

# JPIASource

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ACWA JPIA Risk Management for the Water Industry

## Break Ground on Damage Prevention - Common Ground Alliance Damage Information Reporting Tool



Common Ground Alliance (CGA) developed the [Damage Information Reporting Tool](#) (DIRT) to gather data related to excavation activity that accounts for more than 76 percent of underground utility line strikes. The data is collected to enhance safety and awareness while reducing the overall risks related to utility damages caused by excavation. The reporting tool allows utility operators, excavators, facility owners, and regulatory agencies to submit reports on excavation-related incidents that cause damage to subsurface utilities. The reports include the type of utility involved, root causes, and circumstances of the damage.

DIRT collects root causes data nationwide and puts it into a database that subsurface utility owners and excavators can utilize to assist in identifying common causes of utility strikes. This data can assist agencies in protecting critical infrastructure, ensuring public safety, and minimizing disruptions caused by utility damage. The key objective in CGA's mission is to improve damage prevention practices nationwide.

## Reducing Damage by 50% in 5 Years

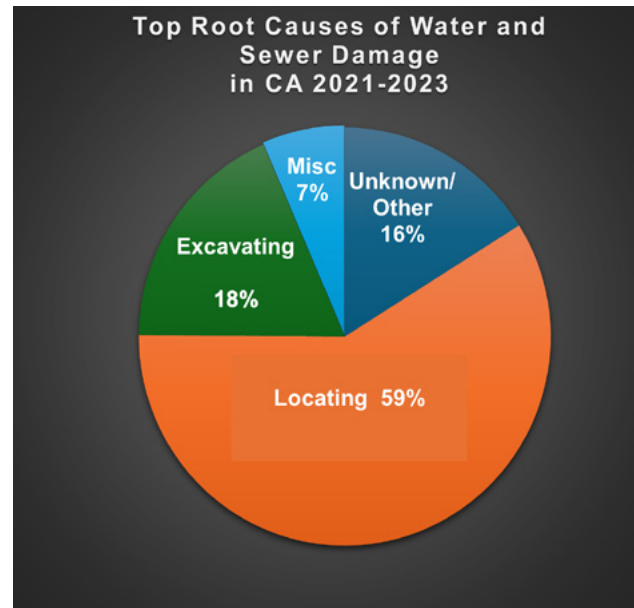
### 50-in-5 Challenge

To meet that objective, CGA issued their ["50-in-5"](#) industry challenge, encouraging stakeholders to make actionable changes to reduce damages to critical underground utilities by 50 percent over the next five years.

As part of their challenge, CGA has outlined **three critical issues** for stakeholders across the U.S. to focus on. Using data analysis, CGA found that these three issues contributed to more than **76 percent** of utility line strikes and include the following:

#### Three Critical Issues

- Effective and consistent use of 811.
- Key excavator practices (potholing, maintaining clearance, etc.).
- Accurate, timely utility locating.



#### DIRT Data Related to California Water and Wastewater Strikes

Reviewing data specific to California, stakeholders reported a total of 25,821 Underground Utility Line Strikes from 2021-2023. Water and Sewer were affected by 1,281 of those strikes. The top three root cause groups responsible for more than 93 percent of the damage include Locating (59%), Excavating (18%), and Unknown/Other (16%).

Within these groups, CGA drills down even more to identify root causes. These details provide specific actions or lack of actions that have directly caused damage.

- 1. Locating Root Cause Details**
  - a) Not marked due to locator error
  - b) Marked inaccurately due to locator error
  - c) Unlocatable facility
- 2. Excavating Root Cause Details**
  - a) Excavator failed to maintain clearance
  - b) Improper excavation practices
  - c) Excavator dug prior to verifying marks (potholing)
- 3. Unknown/Other**
  - a) Root cause not listed

## Reporting Utility Damage

Anytime there is a subsurface utility line strike the excavator and/or facility owner have a responsibility to report the line strike. There are two categories of reporting, required reporting and voluntary reporting.

