



OFFICE OF ENERGY INFRASTRUCTURE SAFETY  
**UNDERGROUND SAFETY BOARD**

**2025 ANNUAL REPORT TO THE  
GOVERNOR AND LEGISLATURE**

# 2025 ANNUAL REPORT TO THE GOVERNOR AND LEGISLATURE



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## ABOUT THIS ANNUAL REPORT

The Dig Safe Act of 2016 (Government Code section 4216, et seq.) created the California Underground Safety Board (Board)<sup>1</sup> and section 4216.23 requires the Board to submit an annual report to the Governor and Legislature outlining the Board's activities pertaining to statewide damage prevention, challenges, and its recommendations. Senate Bill (SB) 254 (Becker), Chapter 119, Statutes of 2025, expands these reporting requirements by directing the Board to include updates related to the development of Planning and Design (P&D) regulations, including an evaluation of the advantages, barriers, and funding options for a statewide web-based information-exchange platform.

This annual report identifies significant statewide challenges, including:



the continued prevalence of excavation without contacting 811 first,



inconsistent damage reporting,



incomplete subsurface maps,



unmarked facilities, and



fragmented enforcement authority.

The annual report also provides the Board's initial status updates on implementing the requirements of SB 254 while acknowledging the limited time between the bill's passage and this report's February 1 deadline.

## LETTER FROM THE CHAIR

Honorable Gavin Newsom, Governor of the State of California, and distinguished Members of the California State Legislature:

As Californians have experienced, when an underground facility is damaged, the consequences range from loss of life to a brief service outage, e.g., an electrical, gas, or internet outage. The solution to avoiding these outcomes begins with a shared responsibility to protect one another. By fostering communication, transparency, and a sense of community, we help people work safely in shared spaces.

The California Underground Safety Board (Board) investigates (a) damages caused by excavators, and (b) complaints alleging a violation of the Dig Safe Act and takes the following actions:

- Determines if a Dig Safe Act violation occurred, and if so, the appropriate corrective educational actions and penalties for the acts that were a violation, and to help prevent future damages.
- Develops solutions to help prevent people/entities from causing damage to underground infrastructure through the Board's expertise and the input of stakeholders, and
- Raises awareness of the importance of safe practices when working near and around underground infrastructure.

The Board is working to address the challenges identified in this annual report with the goal of reducing the maximum number of damages. The Board can best accomplish this through engagement with the many stakeholders involved – operators and owners of subsurface facilities, excavators, specialty contractors, and others. The Board works with partner agencies at the federal level, in California government, and throughout the United States to enforce laws, foster effective damage-prevention initiatives, and increase safety awareness.

The Board looks forward to working with you to address these matters and effectuate change.

Sincerely,

Bill Johns, Chair, Underground Safety Board

**EVERY SAFE DIG BEGINS WITH 811—  
BECAUSE WE'RE ALL CONNECTED UNDERGROUND.**

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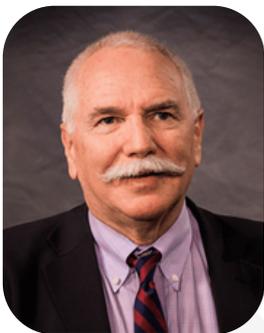
## THE BOARD'S MISSION AND RESPONSIBILITIES

The Board's mission is to improve public and worker safety by facilitating communication and learning among excavators and the operators of subsurface facilities, by investigating damage events to determine their causes, and by developing solutions to improve safety outcomes. The Board<sup>1</sup> strives to be a model regulatory and investigatory board for other states to emulate.

The Legislature<sup>2</sup> charged the Board with coordinating the state's education and outreach efforts for safe excavation around subsurface facilities and the development of standard safety practices. The Board is also charged with investigating violations of the Dig Safe Act. If in a public hearing, the Board finds a violation occurred, it will vote on the appropriate course of action which could include an education course, a financial penalty, and/or corrective action(s).

The Board is comprised of nine members serving five-year terms. The Governor appoints seven, and the Assembly Speaker and the Senate Committee on Rules each appoints one member.

The following Board members served in 2025:



**Bill Johns, Chair**

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Appointed by Governor Brown, 2017



**Travis Clausen, Vice Chair**

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Appointed by Governor Newsom, 2025



**Marshall Johnson**

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Appointed by Governor Brown, 2017



**Amparo Muñoz**

---

Appointed by the Assembly Speaker, 2018



**Dave Sorem**

---

Appointed by Governor Newsom, 2024



**Shant Simonian**

---

Appointed by the Senate Committee on Rules, 2025

## EXECUTIVE SUMMARY

California relies on an extensive network of underground infrastructure to deliver essential services, including natural gas, electricity, water, wastewater, telecommunications, and broadband. Damage to this infrastructure poses serious risks to public and worker safety, disrupts critical services, and results in substantial economic costs. Despite long-standing excavation damage prevention laws and universal access to the 811 Call Before You Dig system, excavation-related damage continues to occur across the state.

Data from California and national sources demonstrate that excavation damage is not random. Most incidents are attributable to recurring conditions, including excavation conducted without contacting 811, inaccurate or incomplete facility records, and the presence of subsurface facilities that are not identified in available maps or records. In some cases, excavators encounter subsurface facilities for which no operator has records, and no entity claims ownership. These facilities are not marked through the 811 process and are only discovered once excavation is underway.

Under current law, excavators must presume that any unmarked subsurface facility encountered during excavation is active and they must stop work in its vicinity. However, the statute provides no process for resolving ownership or facility status when no operator can identify or claim the facility. This creates a practical

deadlock in the field: excavation cannot lawfully proceed, yet no statutory mechanism exists to compel the operator's engagement or to resolve the issue of responsibility. This condition reflects a gap in statute rather than operator noncompliance or excavator misconduct and cannot be resolved under existing law.

“  
...excavators and operators continue to face uncertainty that increases safety risks, delays projects, and undermines confidence in the state’s excavation damage prevention framework.  
”

While California has taken important steps to improve underground safety, including requiring Geographic Information System (GIS) mapping for new subsurface installations beginning in 2023, these measures do not address subsurface facilities that lack records or identifiable ownership. As a result, excavators and operators continue to face uncertainty that that increases safety risks, delays projects, and undermines confidence in the state’s excavation damage prevention framework.

This annual report identifies statutory gaps that limit the effectiveness of California’s excavation safety system and presents targeted legislative recommendations to address excavation without contacting 811, incomplete statewide damage reporting, the absence of a process for unrecorded and unclaimed subsurface facilities, limitations in mapping requirements, and fragmented enforcement authority. Addressing these gaps will improve statewide safety outcomes, reduce preventable excavation-related damage, and strengthen coordination across California’s underground infrastructure system.

# THE DIG SAFE ACT OF 2016 & RELATED FEDERAL LAWS

The Dig Safe Act of 2016, (Hill), Chapter 809, Statutes of 2016, created the Board to investigate damage events, coordinate education and outreach programs, and develop safety standards.



At the federal level, the Pipeline and Hazardous Materials Safety Administration (PHMSA) administers and enforces federal pipeline safety laws and regulations. Federal law allows states to assume safety authority over intrastate gas pipelines and hazardous liquid pipelines, subject to certification and oversight by the U.S. Department of Transportation.

Federal statute authorizes the U.S. Secretary of Transportation to establish minimum requirements for state pipeline damage prevention programs, including one-call notification systems, for the purpose of protecting pipeline facilities from excavation damage. The regulations implementing this authority are primarily set forth in 49 CFR § 198 Subpart D, which establishes criteria used by PHMSA to evaluate the adequacy of state excavation damage prevention enforcement programs.

