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Safety, From the Ground Up: An Update from the California Dig Safe Board

The California Underground Facilities Safe Excavation Board, colloquially known as the “Dig Safe” Board, was created by the Dig Safe Act of 2016 (SB 661, Hill, Chapter 809, Statutes of 2016) and tasked with investigating excavation accidents, developing excavation safety standards, and coordinating education and outreach programs. In its two-plus years of operation, the Board has worked to fulfill these statutory obligations while establishing a transparent, responsive administrative foundation.

The purpose of this hearing is to review the actions taken by the Dig Safe Board thus far, and to examine the Board’s successes and areas where gaps may still exist. Recent dig-ins continue to expose shortcomings in California’s 8-1-1 program, but present opportunities for education and outreach. The Dig Safe Board was created to address the ongoing concerns around dig safety, and this Subcommittee looks forward to the Board’s plans to influence change and be responsive to emerging safety concerns.

Findings

- *Recent excavation incidents have continued to highlight the ongoing need for education and outreach. Although many excavators and operators have engaged in Dig Safe Board proceedings, the Board should continue to seek out parties who may not be seen as traditional excavators.*
- *Current proceedings before the California Public Utilities Commission reveal historic failures by utilities to prioritize safety. The Legislature should consider whether assessed penalties should be directed toward education and outreach bodies like the Dig Safe Board.*
- *The Dig Safe Board is operating in a deficit. Although they are on track to repay their startup loan on time, subsequent fee adjustments leave them without enough revenue to sustain operations. As the Board begins enforcement and launches their education-in-lieu-of-fine program, the Legislature should consider whether the functions of the Board merit additional funding.*

8-1-1 and Dig-Ins

Much of California's essential services travel through underground infrastructure, such as water mains, conduit carrying telecommunications cabling or electric lines, or natural gas or oil pipelines. Many California industries work beside this underground infrastructure, from the utilities themselves doing maintenance or installation work, to landscapers, construction companies, homeowners, or farmers. As a result, the potential for these various workers to strike underground infrastructure poses a unique and ever-present safety risk.

To minimize the chance of striking underground infrastructure, a calling system was established around the 8-1-1 "Call Before You Dig" phone number.¹ Excavators call 8-1-1 before beginning work. The 8-1-1 call is routed to the nearest "one-call center,"² a nonprofit association providing operators (either over the phone or online) that collect information about the excavator's planned dig site. The one-call center assigns a "ticket" to the excavator's information. The one-call center then communicates the ticket information to the appropriate utility companies. Statute prohibits one-call centers from charging excavators a fee for obtaining a ticket.³

Once utility companies receive a ticket, they have two working days,⁴ not including the date of notification, to visit the excavation site and mark the areas above underground infrastructure, in a process known as "locate and mark." After the utility locate and mark occurs, the excavator is

¹ Created in March 2005 by the FCC; <https://docs.fcc.gov/public/attachments/DOC-257293A1.pdf>

² Also known as a "regional notification center". In California there are two : the Underground Service Alert-North (USA North) and Underground Service Alert South (DigAlert)

³ Government Code §4216.1

⁴ Government Code §4216(l)

able to commence digging but must maintain a tolerance zone⁵ around the marked underground infrastructure.

A “dig-in” occurs when an excavator strikes underground utility infrastructure. Dig-ins can result in fatalities and injuries – such as the explosions in November 2015 in Bakersfield, California⁶ and in July of this year in Murrieta, California⁷ - as well as property damage, environmental damage, significant cost, and fire. Any error in the 8-1-1 chain could result in a dig-in, from the excavator never calling 8-1-1, to the utility never marking or incorrectly marking the area, or to the excavator digging too close or cavalierly to the marked infrastructure.

As highlighted previously by this Subcommittee,⁸ excavation near underground facilities is a persistent threat to operators, contractors, farmers, and homeowners. Despite the presence and availability of the one-call centers and 8-1-1 resources, dig-ins continue to damage underground infrastructure, leave residents without vital utility service, and put workers and civilians at risk.

