

# The Next Generation of Reducing Damages Through Shared Responsibility

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# CGA

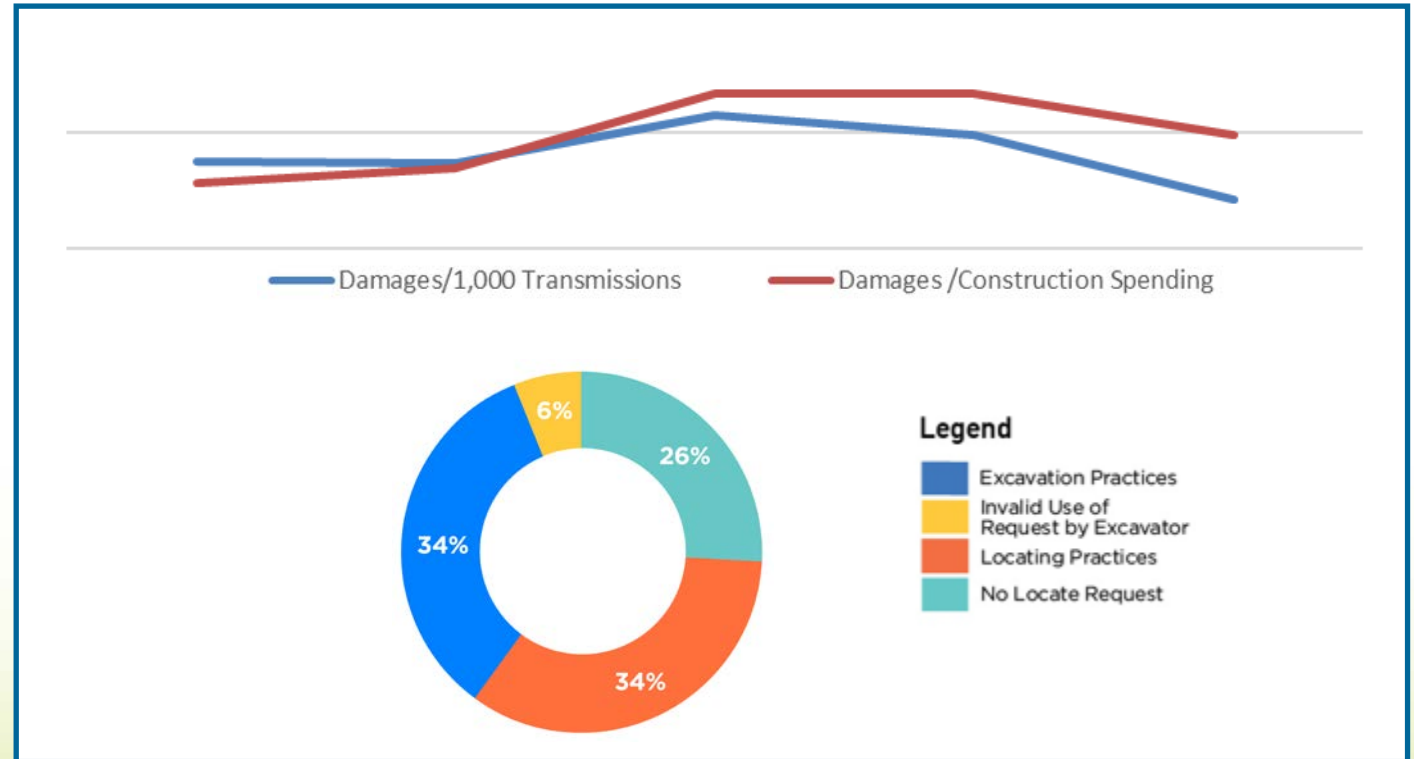
## Mission

The Common Ground Alliance is dedicated to preventing damage to underground utility infrastructure and protecting those who live and work near these important assets through the shared responsibility of our stakeholders.



# Damage Prevention Today

- Current practices are not significantly reducing damage trends
- No single answer, root cause or stakeholder group