These federal regulations apply in the context of federal oversight and grant eligibility and do not directly regulate the structure, operation, or day-to-day administration of state one-call notification systems. Instead, PHMSA evaluates whether a state's enforcement program meets minimum adequacy standards as a condition of continued federal pipeline safety certification and grant funding. PHMSA annually jointly notifies the Board, the [California Public Utilities Commission](#), the [Office of the State Fire Marshal \(OSFM\)](#), and the [Contractors State License Board \(CSLB\)](#).

The structure, governance, and operation of “Call Before You Dig” or “811” notification systems are primarily established under state law. Under Government Code 4216, a regional notification center means a nonprofit association or other organization of operators of subsurface installations that provide advance warning of excavation or other work close to existing subsurface installations, for the purpose of protecting those installations from damage, removal, relocation, or repair<sup>3</sup>.

While both of California’s regional notification centers are organized as nonprofit entities; one is a nonprofit mutual benefit corporation<sup>4</sup>, and the other is a nonprofit public benefit corporation<sup>5</sup> state law does not require a specific nonprofit structure or a unified organizational form for these centers. In practice, they are composed principally of operators of subsurface installations, and their primary function is to facilitate notification from excavators to facility operators regarding planned excavation activity. Because the statutory definition emphasizes protection of subsurface installations, regional notification centers are structured around operator participation and asset protection rather than explicit representation of other stakeholders. As a result, they serve as the primary communication mechanism between excavators and operators of subsurface facilities, and the implementation of a statewide P&D information exchange system may expand or adapt this communication role within California’s damage prevention network.

A list of California statutes and Federal laws related to underground infrastructure safety and excavation damage prevention is provided in Appendix A.



## UNDERGROUND INFRASTRUCTURE: OUT OF SIGHT, NOT OUT OF MIND

Every safe dig begins with 811—because we’re all connected underground. Underground safety means preventing injury and damage. Small colored flags and “white” markings on the ground indicate the presence of underground infrastructure and signal areas where excavation must be performed with extra care.

Californians rely on underground infrastructure for almost every facet of their life: electricity, natural gas, petroleum products, potable and non-potable water, waste disposal, telecommunications, cable television, and high-speed internet. As California expands and rebuilds, an increasing share of utility services and related installation are being placed below ground.

## Underground Installations – By the Numbers

### UNDERGROUND INSTALLATIONS – BY THE NUMBERS

California has extensive existing underground installations

**1M+**  
water service connections<sup>9</sup>

approx.  
**33%**  
of the **220,590 miles** of electrical distribution lines across the state are **underground**<sup>10</sup>



**150,000+**

**MILES OF NATURAL GAS PIPELINES**<sup>6,7</sup>

**11M** California's natural gas utilities provide service to over 11 million gas meters<sup>8</sup>



#### EXTENSIVE SEWER INFRASTRUCTURE

Total data isn't available, but the number is quite large, for example:

San Francisco has

**1,000+ miles of sewer main** in a City/County comprised of about **50 square miles**<sup>11</sup>



Construction is ongoing for about **2,700 miles** of a planned 8,000-mile broadband expansion<sup>12</sup>



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Some local California jurisdictions now require placing new and replacement utility services underground. More underground installations are being constructed to support California’s goal of building 2.5 million new housing units by the end of 2030.<sup>13</sup> Non-residential and commercial/industrial construction is also expected to see growth; all of which requires more subsurface installations.

New types of subsurface installations are under construction, including but not limited to, reclaimed/recycled water systems, biodiesel pipelines, and a proposed hydrogen pipeline system.<sup>14</sup>

## Underground Installation Operators

Operators of underground installations provide a wide range of services, some of which seem obvious while others are less so. For example, common underground installations are operated by electric utilities, gas utilities, oil and gas producers, oil refineries, oil and gas pipeline companies, telephone utilities, cable TV, broadband internet, waters, storm drain and sewer services. Other underground installation owners include agricultural producers, food processors, manufacturers, business parks, cities, counties, towns, special districts, mutual water companies, school and community college districts, public and municipal utilities, joint powers agencies, and port and harbor districts. In addition, to a wide variety of operator types, some facilities are managed and leased by third parties.

State and federal agencies also operate underground installations at their facilities, including the State Water Project, University of California campuses and medical facilities, state university and community college campuses, U.S. Air Force bases, and national parks.



## FREQUENTLY USED TERMS IN THIS REPORT

An **“excavator”** means any person, firm, contractor or subcontractor, owner, operator, utility, association, corporation, partnership, business trust, public agency, or other entity that, with their own employees or equipment, performs any excavation.

An **“operator”** means any person, corporation, partnership, business trust, public agency, or other entity that owns, operates, or maintains a subsurface installation. Except for Caltrans all operators are required to be members and share costs in a regional notification center.

A **“Regional Notification Center (RNC)”** is an organization of operators of subsurface installations that provides advance warning of excavations or other work close to existing subsurface installations, for the purpose of protecting those installations from damage, removal, relocation, or repair.

A **“subsurface installation”** is any underground pipeline, conduit, duct, wire, or other structure, except nonpressurized sewerlines, nonpressurized storm drains, or other nonpressurized drain lines

*Refer to Government Code section 4216, for complete statutory definitions*

## Damage to Underground Installations in California Occurs Frequently

The Common Ground Alliance (CGA) is an association of underground utility professionals including excavators, locators, utility companies, government agencies, regional notification centers, and technology providers. Additionally, its Best Practices Guide is referenced in the definitions provided in Government Code section 4216 (n)(1) “Locate and field mark” and (p) “Qualified person.”

It maintains a system for gathering data about excavation damage and near misses in the United States and Canada through a system called the Damage Information Reporting Tool (DIRT). The data is provided by industry stakeholders. This report uses 2023 and 2024 DIRT data throughout.

In 2023, there were nearly 8,000 underground damage incidents reported in California to DIRT.<sup>15</sup> Figure 1 shows both the total incidents by month as well as the root cause of the incident. It shows a clear indication of “inadequate information” on the location of subsurface facilities prior to excavating (no locate request).

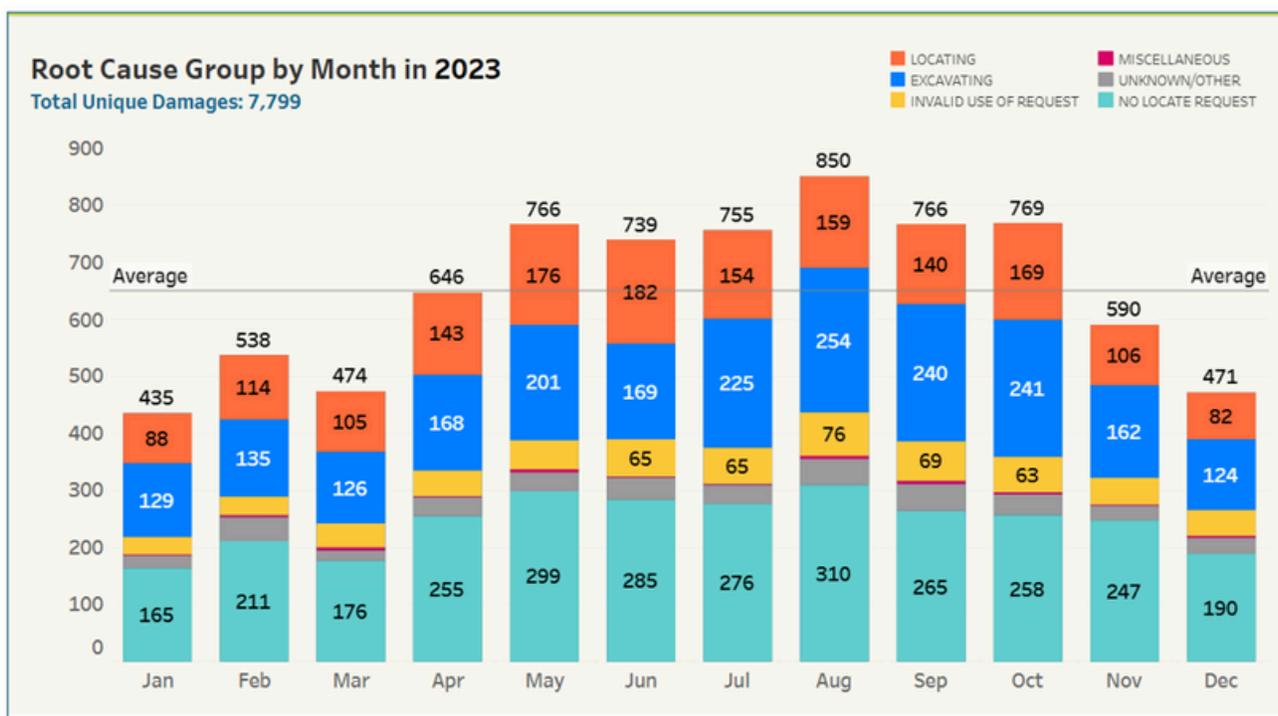


Figure 1: Monthly Total of Root Cause in California, 2023

Figure 2 shows the types of infrastructure that were damaged.

