Third-Party Excavation Damage – November 2, 2017

New Orleans, LA

Pipeline Safety Trust Conference

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President & CEO
Common Ground Alliance
CGA Mission

Provide clear and tangible value to our stakeholders by helping to reduce damages to North America’s underground infrastructure. The CGA works cooperatively, fostering a sense of shared responsibility to enhance safety and protect underground facilities by:

- Identifying and disseminating the stakeholder best practices;
- Developing/conducting public awareness and education programs;
- Sharing and disseminating damage prevention tools and technology; and
- Serving as the premier resource for damage and one call center data collection, analysis and dissemination.
CGA Today

- 16 Stakeholder groups
- Over 1,700 members
- Almost 240 member organizations/companies
- 70 sponsors (Bronze, Silver, Gold & Platinum)
- 6 staff members
- 7 working committees
- 23 board members
2.6 Million Miles of Pipeline Across the US
Safety and Reliability
Driving Damages Down over the Past Decade. 54%

Damages have reduced 54% over the last ten years.
CGA Core Programs

• Best Practices
• 811 / Damage Prevention Awareness
• Technology
• Regional Partners
• Stakeholder Advocacy
• Data Reporting and Evaluation (DIRT)
Best Practices

– Version 14.0 published March 2017
– Approximately 170 practices developed on consensus basis
– Many have become law working document
– Currently 5 proposals under review by Best Practices Committee
– 12,000 distributed annually
– Available online with over 50,000 pageviews annually
811 / Damage Prevention Awareness

Reduce damages by increasing awareness of 811 and driving homeowners/excavators to notify the one call center prior to digging.
Damage Prevention in Your State

Explore damage prevention information, local contacts and rules for safe digging in North America.

CGA Regional Partners
Damage Information Reporting Tool (DIRT)

- Collects damage and near miss data
- Voluntary
- Statistically valid
  - Professional Analysis
  - Report Writer
- Managed by a proven committee process
What Data is Collected?

- Who is Submitting Data
- Date and Location of the Event
- Affected Facility Information
- Excavation Information
- Notification
- Locating and Marking
- Downtime
- Description of Damage
- Description of the Root Cause
Recent Highlights

DIRT Report for 2016
Published August 11

- Highest event submissions and Data Quality Index to-date
- First ever estimate of societal costs of damages
- Damages due to failure to call 811 at a record-low
- DIRT Interactive Dashboard includes PHMSA’s determinations of adequacy
Estimated U.S. Total Damages

Estimated Damages, Damages Submitted to DIRT, and Construction Spending

- 675,000 estimated US damages in 2004
- 379,000 estimated US damages in 2016

Construction spending

Estimated range of damages.

Damages submitted

$1,200,000
$1,000,000
$800,000
$600,000
$400,000
$200,000
$-

Construction spending (millions of 2005 dollars)

Excavation damages to underground utilities (U.S.)
Major Root Cause Categories

*DIRT Data*

- Excavation practices not sufficient
- Notification NOT made
- Notification practices not sufficient
- Locating practices not sufficient
- Miscellaneous root causes

**Major Root Cause Categories**

<table>
<thead>
<tr>
<th>Year</th>
<th>Excavation</th>
<th>Notification NOT</th>
<th>Notification</th>
<th>Locating</th>
<th>Miscellaneous</th>
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<tbody>
<tr>
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<td>3%</td>
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<tr>
<td>2013</td>
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<td>16%</td>
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<td>31%</td>
<td>1%</td>
<td>6%</td>
<td>18%</td>
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<tr>
<td>2016</td>
<td>16%</td>
<td>1%</td>
<td>4%</td>
<td>23%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Damages**

- 0% to 20%
- 20% to 40%
- 40% to 60%
- 60% to 80%
- 80% to 100%

**Years**

- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
Excavation Practices

DIRT Data

- Other excavation practices not sufficient: 69.3%
- Failure to maintain clearance: 15.6%
- Failure to use hand tools where required: 4.0%
- Failure to test hole (pot-hole): 3.2%
- Failure to support exposed facilities: 6.3%
- Improper backfilling practices: 0.2%
- Other: 1.4%
Locating Practices

DIRT Data

- Markings/location not sufficient: 22.76%
- Incorrect facility records/maps: 9.57%
- Facility not found/located: 3.80%
- Facility not located/marked: 63.86%
811 Notification Practices

DIRT Data

- 94.29%
- 4.79%
- 0.92%

- Notification NOT Made
- Notification made but not sufficient
- Wrong information provided
Missellaneous

DIRT Data

- Abandoned facility: 1.7%
- Deteriorated facility: 1.2%
- One call center error: 2.0%
- Previous damage: 95.1%
Facilities Damaged

United States

- TELECOM: 129,332
- NATGAS: 86,830
- CATV: 27,737
- ELECTRIC: 24,363
- SEWER: 761
- LIQPIPE: 112
- STEAM: 5
Key Takeaways - 2016

• Estimated total U.S. damages increased 20%, from 317,000 to 379,000.
• Since 2010, damages have stabilized into the 300,000–400,000 range despite there being a rebound in construction spending.
• Damages per 1000 transmissions increased from 1.54 in 2015 to 1.76, but rate is lower than the 2013 and 2014 rates of 2.07 and 1.84 respectively, indicating a long-term trend of improvement.
Key Takeaways - 2016

• The ratio of damages to construction spending has declined from 0.63 damages per million dollars in 2004 to 0.41 in 2016.

• Call before you dig awareness remains consistent with historical findings at 45% (June 2017 survey).

• Societal costs associated with underground facility damages in the U.S. in 2016 estimated at $1.5 billion. Minimum estimate based on routine costs for stakeholders directly connected to a damaged facility.
Interactive Dashboard

Access the interactive Tableau dashboard that allows users to filter the data more granularly.

INTERACT
PHMSA Determinations of Adequacy
PHMSA Determinations of Adequacy

DIRT 2016 - Interactive Report

PHMSA Status Analysis (US only) - Inadequate Status All Years

Work Performed by Excavator Type

Top Five Facilities Damaged

Top Ten Reporting Stakeholders
Interactive Dashboard

Facilities Affected
- Service / Drop: 3,746
- Distribution: 798
- Transmission: 4
- Gathering: 1

Facilities Damaged
- Natural Gas: 2,299
- Telecommunications: 1,914
- Electric: 307
- Cable TV: 28
- Water: 10
- Sewer: 2

Damage Count
- State: ON
  - Weight: 4,563

Month of Damage
- Graph showing the percentage of total damage over time.
Technology and Damage Prevention

Technology Committee... keeping a pulse on technology that will affect the damage prevention industry.

• Launched Technology Information Collection Survey
• Annual Report to be published in 2017
What Will The Next Decade Hold?
Thank You

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