A Persistent Threat

Excavation continues to be the top cause of gas pipeline safety accidents,⁹ as tragically illustrated in a July incident in Murrieta, California. While the Murrieta dig-in is still under investigation, news reports have indicated a solar contractor struck a Southern California Gas Company pipeline while working at a single-family home.¹⁰ The subsequent gas leak ignited, killing a utility worker and injuring 15 others. It was additionally reported that the solar contractor failed to call 8-1-1 prior to digging onsite.¹¹

In February, a four-inch gas pipeline exploded in the Jordan Park neighborhood of San Francisco, resulting in a fire that burned five nearby buildings.¹² The preliminary report issued by the National Transportation Safety Board found a third-party contractor working on a telecommunications project damaged a Pacific Gas & Electric Company (PG&E) natural gas line, which ignited and led to the fire.¹³ News reports suggested PG&E had correctly marked its underground infrastructure prior to the incident.¹⁴

Additionally, an investigation was opened in December of 2018 at the California Public Utilities Commission (CPUC) involving fraudulent reporting of locate and mark ticket responses at

⁵ Statute maintains 24 inches as the tolerance zone; Government Code §4216(u)

⁶ <https://www.kerncountyfire.org/news-incidents/latest-incidents1/1188-thirdpartygasdigincident.html>

⁷ <https://www.nbclosangeles.com/news/local/SoCal-Gas-Technician-Killed-in-Explosion--512805811.html>

⁸ https://seuc.senate.ca.gov/sites/seuc.senate.ca.gov/files/12-17-15_background.pdf and <http://seuc.senate.ca.gov/sites/seuc.senate.ca.gov/files/6-4-13background.pdf>

⁹ <https://www.phmsa.dot.gov/data-and-statistics/pipeline/national-pipeline-performance-measures>

¹⁰ <https://www.nbclosangeles.com/news/local/SoCal-Gas-Technician-Killed-in-Explosion--512805811.html>

¹¹ <https://www.latimes.com/local/lanow/la-me-house-explosion-murrieta-20190715-story.html>

¹² <https://www.sfchronicle.com/bayarea/article/Gas-line-explosion-in-SF-keeps-crews-busy-morning-13597673.php>

¹³ <https://www.nts.gov/investigations/AccidentReports/Reports/PLD19MR001-Preliminary.pdf>

¹⁴ <https://www.sfchronicle.com/bayarea/article/Gas-line-explosion-in-SF-keeps-crews-busy-morning-13597673.php>

PG&E.¹⁵ An investigation by the CPUC's Safety & Enforcement Division found the ticket falsification was known to PG&E as early as 2010 following an internal audit, but management failed to address the issue until a whistleblower complaint was filed.¹⁶ The investigative report by the Safety & Enforcement Division notes over 195 dig-ins might be associated with the false or late tickets, providing only a glimpse at the severity of the risk in PG&E's program since dig-ins alone give *"no idea about the number of near misses or risky excavations without markings."*¹⁷ It is unclear whether these allegations are specific to PG&E or might be symptomatic of broader issues statewide.

The causes for excavation damage are varied and may arise from any break in the 8-1-1 chain. Many excavators still fail to call 8-1-1 ahead of their project, meaning they embark on an excavation project without any markings to indicate the location of underground facilities. This failure to call may be due to lack of information about the 8-1-1 service, or due to the excavator thinking their project does not necessitate a call. Even if 8-1-1 is called, utility locators may still fail to respond promptly to the excavator's ticket. Locators who do respond may incorrectly mark underground facilities, either due to their own error or because they were relying on records that are obsolete or inaccurate.

Although the causes are varied, the common thread in excavation incidents is a lack of communication between stakeholders along the 8-1-1 chain. Previous legislative attempts to limit the risk in the 8-1-1 system established statutory liability provisions centered on enforcement.¹⁸ While liability may be a common – albeit blunt – tool for securing safety, it is rarely conducive to communication, especially communication among various parties striving to limit their potential liability. Given this framework, establishing excavation programs with performance metrics – however well intentioned – may lead to actions that prioritize liability over safety, as evidenced by previous findings by this Subcommittee and the open locate and mark proceeding before the CPUC. Dig-in safety cannot be secured when operators and excavators are focused on minimizing their exposure to liability.

The Dig Safe Act of 2016 and Related Legislation

In response to the disparity between liability and safety in the excavation space, as well as the lack of a single authority coordinating education and outreach surrounding safe excavation practices, the Legislature adopted SB 661 in 2016,¹⁹ also known as the Dig Safe Act. The measure created the Dig Safe Board and directed them to:

1. Coordinate education and outreach activities to encourage safe excavation practices.
2. Develop standards for safe excavation.