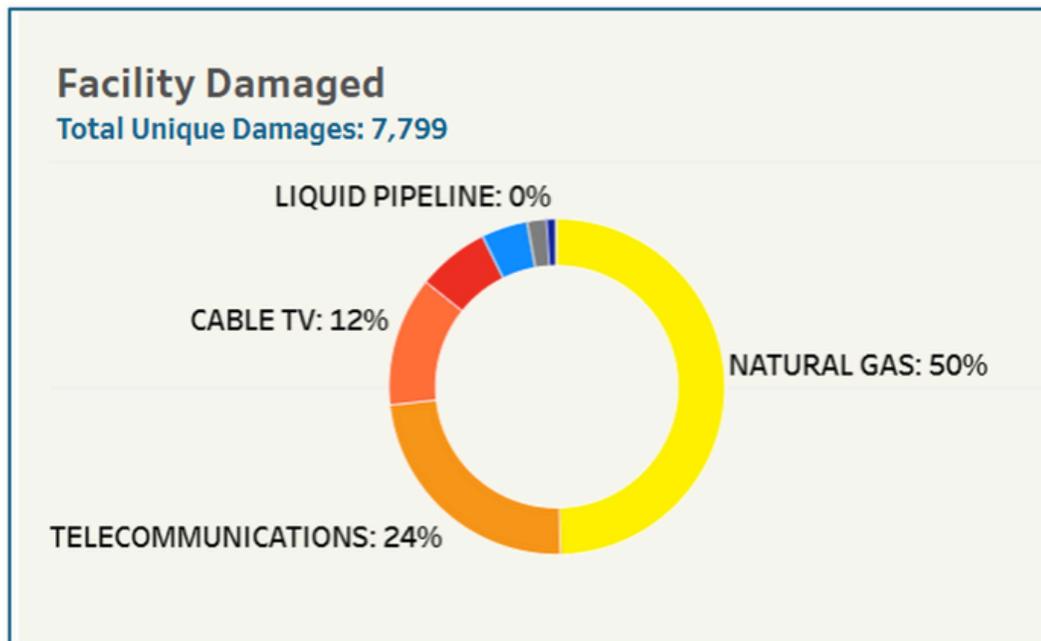


Figure 2: Facility Damage by Type in California, 2023

Figure 3 shows the type of excavator associated with the 2023 damage incidents. Note that in Figure 3, “excavator” is defined in the DIRT database to mean a “person proposing to excavate or engaging in excavation or demolition work for himself or for another person.” This could include an operator, or a contractor working for an operator, performing an excavation on their own subsurface facilities.

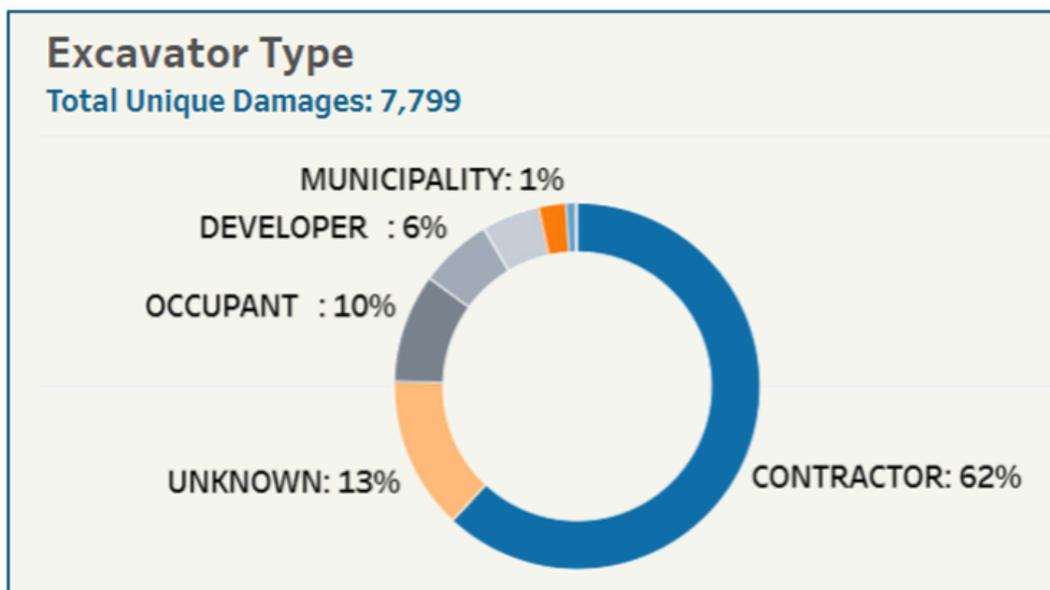


Figure 3: Excavator Damage Type in California, 2023

## Call Before You Dig, 811: Damage Prevention

When a subsurface installation is damaged, the effects are serious whether it involves costly repairs, loss of service, cost delays to a project, property damage, injury, or loss of life.

The State of California authorized a system to notify operators of planned excavation projects near their infrastructure. This is commonly known as “Call Before You Dig” or 811. In 1976, California’s two RNCs started administering the 811 service.

The 811 system facilitates communication between operators and excavators about subsurface installations that may be within a planned excavation zone. This information is used by the excavator before the project begins to focus on excavating safely and to avoid causing damage to subsurface installations.

The call is free, but the safety is priceless.

When an RNC notification of a planned excavation has been received by the operator, it verifies the presence of subsurface facilities using the best available information.

**In 2023, California RNCs received almost 2.5 million locate-and-mark requests and transmitted more than 16 million locate-and-mark requests to operators.<sup>16</sup>**

Subsurface installation can be inaccurately mapped for a variety of reasons. Examples include at the time of the installation, accurate map installation technology did not exist, the technology available was less accurate, or surface ground cover changed over time. It is not uncommon to find a subsurface installation from decades ago that was built with a change in direction to avoid a large tree. Because the installation preceded mapping, when the tree died and was removed, the need for a directional change is no longer evident but still exists underground.

To address the mapping challenges, California updated the Dig Safe law in 2016 to require infrastructure operators to amend, update, maintain, and preserve all plans and records for its subsurface facilities as that information becomes known. It also requires that when there is a change in ownership of a subsurface facility, the records must be turned over to the new operator. As of January 2023, the state requires all new subsurface installations be mapped using a Geographic Information System (GIS) and maintained as permanent records of the operator. In addition, as underground infrastructure is renovated or replaced, geospatial data must be collected and stored permanently using GIS.

California mapping is replete with unmapped underground installations that excavators uncover when preparing to excavate for projects.



To address the shortcomings in mapping, and to provide safety to the operation, excavators must physically verify the locations of subsurface installations by digging potholes (also called test holes) prior to using mechanical excavation.

