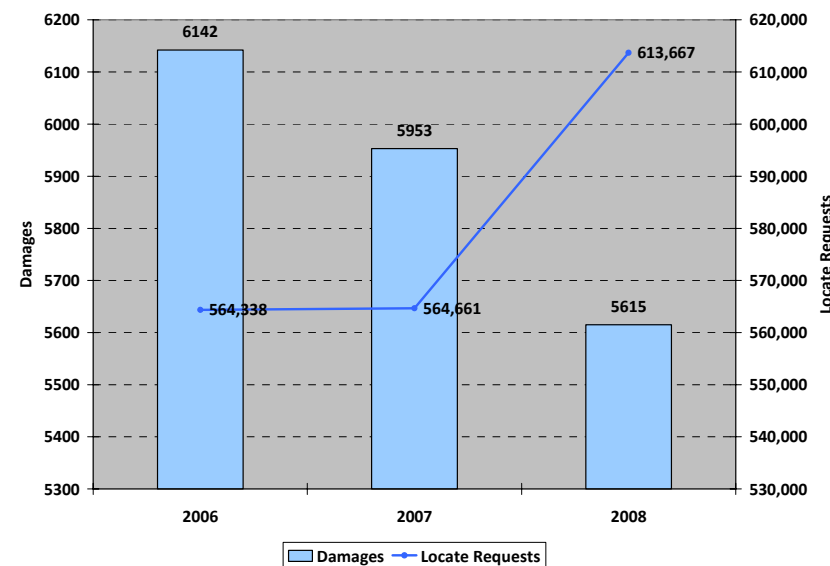
Figure 7: Locate vs. No-Locate Damages and Total Events by Excavator Type (2008)



By contrast, no-locate damages represented 74 % and 63% for the Occupant and Developer excavator groups, respectively. Particularly with Occupants representing 11% of damages, it continues to be necessary to reinforce the “Call Before You Dig” message to the community at large.

The locate request trend however, showed a surprising increase in the last year, as seen in figure 7 that follows. Locate requests, as reported by Ontario One Call, increased by 8.7% between 2007 and 2008. Given the flat trend between 2006 and 2007 however, it is unclear as to the impact of other drivers on the 2008 number. Ontario One Call points to the aggressive marketing campaign launched in 2007 and continued through 2008 as the major factor in driving up the request for locates in 2008.

Figure 8: Damages and Ontario One Call Locate Requests 2006-2008



Comparing the ORCGA data versus the CGA-wide data, there is consistency demonstrated in that Natural Gas facility operation accounted for the largest portion of events submitted.¹

Figure 3, below compares the change in percentage that natural gas and telecommunications damages comprise of total damages in 2005 and 2007.

Figure 3: Comparison of ORCGA and CGA Damages percentages 2005 and 2007

Percent of Total Damages	ORCGA		CGA	
	2005	2007	2005	2007
Natural Gas	52%	54%	65%	48%
Telecommunications	46%	45%	20%	38%
Other Facilities	2%	1%	15%	16%

In 2005, the Natural Gas industry submitted 52% of the ORCGA DIRT data, and CGA-wide, this number was 65%. ORCGA's Natural Gas events for 2005, 3825 events, constitute 11% of the 33,393 events reported by the CGA.

The Telecommunications facility events represent 46% of the ORCGA's 2005 events, but only 20% for the CGA. It is possible that in Ontario, the Telecommunications category may contain some Cable TV events, as there is a convergence of these two types of facilities in the industry as well as new companies emerging and installing facilities. Also, the disparity is an indicator that other facility types (ie. Electric, water, etc), could be largely under-reported in Ontario.

The change in mix of damages within the CGA portfolio between 2005 and 2007 demonstrates the additional efforts to enlist the participation of the Telecommunication industry in DIRT.

Emerging Trends

Figure 4 demonstrates the total damages reported by end of calendar year and shows a decrease in the time period, which is a 23% decrease.