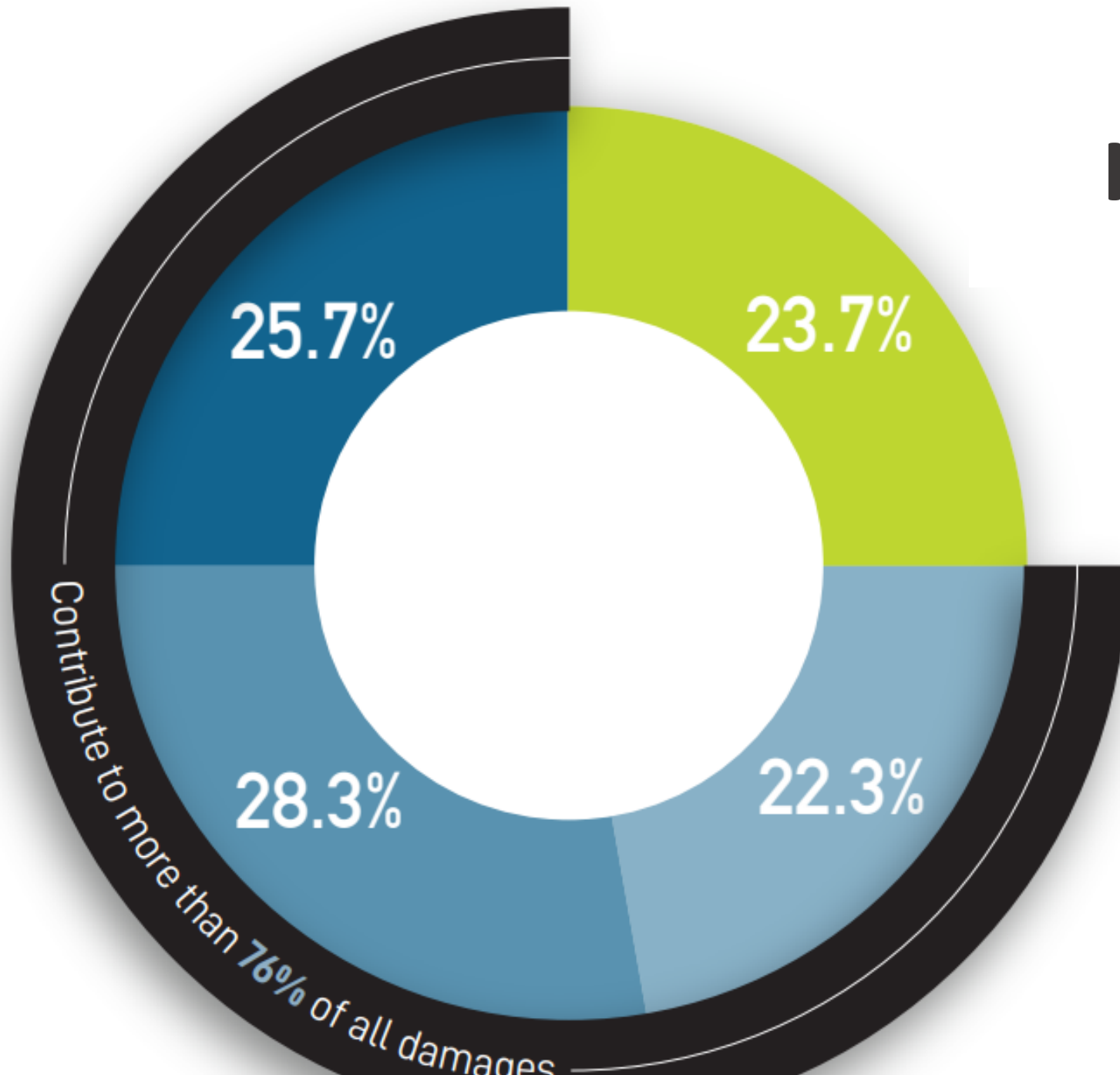


# “50 in 5” Industry Challenge

**3 Areas  
Contribute to More Than  
76% of all Damages**

## Legend

- Failure to notify 811
- Failure to pothole, maintain clearance, etc.
- Failure by locator to mark accurately or on-time
- Other 19 damage root causes
- Contribute to more than 76% of all damages





# DIRT

- Data on excavation damages and near-misses from all affected parties.
- Analysis of data submitted for a given year published in annual report and online interactive dashboard.

# DIRT Report for 2021 – Roadmap for Future



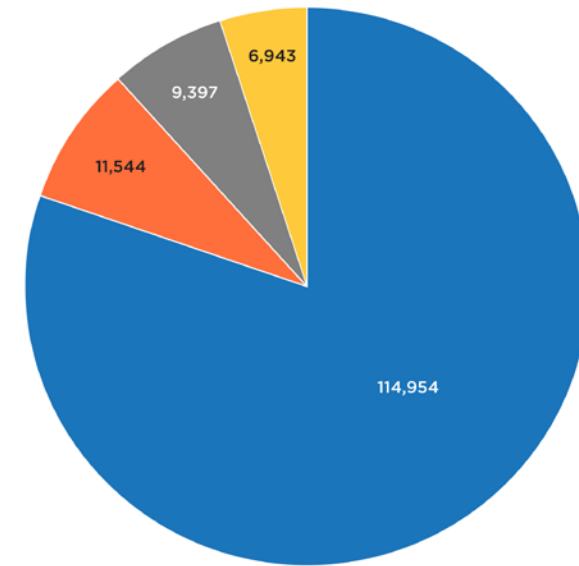
- Documents most pressing *and* consistent issues in damage prevention.
- Outlines recommendations and priorities based on key findings.
- Opportunity for self-evaluation.
- Approximately 11% of reports submitted are multiple reports/perspectives on the same event.
- Top submitting industries are **natural gas (29%)**, **excavators (29%)**, and **telecommunications (23%)**.



# Excavation Information

- **Contractor/developer** is the primary excavator type involved in the greatest number of damages.
- **Backhoes** are involved almost **50%** of all reported damages followed by **hand tools** at **21%**.

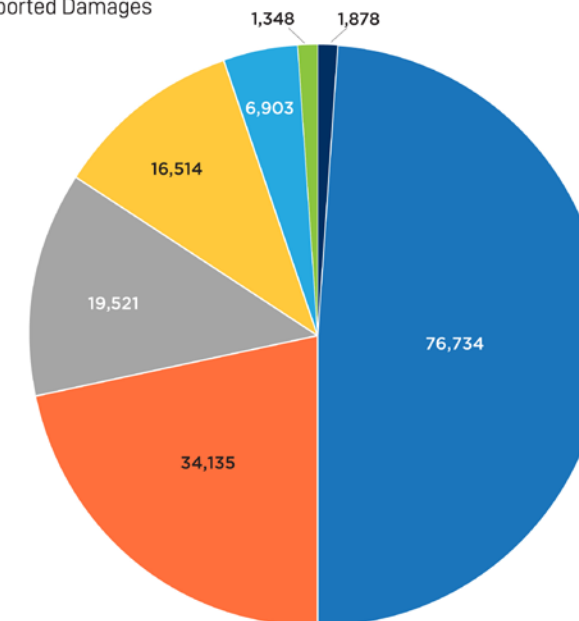
Excavator Type  
# of Reported Damages



- Legend
- Contractor/Developer
  - Occupant/Farmer
  - Utility
  - Municipality/County/State

Chart does not include "unknown" values, and accounts for multiple reports of the same event.