Analysis of data on the root causes of underground installation damage identifies multiple opportunities to reduce harm to subsurface facilities.

Figure 4: Ingleside, San Francisco Sewer, 1912. Credit: San Francisco History Center, San Francisco Public Library

## SNAPSHOT: THE CALL BEFORE YOU DIG PROCESS



1

The excavator delineates the area to be excavated and requests a locate-and-mark service from an RNC no less than 2 days and no more than 14 days prior to the start of the excavation project.

2

The RNC identifies the operators who have facilities in the excavation area and requests locate-and-mark services by the operators.

3

The operator(s) marks the ground OR provides information about where subsurface facilities are likely to be located. These services must be completed before the excavation project begins (no less than 2 business days before).

4

The operator submits a response through the 811-system indicating the locate-and-mark service has been completed.

5

After the locate-and-mark service is complete, the excavator reviews the excavation site and **uses hand tools** to dig potholes to visually verify the location of subsurface installations (note that power tools are only allowed for potholing in specified circumstances). It is at this point that the excavator might discover unmarked facilities (which could be active or no longer in use). They could also discover that there is more than one facility (such as facilities stacked vertically or side-by-side), the facility has a change in direction that was not indicated on maps, or that the depth of the facility is different than what was expected. **Potholes are crucial to ensuring worker safety damage avoidance.** In some situations, an excavator can use a mechanical device such as a specialized vacuum to dig test holes if the RNC is notified and the facility operator has agreed to the use of such a device.

6

The excavator begins work.

Figures 5 and 6 show data on damage caused by excavation practices and problems with accurate locate and mark services.

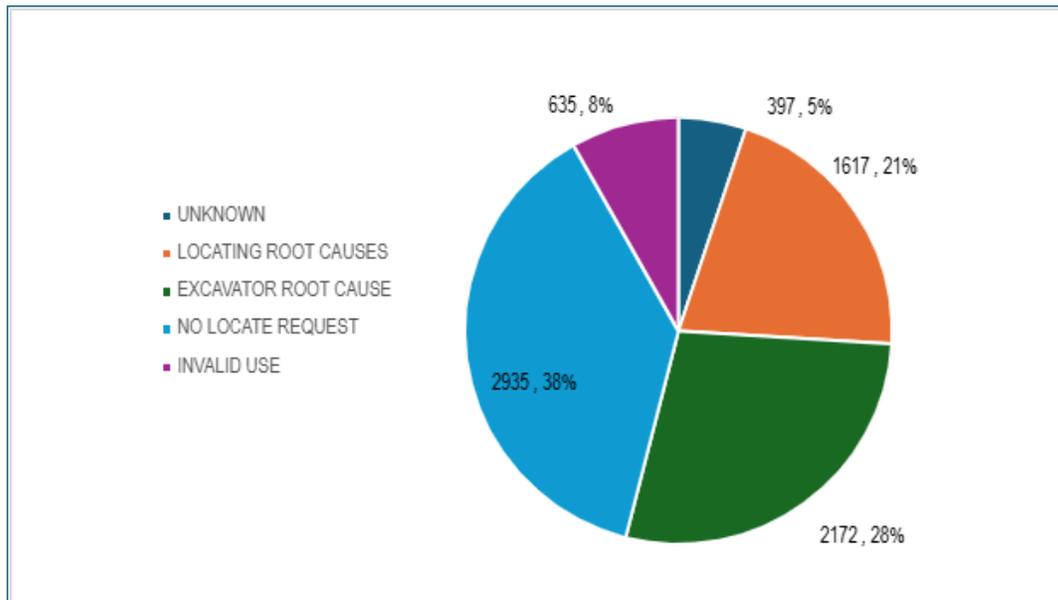


Figure 5: Root Causes of Underground Facility Damage, Source: DIRT Dashboard

As shown in Figure 5, nearly 2 of every 5 (38%) damages in 2023 were caused by failing to request locate-and-mark services through the 811 system. In 2025, the Common Ground Alliance found that 46% or “27.2 million Americans planning digging projects in the next year will not contact 811, putting themselves and their communities at risk of utility service disruptions, costly fines and repairs, and even serious injury or death.”<sup>17</sup> Property owners who are performing excavation work on their own property, that does not require a permit are not required to call 811, but are strongly encouraged to do so.<sup>18</sup>

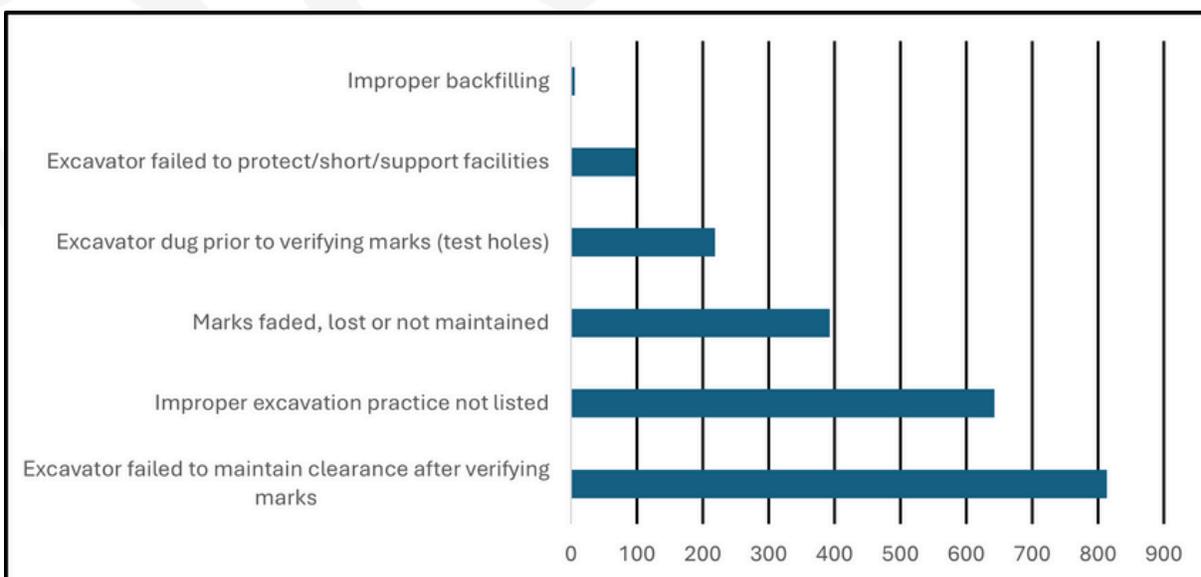


Figure 6: Excavation Damage Root Cause, 2023. Source: DIRT Dashboard

Figure 7 shows the distribution of reported locate related root causes of underground facility damage in 2023, including locator error, incomplete or inaccurate markings, record related issues, abandoned facilities, and tracer wire limitations.