Figure 5 demonstrates the seasonality of damages reported, with events peaking in the summer months, consistent with the construction season in Ontario.

¹ The 2008 CGA DIRT report on 2007 damages published by the CGA

Figure 4: Cumulative Damages 2005-2008

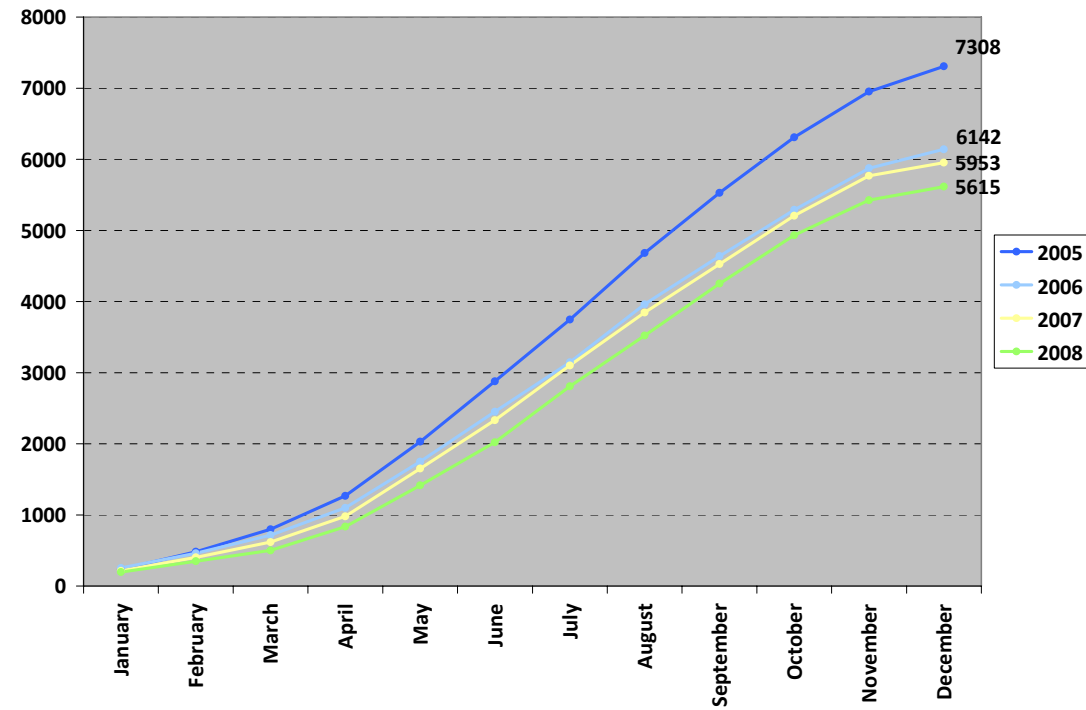
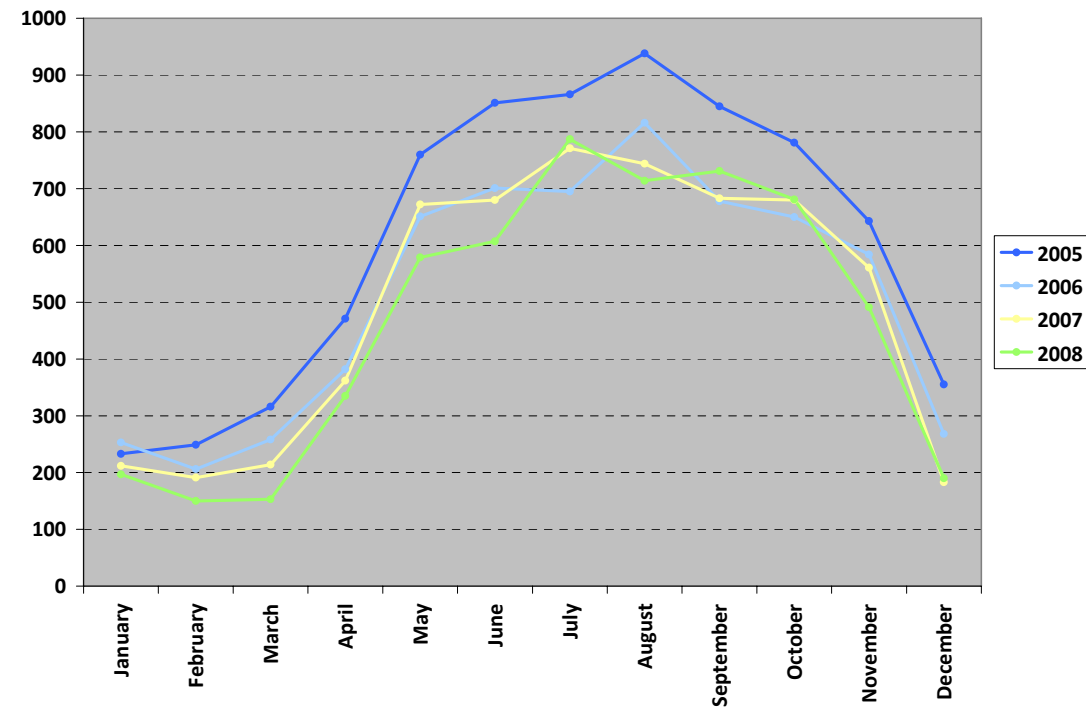