Equipment Type  
# of Reported Damages



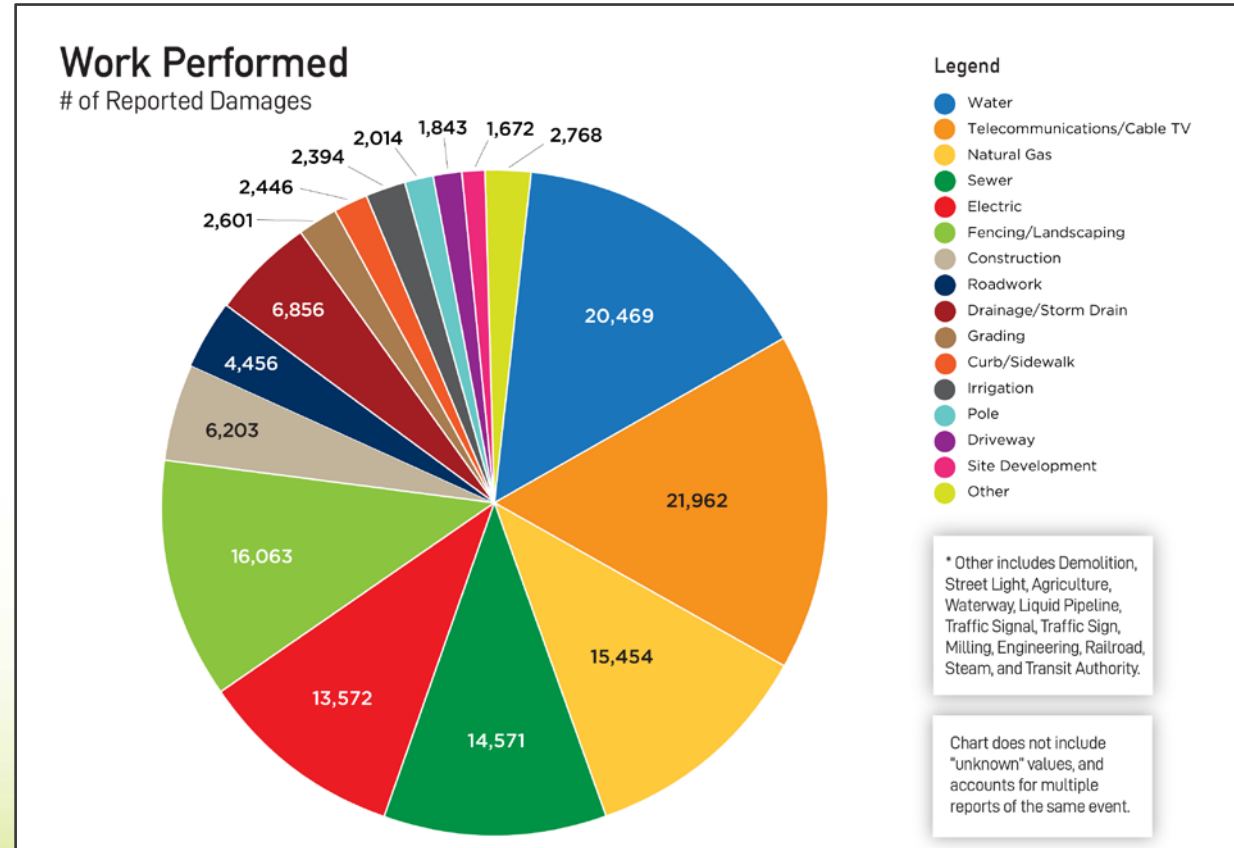
- Legend
- Backhoe
  - Hand tools
  - Boring/Directional Drilling
  - Trencher/Gradescape/Bulldozer
  - Auger/Drilling
  - Vacuum
  - Other\*

\*Other includes Probing, Farm and Milling Equipment, Explosives.

Chart does not include "unknown" values, and accounts for multiple reports of the same event.

# Utility Work is the Most Prevalent Type of Work Performed

- **Water** is the most prevalent work type followed closely by sewer and telecom.
- Many damages involving Horizontal Directional Drilling (HDD) can be **attributed to facility operators, or their subcontractors**, hitting each other and/or themselves.



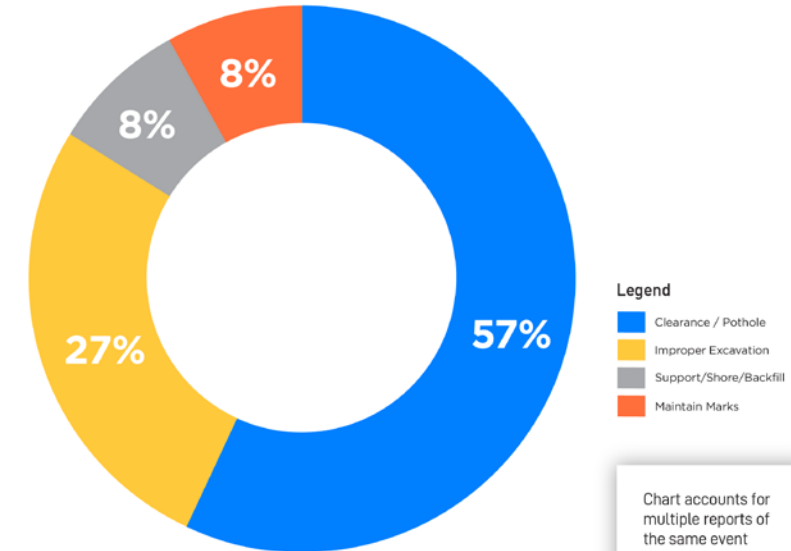
# 76% of Reported Damages - Attributed to Top 6 Root Causes



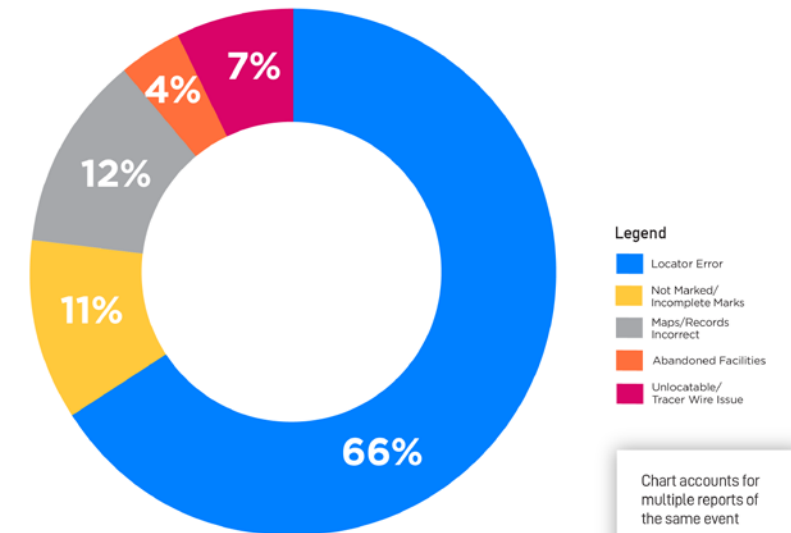
# Clear Root Cause Trends

1. Digging **without notification to 811**
2. Excavators **failing to pothole and failing to maintain sufficient clearance**
3. Facilities not being marked or being marked inaccurately due to **locator error and/or incorrect facility records/maps.**

Excavation Practices Root Causes  
% of Total 2021



Locating Practices Root Causes  
% of Total 2021



# No Notification to 811 Remains a Priority

- ***No notification made to 811 center remains the top root cause*** with over a quarter of all damages still attributed to *no notification*.
  - CGA excavator research tells us that professional excavator awareness of 811 is very high, yet **60% of all damages due to *no notification* can be attributed to professional excavators.**
  - It is important to note that **36% of those professional excavators failing to contact 811 were likely working on projects associated with utilities** (natural gas, electric, telecommunications) and/or municipalities (water, sewer, road, sidewalks, etc.).



# Sense of Urgency

- Increased construction spending has consistently proven to correlate with an increase in damages. **Infrastructure funding will stress system.**
- **Locate requests** to 811 centers (one call centers) increased by **8% over the previous year**, with 811 centers seeing a significant shift in locate request methodology toward electronic rather than voice.