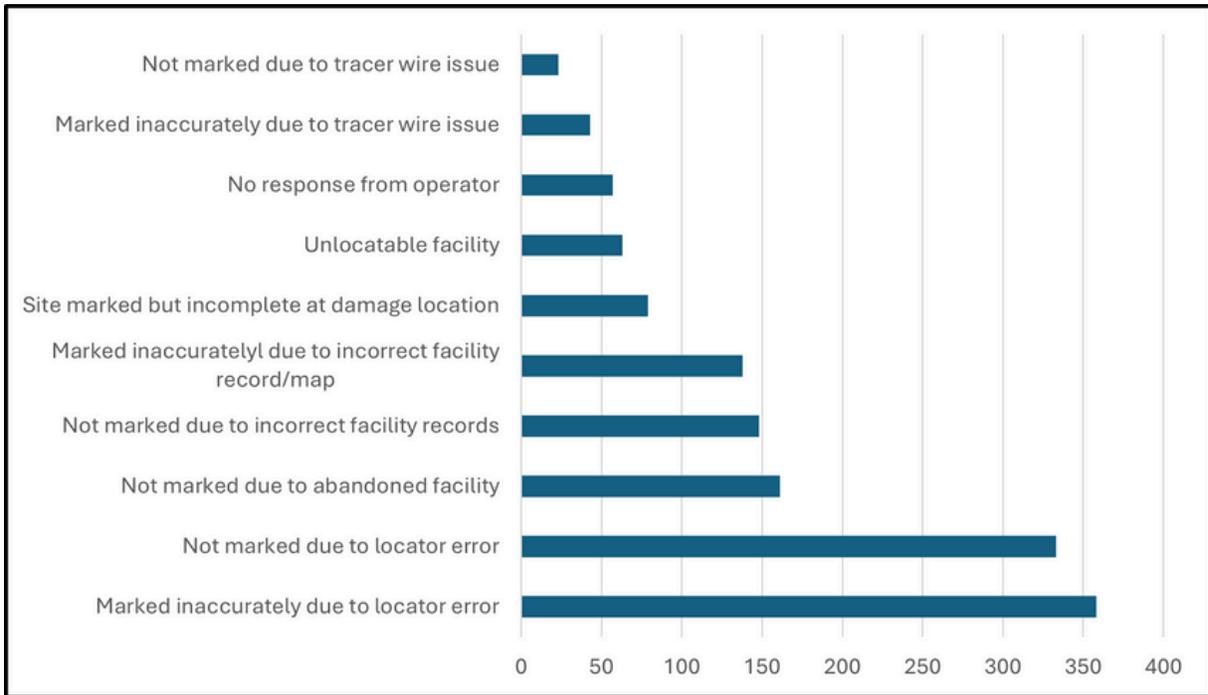


Figure 7: Locate Damage Root Cause, 2023. Source DIRT Dashboard

## HOW THE BOARD ADDRESSES DAMAGE PREVENTION

The Board, in cooperation with the regional notification centers, operators, excavators, other state agencies, industry associations, and the public are focused on:

- Raising awareness of 811,
- Fostering open communication and education among excavators and operators,
- Investigating incidents to uncover root causes and implementing solutions to promote safer practices.

The Board is engaged on specific initiatives within three units: Education and Outreach, Policy, and Investigations.

The current work of each unit follows:



Figure 8: Education and Outreach table, Mock Strike Event, 2025

## Education and Outreach

The Board is committed to delivering essential information to improve underground safety awareness and encourage the use of the 811 system, Common Ground Alliance (CGA) Best Practices, and Board-approved safety standards. The Board's stakeholders are diverse: operators and professional excavators, landowners (residential, commercial, industrial, agricultural, governments, equipment rental companies, home improvement retailers, etc.). Education and outreach must be tailored to the needs of these entities in a manner that leads to improved safety when excavation is near underground facilities. This tailoring is not only about the message, but also how and when it is delivered to the intended audience.

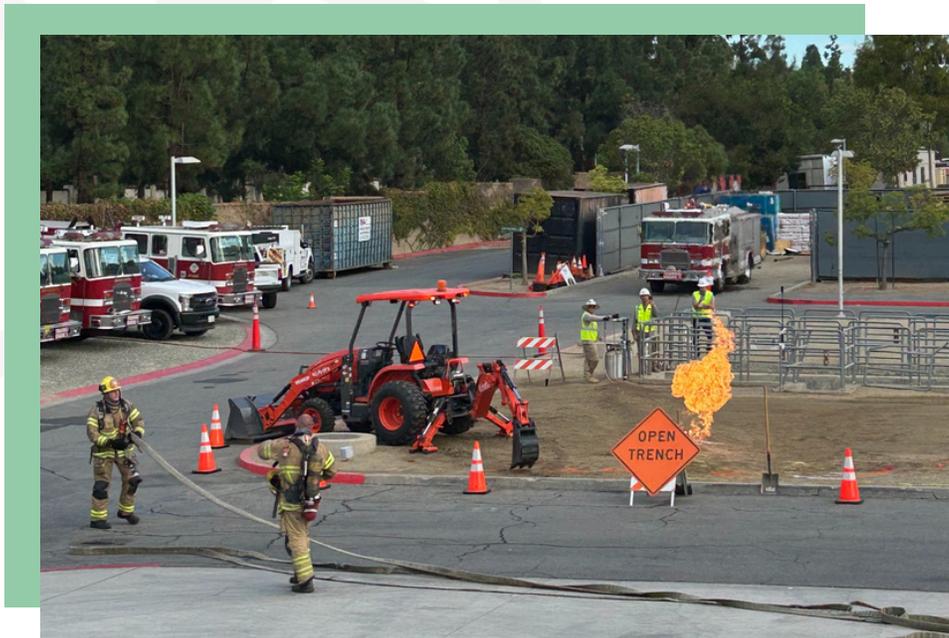
The following is a brief description of the Board's education and outreach activities.

### Public Workshops

Workshops held by the Board's committees were promoted throughout the industry to encourage public input on education and outreach coordination efforts, safety standards, and regulatory language. Public participation is strongly encouraged as are written comments to help shape ideas, beliefs, and the Board's work.

### Annual Education Meeting

State law<sup>19</sup> requires the Board to convene an annual meeting to evaluate the existing needs for education and outreach, including an understanding of those groups with the highest awareness and educational needs, including, but not limited to, homeowners. The annual meeting also facilitates discussion on how to best coordinate existing education and outreach efforts with state and local government agencies, California operators, the regional notification centers, and trade associations that fund outreach and education programs to encourage safe excavation practices. The Board holds this meeting annually in September.



*Figure 9: Mock Strike Event, 2025*

## Regulations and Standard Safety Practices

The Board has several active initiatives to improve public and worker safety and to prevent damage to subsurface facilities. Each of these initiatives are briefly described below.

### Regulations for mapping new subsurface facilities using Geographic Information Systems (GIS)

When locators use an operator’s faulty utility map — out of date and/or inaccurate — they can make marking errors which then lead to underground-utility strikes. GIS refers to a database that stores geospatial coordinates (that is, location records) and other descriptors of any physical features found on Earth including underground utilities.

In July 2025, the Board published draft regulatory language defining “new subsurface installations,” and “geospatial coordinates,” specifying geospatial-coordinate accuracy, and recordkeeping for selected components, attributes and geospatial metadata. With the addition of public comments, the Board will submit the draft GIS mapping regulations to the California Office of Administrative Law (OAL) for approval in 2026-2027.



Figure 10: Example of a digital map showing underground utilities within an 811 ticket-excavation area. Source: Common Ground Alliance

### Standard Practices for Potholing

Potholing means digging holes, following a locate and mark, using hand tools to visually verify where subsurface facilities, obstacles, and hazards exist within and near a proposed excavation. Government Code section 4216.4 requires excavators to determine the exact location of subsurface facilities using hand tools prior to using any power-driven excavation or boring equipment within a tolerance zone (as defined in Government Code section 4216 (u), generally 24” from centerline).

In July 2025, the Board published for public comment draft standard practices for potholing within and near an excavation site to visually identify subsurface facilities. This work is ongoing and will continue into 2027.

### Standard Practices for Unmarked Facilities

Unmarked or inaccurately marked underground facilities continue to be a public safety concern. When an excavator finds an unmarked facility, they must presume that it is active, and the only recourse the excavator has is to notify the RNC that an operator failed to mark its line. However, with an unknown operator, the excavator is left with no one to verify if the unmarked facility is alone, part of a bank of facilities, active, inactive, or referenced by an inaccurate mark in another location.

The Board is developing Standard Practices for Unmarked Subsurface Facilities. This work is ongoing and will continue into 2027.