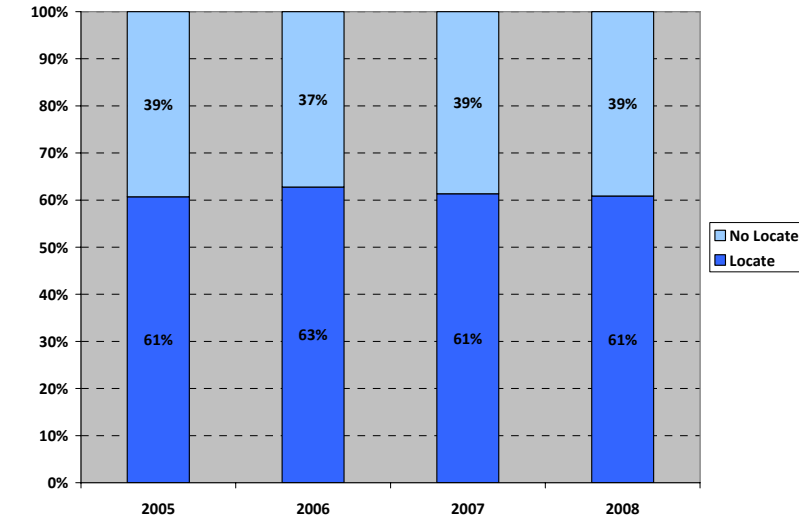
Figure 5: Facility Damages by Month 2005-2008



Damages Due to No Locate

At a high level view, the percent of damages reported where no locate had been requested has been flat during the study period, with non-located damages being 37-39% of the damages reported. However, a deeper look into the no-locate damages by excavator type reveals some differences among the excavator types.

Figure 6: Locate vs. No-Locate Damages 2005-2008



The following demonstrates the breakout of non-located damages for various excavator types for the 2008 calendar year. The contractor, utility and municipality excavator types are at below the 39% “2008 system average” for damages without locates, and these groups represent 82% of damage events (76% contractor, 5% municipality, 1% utility).

Despite better than average performance of these groups, these are industries that should be targeting a zero no-locate percentage, especially since these groups are responsible for 82% of the damage events (Contractors highest at 76%). These groups need to strive to be the best players in the industry. Digging is a fundamental part of the work that these entities conduct, and as such there really should be few to no damages resulting from a no-locate situation. These groups are encouraged to improve their performance.