Construction spending and 811 center outgoing transmissions are increasing over time.

This suggests increased excavation activity that could stress an already overburdened 811 system.

**Between 2016 and 2021:**

**30%**

increase in 811 center outgoing transmissions

**13%**

increase in construction spending (in 2021 USD)

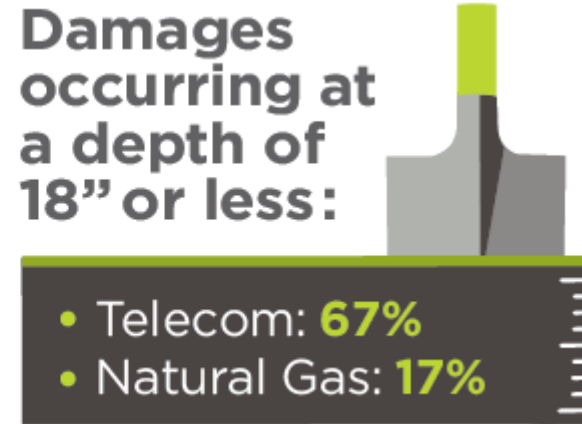
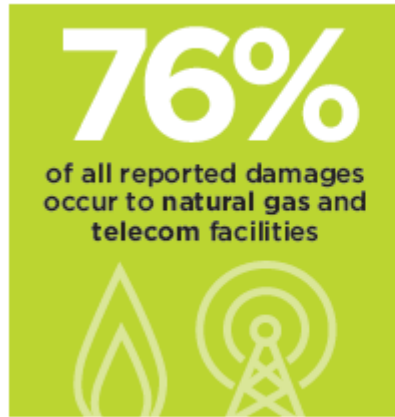


# DIRT Report Recommendations

## Prioritize Damage Prevention Efforts Based on Immediate Needs and Greatest Impact

- Tailor damage prevention efforts and investments to address the **leading individual root causes.**
- Strengthen engagement with **public works stakeholders.**
- Educate professional excavators on areas with the greatest potential impact on damage prevention – **consistent and efficient use of 811 for *all* projects, and safe excavation within the tolerance zone.**

# Sharing Key Takeaways & Findings



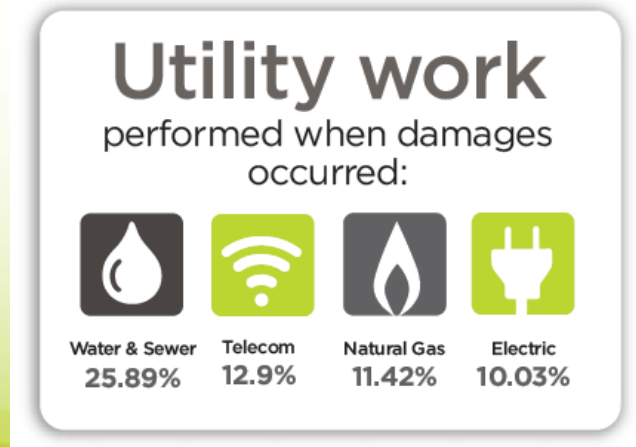
**76%** of damages are caused by just **SIX** root causes

These root causes are also some of the most persistent causes of damages year after year.

## Most Persistent Damage Causes\*

1. Digging without notification to the 811 center
2. Failure to pothole and/or maintain clearance
3. Locating issues caused by incorrect and/or outdated maps

*\* List does not include "unknown" values*





# Data and Research

## *What DIRT data doesn't tell us?*

White Paper 2022

Natural Gas: Leading the Damage Prevention Industry

REPORT

White Paper - Natural Gas: Leading the Damage Prevention Industry



RESEARCH

🔒 Interview Report: Gas Distribution Industry Exploratory Study



RESEARCH

🔒 Survey: Natural Gas Industry

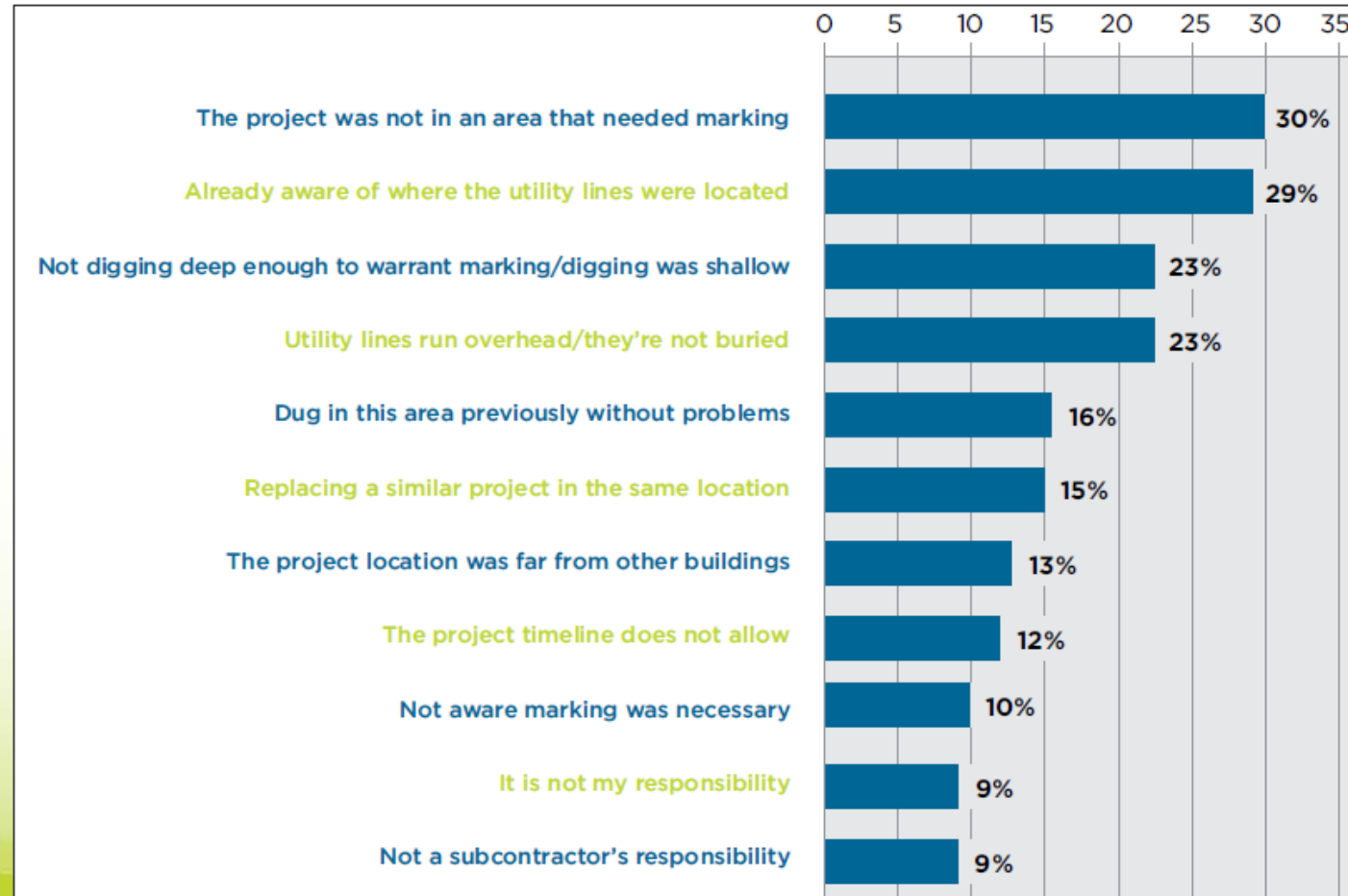
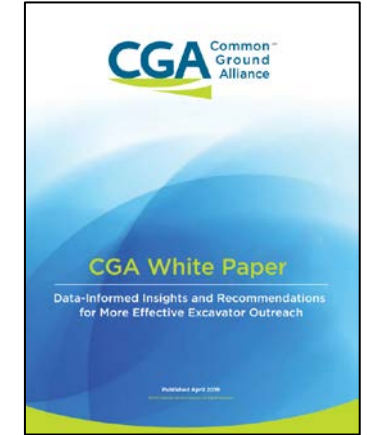