## **RNC Membership Regulations**

Government Code section 4216.1 requires operators to be members of one of California’s two regional notification centers (California Department of Transportation is exempted from this requirement). As of April 2024, the Board learned of entities that had terminated their membership with an RNC without notifying this Board. The RNCs brought this to the Board’s attention. The Board receives no direct information about whether the entity’s subsurface facilities have been sold, removed, or abandoned as Government Code section 4216.1 does not address these issues, only the membership requirement. When an operator terminates its RNC membership it is unclear who, if anyone, has locate-and-mark responsibility for the terminated entity’s subsurface facilities, or whether the terminated entity still owns the subsurface facilities and thus, retains responsibility to locate- and-mark.

This discussion revealed the critical role that geospatial data (colloquially referred to as “shapefiles”) plays in the ticket notification process. This geospatial data informs the RNCs which operators need to be notified of a proposed excavation when an excavator makes a locate-and-mark request for a planned excavation. Each RNC relies on geospatial data to identify and notify all operators who have subsurface facilities within the proposed excavation. Despite the cornerstone role of shapefiles within the ticketing system, no law or regulation requires members to maintain current shapefiles with their RNCs. Relatedly, operators may change their shapefiles at any time, for any reason, including changing their shapefiles to no longer receive notifications in some areas.

The Board is working to develop proposed regulations on membership termination and maintaining accurate and up to date shapefiles.

## **Investigations and Enforcement**

The Board has a team of investigators based in northern and southern California dedicated to investigating possible violations of the Dig Safe Act. The following is a brief description of one of the Board’s enforcement initiatives.

### **“No 811” Pilot Program**

To address excavation damage incidents that occur without a locate request to the 811 system, the Board’s Investigations staff launched a “No 811” pilot program in 2023. The pilot establishes a voluntary reporting pathway for gas operators to notify the Board when their facilities are damaged during excavation activities that occurred without an 811 ticket. These incidents, commonly referred to as “no ticket” or “no 811” damages, represent a significant share of excavation-related damage statewide but are often underreported to regulatory authorities. Through this pilot, the Board investigates reported “no 811” damages, gathers first-hand information from operators and excavators, and applies a structured triage process to ensure that investigations are supported by sufficient evidence. The program was incrementally expanded to include additional operators, improved data collection tools, and standardized investigative

procedures. By increasing visibility into “no 811” damage events and investigating these cases consistently, the pilot program supports enforcement, informs education and outreach efforts, and provides data to better understand and reduce excavation without prior notification.



*Figure 11: Underground Safety Board Annual Education Meeting, 2025*



*Figure 12: Underground Safety Board Investigators at an incident scene in Hayward, CA, 2025. Photo credit: Jaden Schaul / KTVU*

## RECOMMENDATIONS

The Board would like to work with the Governor and Legislature to address several statutory gaps that adversely impact the effectiveness of California’s underground excavation safety system. The issues described below reflect limitations in current law that affect the collection of accurate statewide damage data, the clarity of operator and excavator responsibilities, and the Board’s ability to carry out its enforcement and safety mission.

These recommendations focus on areas where statutory updates would produce the greatest improvements in public and worker safety and enhance statewide consistency in excavation related subsurface damage prevention.

### National Data Supporting These Recommendations

Each year, the Common Ground Alliance, a national safety organization compiles data on excavation damage that occurs across the United States. Their 2024 DIRT<sup>20</sup> report (previously mentioned on pg. 13) summarizes the most common reasons why underground facilities are damaged and identifies trends that contribute to safety risks nationwide. This national analysis is one of the largest sources of information available about why damage happens and what can be done to prevent it.

### National Findings

#### 200,000 DAMAGES

Nearly 200,000 damages to underground facilities were reported in the United States in 2024.

#### RECURRING CAUSES

Most damages were linked to a small number of recurring causes, including failing to contact 811 before digging, inaccurate or outdated utility records, incorrect or missing markings in the field, and excavation without verifying the location of underground lines.

#### DELAYS AND RISKS

In many states, excavators reported that utility operators did not always complete locate and mark requests on time, or only completed part of the work, causing delays and increasing safety risks.

#### INACCURATE RECORDS

Much of the damage occurred on older water, sewer, telecommunications, and other utility systems where records and maps were incomplete or inaccurate.

## Relevance to California

The national findings summarized above are relevant to California in both scale and complexity given the state's underground utility systems and the volume of excavation activity that occurs statewide.

California regional notification centers process millions of locate and mark requests each year, across a diverse array of landscapes. This level and breadth of activity increases exposure to the same systemic risks identified in the national data, including excavation conducted without prior notification, inaccurate or incomplete facility records, and failures to verify facility locations before excavation begins.

Much of California's subsurface infrastructure was installed decades ago, prior to availability of modern mapping technologies. Excavators encounter abandoned water, sewer, telecommunications, electrical, and gas facilities with incomplete records, uncertain ownership, or inaccurate location information. These conditions are consistent with national findings that show disproportionate excavation damage to older infrastructure with limited or outdated documentation.

California maintains strong enforcement authority for excavation damage prevention through multiple state agencies. However, that authority is distributed across multiple jurisdictions. The Board investigates potential violations of the Dig Safe laws and refers matters to the appropriate enforcement entities when warranted. Once referrals are made, the Board does not have direct visibility into enforcement outcomes, which limits the ability to assess statewide trends, evaluate the effectiveness of corrective actions, and to identify recurring risk factors across agencies.

Taken together, California's high excavation activity, abandoned infrastructure, and a jurisdictionally distributed enforcement framework demonstrate that the national findings described above are applicable to California conditions and support the need for the statutory clarifications and coordination improvements identified in this report.

## Conclusion

National data confirms that the challenges identified in this Annual Report such as incomplete facility records, inconsistent reporting, unmarked facilities, and uneven enforcement are shared across the country. These findings support the Board's recommended updates to California law to improve underground safety.

## 1. Excavation Without Contacting 811

### Recommendation:

Legislation is necessary to support the development of a coordinated, statewide 811 education and awareness framework led by the Board and implemented in collaboration with the regional notification centers, relevant licensing and regulatory agencies. This framework will focus on

improving an understanding of excavation requirements, setting clear expectations regarding locate response timelines, and reinforcing the roles and responsibilities of excavators and operators within the 811 processes.

## **Background:**

A leading cause of underground facility damage in California is excavation conducted without contacting 811. The Board finds that this behavior is driven by two primary and distinct factors: A lack of understanding what constitutes excavation under the law and a lack of confidence in the performance of the 811 system.

### **I. Misunderstanding of excavation requirements**

The Board continues to encounter situations in which contractors who are excavating do not understand that their actions are “excavation” as defined by law. Investigations and stakeholder feedback reflect statements such as, “I do not need a ticket because I am not digging very deep.” This indicates a training and awareness gap regarding the statutory definition of excavation (Government Code section 4216 (g) , in pertinent part, say an excavation is “....any operation in which earth, rock, or other material in the ground is moved, removed, or otherwise displaced....”) which applies regardless of depth, project size, or type of work.

### **II. Reduced confidence in 811 system performance**

The Board has found that a portion of excavation activity conducted without an 811 ticket is associated with concerns regarding the reliability and timeliness of locate responses within the existing 811 system. Under current law, excavators must obtain an 811 ticket and may not begin work until all affected utility operators have made a legally appropriate response for locating and marking their facilities. Utility operators are required to complete their locate and mark activities within two working days.

Through investigations, as well as through public comments, surveys, and stakeholder workshops, the Board has consistently received information indicating that locate and mark responses are in some cases delayed beyond the statutory timeframe or remain incomplete. During such delays, excavators are legally prohibited from proceeding with work, resulting in extended downtime, increased project costs, and operational uncertainty despite compliance with notification requirements.

The Board has found that repeated experiences with delayed or incomplete locate and mark responses may undermine confidence in the effectiveness of the 811 processes. This erosion of confidence, as reported by excavators during investigations and public engagement activities, may contribute to decisions to proceed without an 811 ticket in violation of the law, based on a perception that the system does not reliably support timely project execution.