### 1. California Underground Safety Board Required Utility Damage Reporting:

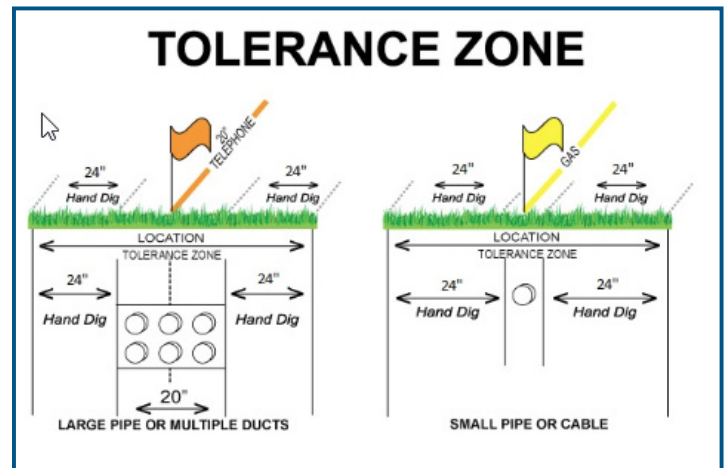
- a. Underground Safety Board reporting can be done through your local [One Call Center](#), or by dialing [811](#) to notify the utility owner. Reporting is required immediately and in no case longer than **two hours** when the following damage occurs:
  - i. Natural gas or hazardous liquid utility infrastructure.
  - ii. High priority underground utility infrastructure
  - iii. Fatality or Injury that requires treatment at medical facility.
- b. Notify 811 and the [Safe Dig Board](#) within 48 hours for all other utility damage not listed above.

### 2. Voluntary Utility Damage Reporting:

To effectively reduce subsurface utility damage, it is critical to identify the root cause(s) of damage. ACWA JPIA strongly encourages members to conduct an incident investigation of utility damage and report the root cause details to DIRT. This information is critical for excavators and utility owners to identify risks and apply controls to improve operating practices as shown in the next section.

## Using DIRT Data for Risk Management

DIRT data is a valuable resource. Members are encouraged to utilize, identify areas for improvement to mitigate risks, enhance safety, and reduce third-party liability exposure. The JPIA's [Commitment to Excellence Program](#) (C2E), and [CGA](#) provide best practices connected with DIRT's California water and sewer data outlined above.



**Underground Line Locating:** This includes utilities not marked due to locator error, marked inaccurately, or unlocatable facility. To control related losses:

- Conduct periodic locator training that meets the minimum training guidelines and practices of the National Utility Locating Contractors Association to ensure accuracy of location within the tolerance zone.
- Have written specifications/SOP to require the use of tracer wire to assist in identifying underground utility on new or replaced lines.
- Maintain accurate mapping of utilities, by establishing a process to update and modify as-builts and/or GIS mapping of underground assets.
- Verify completion of locating by documenting in writing and photography of what was located, any activity at the site, and communications with excavator.

**Excavation:** This includes failure to maintain clearances, improper excavation practices, and failure to identify subsurface utility prior to digging. To control related losses:

- Locate subsurface utility by potholing through hand digging or vacuum excavation if allowed by utility.
- Only hand dig or vacuum excavation within the tolerance zone or clearance areas, if allowed by utility.



- Train all operators on 811 notification and excavation practices as required by the California Government Code 4216-4216.9. This training is available through [USA North](#) and [DigAlert](#).

**Unknown/Other:** This includes pipe damage where the root cause is unknown. To control related losses:

- Anytime there is damage to a subsurface utility, the excavator and utility owner should conduct their own incident investigation with the goal to identify the root cause. This can be used to prevent a similar incident from occurring again, and also used to report better data to [DIRT](#). CGA has developed the [Root Cause Determination Flow Chart](#) to assist in determining root causes. The flow chart is located in the 2023 Dirt Report.

By reporting and utilizing DIRT data, members can gain the advantage and ensure they are following best management practices that reduce the likelihood of incidents related to common errors associated with strikes to subsurface utilities. For more information about Common Ground Alliance, or to review the data visit [commongroundalliance.com](http://commongroundalliance.com).