RESEARCH

Active Digger Research 2021 Data Sheet

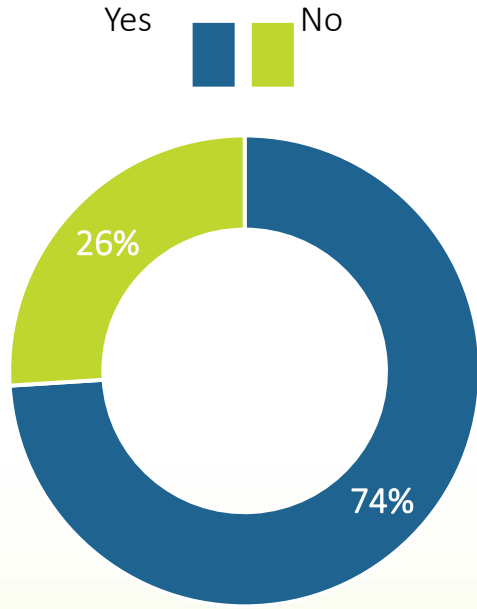
# Professional Excavators

## Reasons for Not Contacting 811



# Active Digger Research

Are you aware of service?



Q: Are you aware of a free national phone number and service that people can contact to have underground utility lines on their property marked prior to starting any digging project?



## THE REASONS ACTIVE DIGGERS HAVE NOT HAD LINES MARKED VARY

*Among active diggers who have not had their underground utility lines marked:*

**believe they are not digging deep enough to warrant having lines marked**

**36% say their project was not in an area that needs marking**

# Locator Research: Data, Findings and Insights

## Locator research methodology

**402**

U.S.-based locate technicians completed an online survey.



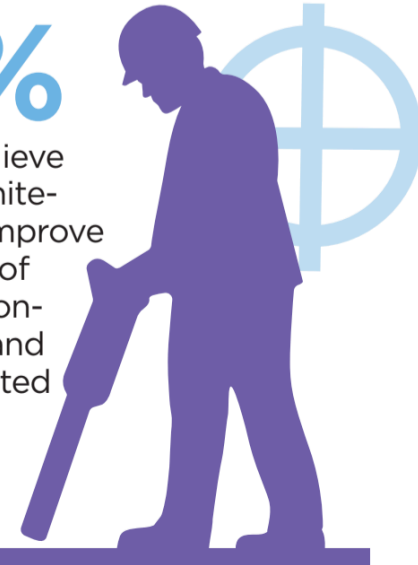
**20** locating industry decision-makers participated in in-depth interviews.

## TOP 3 CHALLENGES facing locate technicians:

1. Area to be marked is not clearly defined - **51%**
2. Incorrect information provided by excavator - **37%**
3. Heavy workload - **33%**

**97%**

of locators believe mandatory white-lining would improve the likelihood of accurate and on-time locates, and **99%** say updated facility maps would be effective.