These two factors operate together to drive excavation without contacting 811.

## 2. Incomplete Statewide Damage Reporting

### **Recommendation:**

Legislation is necessary to establish a statewide clearinghouse for all subsurface facility damage reports. This clearinghouse would require reporting from operators, excavators, and the regional notification centers and would allow the Board to utilize California-specific information to identify systemic risks, statewide trends, and high-risk practices that require corrective action. Comprehensive and consistent damage reporting would also enable the Board to evaluate the outcomes and effectiveness of its education, outreach, and investigative efforts over time, support data-informed policy decisions, and promote the continuous improvement of California's excavation safety framework.

### **Background:**

California does not maintain a single comprehensive statewide system for collecting excavation damage data. The Board receives damage notifications from excavators, while some operators report damage information to other state or federal agencies based on facility type or regulatory jurisdiction. Other operators may not be required to report damage events to any centralized entity. In addition, regional notification centers do not report damage incidents to the Board. As a result, damage information is fragmented across multiple entities. This fragmentation limits the ability to analyze statewide trends, identify contributing factors, or evaluate the effectiveness of damage prevention efforts.

## 3. Unclear Statutory Process and Undefined Terminology When Abandoned Facilities are Encountered

### **Recommendation:**

Legislation is necessary to establish a statutory definition of an "abandoned subsurface installation" and to create a clear process to require operator engagement when an unmarked or unknown subsurface facility is encountered during excavation. This process should clarify operator responsibilities for investigating potential ownership, the sharing of available records, or information relevant to facility status, and coordination with other operators when ownership is uncertain. Establishing both a clear definition and a defined process in statute will provide statewide consistency, reduce uncertainty for excavators in the field, and support safe and legally compliant excavation when abandoned facilities are encountered.

### **Background:**

Current law requires that all underground facilities within the delineated excavation area be located and marked. Government Code section 4216.3(c) further requires an operator to

indicate, the presence of any known abandoned subsurface installation, within the delineated area by marking a letter “A” inside a circle. This requirement reflects legislative recognition that abandoned facilities present particular safety and operational challenges for excavators and that excavators must be made aware of their presence before proceeding with work.

However, current statute does not define the term “abandoned subsurface installation,” despite imposing a specific marking requirements when such facilities are present. Because the designation of a facility as abandoned can have legal, operational, and ownership implications, defining this term involves policy judgments that extend beyond the Board’s regulatory authority. In the absence of a statutory definition, operators may apply inconsistent interpretations of what constitutes an abandoned facility, and the Board lacks a clear legal standard to apply during investigations. Establishing a definition in statute would provide statewide consistency, clarify operator and excavator responsibilities, and ensure that the Board enforcement and oversight activities are grounded in clear legislative direction.

In practice, the Board has observed situations in which an excavator encounters an unmarked facility during excavation that is later understood to be an abandoned facility. When clarification is sought, the most common operator response is that the facility is not theirs, and in some cases, all operators contacted may deny ownership. Without a statutory definition of abandonment, and without a clear process compelling operator engagement, these facilities remain unclassified and unmarked. This leaves excavators without the ability to proceed in a safe and legally compliant manner.

When this occurs, the excavator is left without a clear path forward. The excavator cannot reasonably determine facility ownership or status, and current law does not compel operators to coordinate, investigate, or resolve responsibility for the facility. At the same time, excavation cannot legally continue until the unmarked facility is addressed. This creates a gap in the statutory process where excavation is stalled, responsibility is unclear, and safety risks remain unresolved.

The Board has found that this gap places an unreasonable burden on excavators to resolve facility ownership and classification, tasks that are impossible for them to perform.

## 4. Incomplete Mapping of Subsurface Facilities That Lack Records

### **Recommendation:**

Legislation is necessary to strengthen requirements for the documentation and mapping of subsurface facilities that are not reflected in available records. Statutory updates should require operators to update Geographic Information System (GIS) records when subsurface facilities are exposed, repaired, replaced, relocated, or otherwise identified during excavation activities, and to establish a long-term framework for improving the accuracy of subsurface facility records statewide.

## **Background:**

Current law requires new subsurface installations to be mapped using Geographic Information Systems (GIS) and maintained as permanent records of the operator. These requirements have improved the accuracy of records for newly installed facilities. However, many subsurface facilities currently in the ground are not reflected in available maps or records or are documented using outdated or approximate information.

In practice, excavators frequently encounter subsurface facilities during excavation that are not identified through the 811-notification process because no operator has records indicating the presence of the facility within the excavation area. When this occurs, excavation must stop, as excavators are required to presume the facility is active. However, existing law does not require operators to update mapping records when undocumented facilities are discovered, nor does it establish a process to improve the accuracy of records for subsurface facilities that lack documentation.

As a result, subsurface facility records may remain incomplete even after facilities are exposed, repaired, or otherwise verified in the field. This perpetuates uncertainty for future excavation activities, increases the risk of damage, and undermines the effectiveness of the 811 system. Strengthening statutory mapping requirements to capture newly identified subsurface facilities when they are encountered would incrementally improve record accuracy over time and reduce preventable excavation-related safety risks.

## **5. Fragmented Enforcement Authority and Inability to Compel Compliance with Investigations**

### **Recommendation:**

Legislation is necessary to grant the Board authority to compel stakeholders to comply with investigations and impose penalties for noncompliance.

### **Background:**

California maintains strong enforcement authority for excavation damage prevention across multiple agencies with distinct statutory jurisdictions. In most cases, enforcement authority rests with the agency that regulates the facility or the contractor involved. The Board does not have direct authority to impose administrative penalties and must rely on referrals to other agencies for enforcement. This referral-based structure limits the Board's ability to ensure timely compliance.

In addition, the Board lacks a direct statutory mechanism to compel excavators, operators, or other stakeholders to cooperate with Board investigations. Although Board regulations require cooperation, such as responding to information requests and participating in interviews, those requirements exist in regulation rather than statute. Most of the Board's cases are referrals to

other agencies. These referral agencies do not have authority to enforce violations of Board regulations. As a result, investigations may be delayed, require repeated follow up, and consume additional state resources.

## PLANNING AND DESIGN SB 254 REQUIREMENTS

Senate Bill (SB) 254 requires the Board to adopt statewide Planning and Design (P&D) regulations by July 1, 2027. SB 254 also requires this annual report to evaluate the advantages, barriers, and funding options for a web-based platform supporting the P&D information-exchange process, including a mechanism for federally recognized or non-federally recognized California Native American tribes to view project plans and communicate with project submitters.

Because SB 254 was approved by Governor Newsom on September 19, 2025, and the Board’s annual report is due February 1, the Board has had limited time to begin the required evaluation. This section provides an initial update and outlines the Board’s planned approach for completing the full assessment in future reporting cycles.

<p><b>INITIAL ASSESSMENT</b></p>	<p>The Board has analyzed all related new requirements under SB 254 and integrated them into its multi-year P&amp;D regulatory development framework.</p>
<p><b>EARLY STAKEHOLDER ENGAGEMENT BEGUN</b></p>	<p>Initial outreach has been conducted with operators, designers, and regional notification centers to identify existing processes, communication challenges, and potential technology needs.</p>
<p><b>PRELIMINARY THEMES IDENTIFIED</b></p>	<p>Early discussions suggest that successful development of the P&amp;D platform will require consideration of:</p> <ul style="list-style-type: none"> <li>• Wide variation in operator data systems</li> <li>• Absence of statewide design-phase standards</li> <li>• Funding constraints</li> <li>• Integration with existing RNC systems and workflows</li> </ul>

## 2024-25 HIGHLIGHTS AND ACCOMPLISHMENTS

- The Annual Education and Outreach Meeting engaged the industry on best practices and emerging technology for subsurface facility installation safety
- Publicized National 811 Day in August and National Safe Digging Month
- Completed 47 investigations
- Referred 41 violations to other agencies for potential sanctions
- Made improvements to the Board’s damage notification system

# APPENDIX A

## CALIFORNIA LAWS RELATED TO SUBSURFACE INFRASTRUCTURE DAMAGE PREVENTION

### **SB 661 (Hill) Chapter 809, Statutes of 2016**

**The Dig Safe Act of 2016** creates the Underground Safety Board with the following overarching duties:

1. Coordinate education and outreach activities that encourage safe excavation practices,
2. Develop Standard Safety Practices and Regulations,
3. Investigate possible violations of the 811 one-call law; and
4. Enforce the 811 one-call law

### **AB 1914 (Flora) Chapter 708, Statutes of 2018**

Directs the Underground Safety Board to determine through regulation what types of power tools may be used around buried facilities prior to determining their exact location using hand tools.