### Test Your Knowledge

- 1. What was the leading root cause of underground utility damage in California?**
  - a) Excavator failed to maintain clearance
  - b) Marked Inaccurately
  - c) Failure to notify 811
  - d) Locating
- 2. Who must you ALWAYS notify immediately if you hit a utility line?**
  - a) Water Department
  - b) Fire Department
  - c) Local One Call Center or 811
  - d) Police
- 3. What is DIRT?**
  - a) Dig If Ready To
  - b) Direct Impact Root Tracker
  - c) Don't Inspect Replacement Tool
  - d) Damage Information Reporting Tool
- 4. What is the 50 in 5 Challenge?**
  - a) Report 50 incidents in 5 days
  - b) Reduce damage to underground facilities by 50 percent in five years.
  - c) Safety zone is 50 feet away and five inches above all utilities.
  - d) Excavators must complete 50 hours of training in five days.
- 5. When do you notify the 811 One Call Center?**
  - a) Within 48 hours of striking a utility line.
  - b) When a natural gas line is damaged during excavation.
  - c) Immediately within two hours of striking a utility line.
  - d) All of the above.

## Resources

Common Ground Alliance – DIRT Website  
<https://dirt.commongroundalliance.com/>

Common Ground Alliance Dashboard  
<https://commongroundalliance.com/DIRT-dashboard>

CGA's Website/Glossary/Best Practices Guide <https://commongroundalliance.com/Publications-Media/Best-Practices-Guide>

USANorth811 and USA North California Excavation Law  
<https://www.usanorth811.org/images/2020CALaw.pdf>

DIGALERT  
<http://www.digalert.org/>

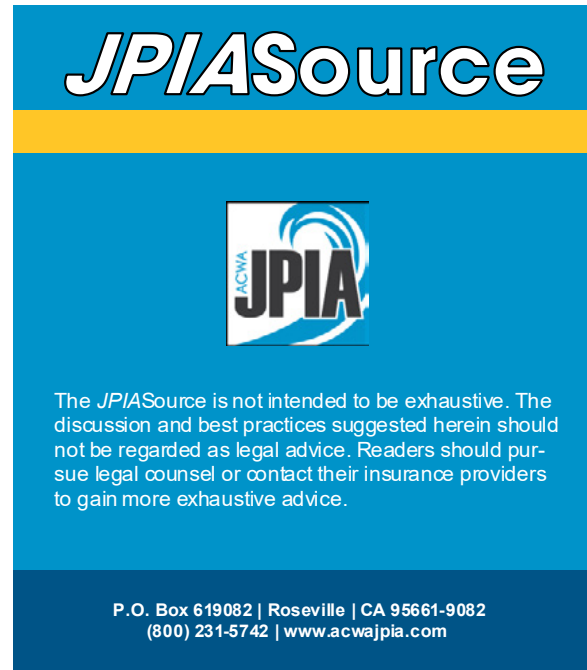
Underground Safety Board  
Utility Infrastructure Damage Information Sheet  
[https://energysafety.ca.gov/wp-content/uploads/working-safely-around\\_020323.pdf](https://energysafety.ca.gov/wp-content/uploads/working-safely-around_020323.pdf)

811 Underground Service Alert of Northern California and Nevada  
Call 811 or 800-642-2444  
<http://www.usanorth811.org/>


ACWA JPIA Commitment to Excellence  
<https://www.acwajpia.com/commitment-to-excellence/>

JPIA's Commitment to Excellence Best Practices  
[Commitment to Excellence Construction Best Practices](#)

CGA Root Cause Determination Flow Chart  
<https://dirt.commongroundalliance.com/2023-DIRT-Report/Enhancing-Data-Quality-and-Collaboration>



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The *JPIASource* is not intended to be exhaustive. The discussion and best practices suggested herein should not be regarded as legal advice. Readers should pursue legal counsel or contact their insurance providers to gain more exhaustive advice.

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