# Key Takeaway

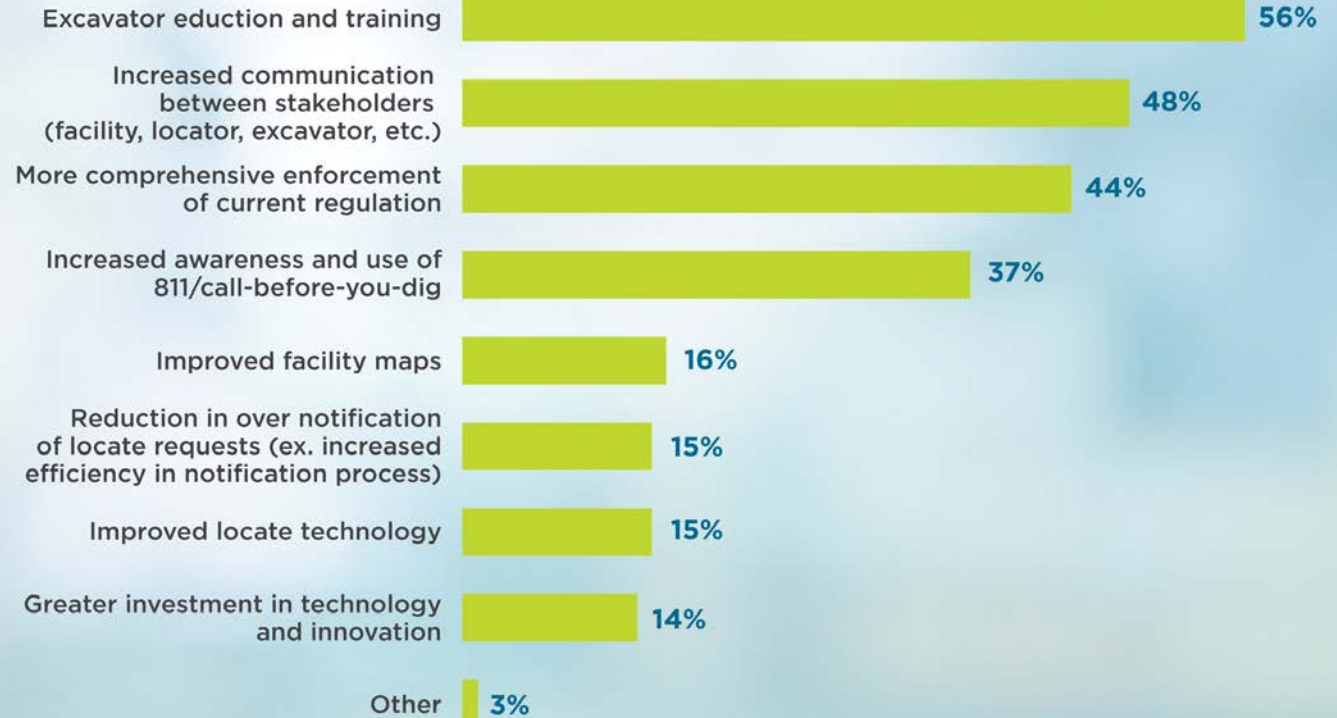
## Shifting the Focus

### Improved Mapping and Contracts

- Focusing on internal processes and policies may be the most direct pathway to address external challenges in the short term.
- Natural gas distribution stakeholders can better reduce damages by focusing on improved facility mapping and contracts that prioritize damage prevention.

#### STRATEGIES FOR REDUCING DAMAGES

Q | Which of the following strategies do you think have the most potential to reduce damages to natural gas facilities? (Select up to 3)



SOURCE: Survey, slide 16

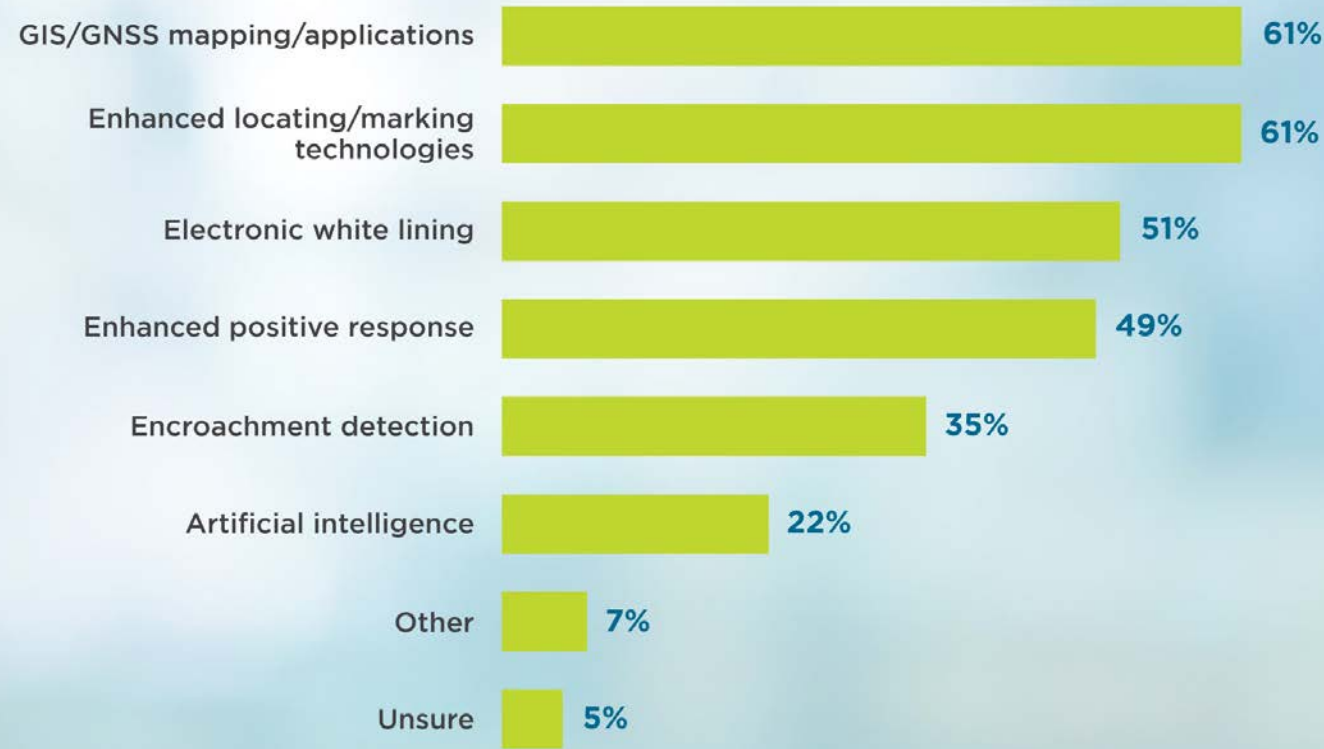
# Key Takeaway

## Innovation and technological advancements

Technology and innovation are critical to damage prevention and reducing future damages.

### TECHNOLOGY TO REDUCE DAMAGES

Q | What technological advances could help reduce damages in the natural gas industry?  
Select all that apply



SOURCE: Survey, slide 20

# CGA - Self Evaluation

- ✓ What is data telling us? ➡ **DIRT, White Papers**
- ✓ How are CGA programs, initiatives, messaging and tools supporting these key findings? ➡ **Best Practices, Technology, 811, Case Studies**
- ✓ Where should we focus to ensure the greatest return on investment (ROI)? ➡ **Next Practices**
- ✓ Are we making sufficient progress? ➡ **“50 in 5” Challenge**

# CGA Programs and Initiatives

## Goal

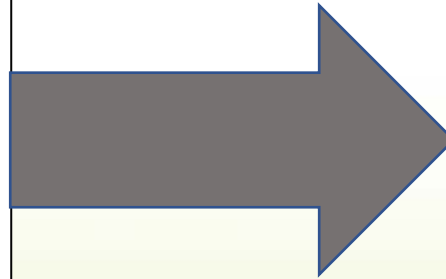
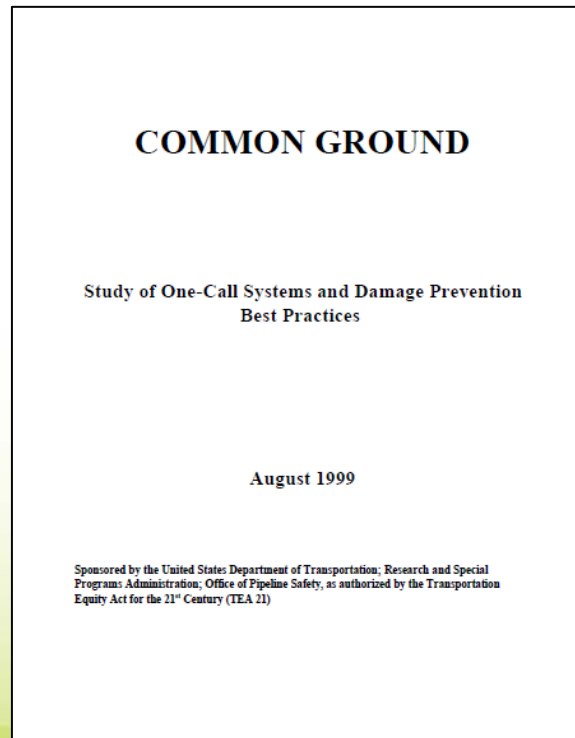
Drive down damages nationwide by using information and data to consistently target critical challenges and top damage root causes.