### **AB 1166 (Levine) Chapter 453, Statutes of 2019**

Requires operators to electronically notify the excavator of their locate and mark activities beginning January 1, 2021, and requires the Underground Safety Board to develop an application process to approve one-year extensions for good cause.

### **SB 865 (Hill) Chapter 307, Statutes of 2020**

Requires GIS mapping of new underground facilities, requires the regional notification centers to share certain information with the Underground Safety Board, and moves the Underground Safety Board to the newly formed Office of Energy Infrastructure Safety (Energy Safety) as of January 1, 2022.

### **SB 297 (Durazo) Chapter 726, Statutes of 2021**

Increases penalties for knowing and willful violations of the Dig Safe Act of 2016 to “up to \$100,000.”

### **SB 778 (Ochoa Bogh) Chapter 447, Statutes of 2024**

Revises the procedure an excavator must follow should a ticket expire; revises the requirements for an excavator to use vacuum equipment; and revises the requirements related to subsurface facility operator responses that an excavator must receive before beginning excavation, and the emergency and notification procedures when an excavator discovers or causes damage to a subsurface infrastructure.

### **California Code of Regulations, Title 19, Division 4**

Establishes investigations and enforcement authority of the Underground Safety Board and defines responsibilities related to areas of continual excavation and pre-excavation responsibilities.

### **California Code of Regulations, Title 19, § 4100**

After calling 911 emergency services, requires excavators to notify a regional notification center within two hours after the excavator has knowledge of the damage if the damage involves a natural gas, hazardous liquid, any high priority subsurface infrastructure and any damage that causes injury that requires medical services or caused fatalities.

### **FEDERAL LAWS RELATED TO SUBSURFACE INFRASTRUCTURE DAMAGE PREVENTION (SUMMARIES – REFER TO SPECIFIC FEDERAL LAW FOR FULL TEXT)**

#### **49 U.S.C. §§ 60105–60106**

Allows States to assume safety authority over intrastate gas pipelines, and hazardous liquid pipelines.

#### **49 U.S.C. §60114**

Authorizes the Secretary of Transportation to prescribe regulations providing minimum requirements establishing and operating an 811 one-call notification system for a State to adopt that will notify an operator of a subsurface infrastructure of activity in the vicinity of the infrastructure that could be threatened.

#### **49 U.S.C. §60116**

Requires each owner or operator of a gas or hazardous liquid pipeline to carry out a continuing program to educate the public on the use of a 811 one-call notification system prior to excavation and other damage prevention activities, the possible hazards associated with unintended releases from the pipeline, the physical indications that such a release may have occurred, what steps should be taken for public safety in the event of a pipeline release, and how to report such an event.

#### **49 U.S.C. §60134**

The Secretary of Transportation may make a grant to a state authority (including a municipality with respect to intrastate gas pipeline transportation) to assist in improving the overall quality and effectiveness of a damage prevention program of the state authority if the state authority has an annual certification under 49 U.S.C. §60105 or an agreement under 49 U.S.C. §60106, an effective damage prevention program or demonstrates progress toward establishing such a program and does not provide any exemptions to municipalities, state agencies, or their contractors from the one-call notification system requirements of the program.

#### **49 CFR 192.614**

Each operator of a buried pipeline must carry out a written program to prevent damage to that pipeline from excavation activities. An operator may comply through participation in a public service program, such as an 811 one-call system, but such participation does not relieve the operator of responsibility for compliance with this section.

**49 CFR 195.422(a)** Each operator shall, in repairing its pipeline systems, ensure that the repairs are made in a safe manner and are made to prevent damage to persons or property.

(b) No operator may use any pipe, valve, or fitting, for replacement in repairing pipelines, unless it is designed and constructed as required by this part.

**49 CFR 198, Subpart D**

Establishes standards for effective state damage prevention enforcement programs and prescribes the administrative procedures available to a state that elects to contest a notice of inadequacy. PHMSA conducts annual program evaluations and certification reviews of state pipeline safety programs. PHMSA will also conduct annual reviews of state excavation damage prevention law enforcement programs.

**49 U.S.C. §60101**

Authorizes the PHMSA Administrator to pay out funds appropriated or otherwise make available up to 80 percent of the cost of the personnel, equipment, and activities reasonably required for each state agency to carry out a safety program for intrastate pipelines under a certification or agreement with the Administrator or to act as an agent of the Administrator with respect to interstate pipelines.

**49 Code of Federal Regulations part 198.5549 CFR 198.55**

As part of a state receiving grants, PHMSA conducts annual program evaluations and certification reviews of state pipeline safety programs. PHMSA will also conduct annual reviews of state excavation damage prevention law enforcement programs. If PHMSA finds a state's enforcement program inadequate, PHMSA may take immediate enforcement against excavators in that state. The state will have five years from the date of the findings to make program improvements that meet PHMSA's criteria for minimum adequacy. A state that fails to establish an adequate enforcement program within five years of the finding of inadequacy may be subject to reduced grant funding.

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## Footnotes

- <sup>1</sup> [About Underground Safety Board \(Updated\) | Office of Energy Infrastructure Safety](#)
- <sup>2</sup> [California Government Code section 4216.12 \(2025\)](#)
- <sup>3</sup> [California Government Code section 4216 \(2025\)](#)
- <sup>4</sup> [Search | California Secretary of State, File Number 1534866](#)
- <sup>5</sup> [Search | California Secretary of State, File Number 1246642](#)
- <sup>6</sup> [Southern California Gas Company—Pipeline Basics](#)
- <sup>7</sup> [Gas Systems](#)
- <sup>8</sup> [Natural Gas and California](#)
- <sup>9</sup> [Drinking Water - Public Water System Annually Reported Number of Service Connections Metered and Unmetered by Service Connection Type - Service Connections – Reporting Years 2013-2023 - California Natural Resources Agency Open Data](#)
- <sup>10</sup> [CPUC Undergrounding Programs Description](#)
- <sup>11</sup> [Tunnels Under San Francisco? Inside the Dark, Dangerous World of the Sewers | KQED](#)
- <sup>12</sup> [California on track to surpass 3,000 miles of broadband construction by end of year with new infrastructure agreements signed | Governor of California](#)
- <sup>13</sup> [Governor Newsom unveils proposal to cut red tape and fast-track housing and development | Governor of California](#)
- <sup>14</sup> [Angeles Link | SoCalGas](#)
- <sup>15</sup> [2023 DIRT Report](#)
- <sup>16</sup> [DIRT Dashboard](#)
- <sup>17</sup> [Survey Finds 46% of Americans Plan to Dig Without Contacting 811 Beforehand, Risking Utility Disruptions and Safety Hazards. Common Ground Alliance, April 1, 2025](#)
- <sup>18</sup> [California Government Code, section 4216.8](#)
- <sup>19</sup> [California Code, GOV 4216.17](#)
- <sup>20</sup> [2024 DIRT Report](#)