# Document Existing Best Practices







What practices are in place today?



# Best Practices

- Version 18.0 published June 2021
- More than 160 practices developed through consensus
- Available online at [bestpractices.commongroundalliance.com](https://bestpractices.commongroundalliance.com)

Filter by Industry Icons 

 One Call Center  Facility Owner  Excavator  Locator  Project Owner  Designer



Published in summer of 2021, Best Practices 18.0 includes all new practices and is now available to download and in hard copy.



To download or order booklets visit:

[BestPractices.CommonGroundAlliance.com](https://BestPractices.CommonGroundAlliance.com)

**BP 2-19:**  
Underground Electronic Utility Markers

**BP 6-19:**  
As-Built Mapping of Underground Electronic Utility Markers

**Appendix B Addition:**  
Guidelines for Underground Electronic Utility Marker Technology



To review the complete new practices, visit:  
[BestPractices.CommonGroundAlliance.com](https://BestPractices.CommonGroundAlliance.com)



# Documenting Case Studies



CASE STUDY

Next Practices Case Study - Crown Castle



CASE STUDY

TECHNOLOGY

Technology Case Study - People's Gas



CASE STUDY

TECHNOLOGY

Technology Case Study - Exodigo



CASE STUDY

TECHNOLOGY

Technology Case Study - Alliance Water Resources & Public Water Supply District 6



CASE STUDY

TECHNOLOGY



CASE STUDY

TECHNOLOGY



CASE STUDY

TECHNOLOGY



CASE STUDY

TECHNOLOGY



# Awareness vs. Behavior Change









MAKING THE 811 SYSTEM MORE EFFICIENT  
**HOW EXCAVATORS CAN HELP**

**WHEN MAKING LOCATE REQUESTS...**

**PROVIDE QUALITY INFORMATION**

Specific dig site location & dimensions

Correct contact name & phone number

Detailed description of work being performed



**MANAGE TICKET QUANTITY**

Give sufficient notice

Eliminate unnecessary requests

Stop locates on completed jobs



LEARN MORE WAYS TO HELP  
VISIT [CALL811.COM/EXCAVATOR](http://CALL811.COM/EXCAVATOR)



A screenshot of a YouTube video player. The video title is 'CGA Excavator Video (Full Length)'. The video thumbnail shows a man in a yellow hard hat and orange safety vest smiling. The text 'HOW EXCAVATORS CAN HELP' is overlaid on the thumbnail in large green letters. A red play button is in the center. At the bottom right of the player is a green button that says 'DOWNLOAD VIDEO'. The video player interface includes 'Watch later' and 'Share' icons in the top right corner.

MAKING THE 811 SYSTEM MORE EFFICIENT  
**FACILITY OWNER/OPERATORS &  
LOCATE PARTNERS CAN HELP**

**DAMAGE  
PREVENTION  
STARTS EARLY**

- ✓ Accurately Record Where Cable/Wires are First Placed



**LOCATING &  
MARKING**

- ✓ Implement Software/Utilize Online Portals
- ✓ Look for New Ways to Improve Efficiency/Accuracy
- ✓ Provide On-Time Response & Accurate Locates
- ✓ Make Markings Highly Visible, Factor In Weather/Terrain
- ✓ Provide Good Contact Information
- ✓ Keep Mapping Data Up to Date



**FOSTER  
RELATIONSHIPS  
& PARTNERSHIPS**

- ✓ Keep Good Lines of Communication with Other Stakeholders

A screenshot of a YouTube video player. The video title is "CGA Facility Owner/Operator Video (Full Version)". The player interface includes a play button, "Watch later", and "Share" options. The video content shows several people in safety gear (hard hats and vests) working together, with a central red play button overlaid on a gear graphic. Below the video player is a green button with the text "DOWNLOAD FULL VERSION".



# Toolkits and Resources



DIRT



LOGIN

CONTACT



Membership & Engagement ▾

Publications & Media ▾

Tools & Resources ▾

Conferences & Events ▾



Excavator Toolkit

TOOLKIT

🔒 Excavator Toolkit



NSDM Toolkit

TOOLKIT

🔒 National Safe Digging Month Toolkit



811 Tips for Facility Owners Toolkit

TOOLKIT

811 Tips for Facility Owners/Operators



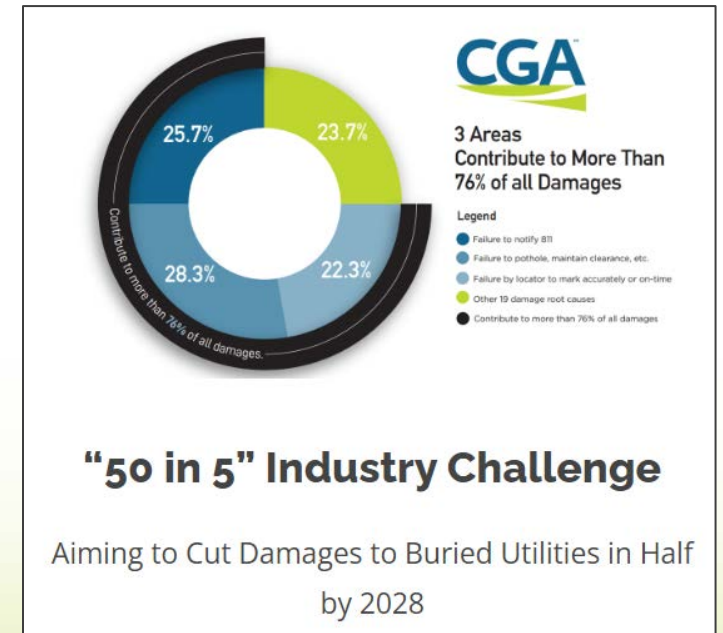
811 Tips for Excavators Toolkit

TOOLKIT

811 Tips for Excavators Toolkit



# Damage Prevention – Looking Ahead



# *What is the future of damage prevention?*



# Next Practices Initiative

- Clearly identifies and focuses the industry on the **advancement of effective solutions to address the most critical damage prevention challenges.**
- Targets most critical issues
  - Data driven
  - Identifies inefficiencies
- Industry Call to Action
  - Opportunities for Systemic Improvement
  - Roadmap to Realizing Systemic Improvements





# **Status Report: Increase effective implementation of electronic white lining.**

## Incentives to Implement Electronic White Lining

- Improve excavator confidence in the damage prevention system
- Reduce system volume and increase efficiency

**Call to Action:** Document successes/lessons learned and track effectiveness.

# Status Report: Quantifying Unchecked Demand and Leveraging Technology

## Incentives for Addressing System Demand

- Technology already exists to address many issues
- Understanding primary drivers of system volume is key to adjusting demand

**Call to Action:** More data/analysis on impact of unchecked demand. Pursue innovative processes and use of technology to increase efficiency.

# **Status Report: Pursue accurate and accessible GIS mapping system / database.**

## Incentives for Creating and/or Sharing GIS Facility Maps

- Increased efficiency (locating, planning and design, construction)
- Excavator safety
- Cost savings over time

## **Call to Action**

1. Review – How are you using (or not using) GIS across the organization? If you are not using GIS, why?
2. Identify – What policies/practices are preventing your company from accessing the benefits of GIS?
3. Encourage and Document – Sharing information to enhance damage prevention process.

# Status Report: Contractually Incentivize Adherence to Best Practices

**Contracts** establish relationships between stakeholders and affect overall confidence in the damage prevention process.

## Call to Action

- Ensure your **core values are reflected in your contracts**
- Review and redefine what constitutes an “effective” contract



## **MISSION**

To address systemic inefficiencies in the damage prevention process through the development of a system of comprehensive participant accreditation and metrics, creating the foundation for a consolidated benchmarking and true peer review process.



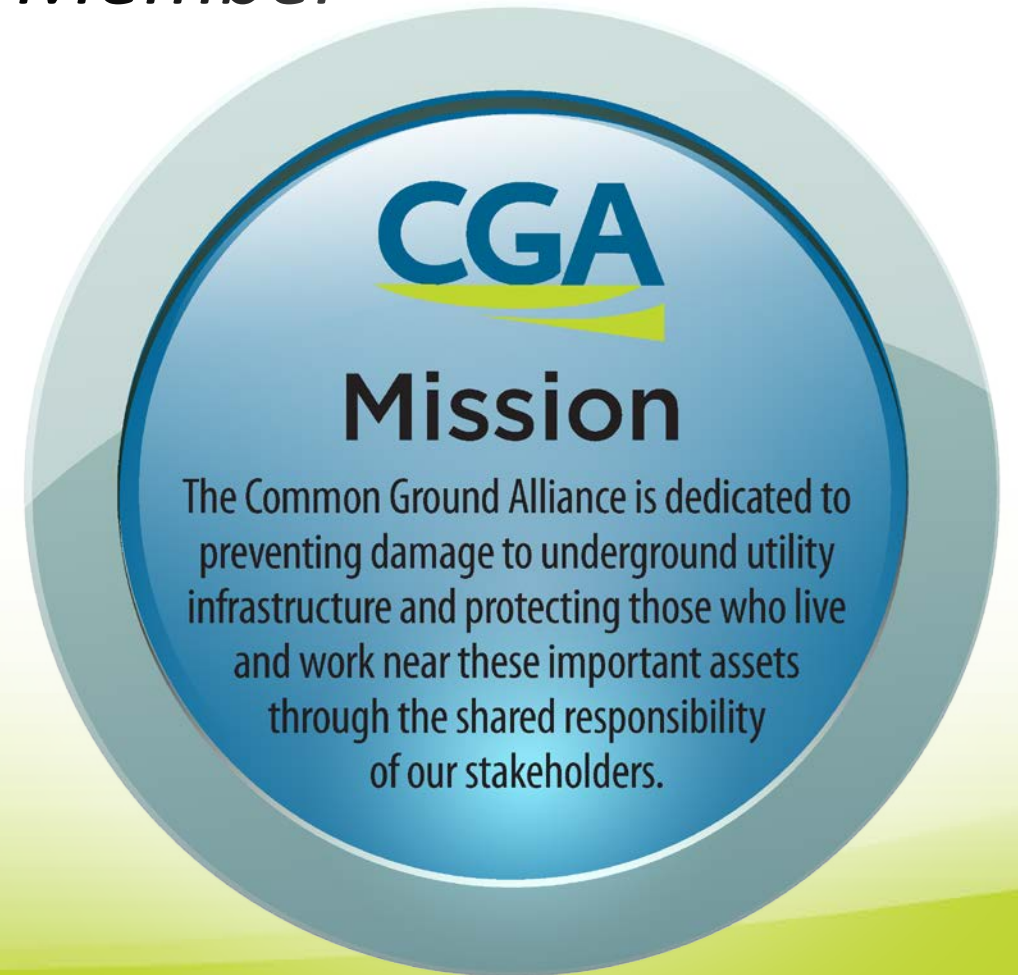
# Core Principles of the DPI

- **ALL participants demonstrate commitment to their damage prevention responsibilities** through accreditation, data submission and participating in peer reviews.
- The DPI is **participant-driven** and **operates transparently** and **in service to all stakeholders**.
- Participation is **voluntary**.
- The DPI is **not punitive**. Accreditation does not depend upon performance. Performance speaks for itself.

# Common Ground Alliance

*Become an Active Member*

- Brings together **all** damage prevention stakeholder groups.
- Addresses the **entire** damage prevention process.
- Includes over 1,800 individual members and 300 member organizations/ companies.





CONFERENCE  
& EXPO 2023



April 17-21 • Caribe Royale Resort • Orlando, Florida

**We look forward to seeing you at the  
2023 CGA Conference & Expo!**

April 17-21, 2023

Caribe Royal Resort

Orlando, Florida





# **Committee Summit Schedule**

## **Summer Committee Summit**

**Details:** Gulf Shores, Alabama

**When:** 7/31/2023 - 8/3/2023

## **Fall Committee Summit**

**Details:** Indianapolis, Indiana

**When:** 11/6/2023 - 11/9/2023



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