¹⁵ OII 18-12-007

¹⁶ <https://apps.cpuc.ca.gov/apex/f?p=401:56:0::NO>

¹⁷ SED's *Investigative Report Into the Operations and Practices of PG&E's Damage Prevention and Locate & Mark Programs*, December 6, 2018; pg. 172; <ftp://ftp.cpuc.ca.gov/Safety/news/SEDInvestigativeReportRedacted.pdf>

¹⁸ Government Code §4216.7

¹⁹ SB 661, Hill, Chapter 809, Statutes of 2016

3. Investigate possible violations of the Dig Safe Act.
4. Enforce the one-call law.

Since the passage of SB 661, two other measures were adopted that placed additional responsibilities with the Dig Safe Board:

- AB 1914 (Flora, Chapter 708, Statutes of 2018)²⁰ authorizes excavators to use power-operated or boring equipment prior to determining the exact location of subsurface installations and requires the Dig Safe Board to adopt regulations to that effect on or before July 1, 2020.
- AB 1166 (Levine, Chapter 453, Statutes of 2019)²¹ requires utility operators to supply an electronic positive response through regional notification centers before an excavation's start date and time, beginning January 1, 2021, and requires the Dig Safe Board to adopt regulations to implement the measure on or before that date.

Current Status of the Dig Safe Board

Education prioritized. Education is a foundational tenet of the Dig Safe Board, with statute directing them to annually discuss existing outreach needs and take steps to close educational gaps.²² As extensively highlighted in the Dig Safe Board's 2019 Legislative Review Report,²³ the Board has prioritized outreach and educational needs of their various jurisdictional stakeholders. This is an appropriate focus of the Board given their recent presence in the excavation space, and the caution of parties to engage in 8-1-1 conversations after years of liability protection. However, as highlighted in a previous Subcommittee report,²⁴ California excavation data show failure to call 8-1-1 as a disproportionately greater source of damages than elsewhere in the nation. It is currently unclear why excavators are ignoring 8-1-1 services; whether parties are either completely unaware of 8-1-1 and their need to call, or whether parties have grown dangerously confident after years of never using 8-1-1. Future outreach efforts of the Dig Safe Board will need to identify gaps in knowledge of existing stakeholders as well as the potential for targeted outreach campaigns for new stakeholders, traditionally overlooked in the excavator space – such as solar contractors.

Education-in-lieu-of-fine has, therefore, been a foundational approach for the Dig Safe Board, signaling a shift away from the liability paradigm and providing a targeted approach to reach unanticipated stakeholders. For excavation violations that are not egregious or persistent in nature, providing education on safe digging practices to the offending party may better serve the community as a whole. Following a search for an appropriate educational program, the Board determined that the most cost-effective approach would be to create their own curriculum. Since that decision, the course development process was prioritized by the Board over other

²⁰ http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB1914

²¹ http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1166

²² Government Code §4216.17

²³ California Dig Safe Board Legislative Review Report; October 18, 2019; pg. 46-63

²⁴ https://seuc.senate.ca.gov/sites/seuc.senate.ca.gov/files/12-17-15_background.pdf

education and outreach activities so that the course will be available when enforcement begins next year. Once the course is operational, the Board should establish a clear direction for how future educational and outreach resources will be prioritized.

Regulation approval at the expense of standard development. The Board authorized and approved regulations for fees on one-call center members, which were operative as of January 1, 2019. Regulations concerning areas of continual excavation were authorized and approved, following a rigorous stakeholder outreach process; those regulations are expected to be operative January 1, 2020. While the Dig Safe Board is statutorily directed to develop reasonable care standards for safe excavation, the Board has found it necessary to redirect their limited resources to meet recent statutorily directed regulation development and the implementation deadlines for AB 1914 and AB 1166.

Investigations in progress. In 2019, the Dig Safe Board began their statutory directive to investigate complaints and accidents. The Dig Safe Board's directive differs from other investigatory boards, as articulated in the Board's 2019 Legislative Review Report²⁵:

Prior to the Board, only dig-in incidents of significant consequence were investigated – usually only those involving death, injury, or a significant event such as a large explosion. For instance, only approximately 100 of the 5,000 or more gas dig-ins are immediately reported to the Public Utilities Commission each year. On the other hand, Dig Safe Board investigators could potentially investigate 1,000 incidents. By investigating low-consequence events, the Board will have access to information about the precursors of safety problems. Investigation of low-consequence events allows the Board to have an education-first enforcement posture and to develop policy based on data and experience, so that it can focus on preempting the next incident instead of regulating the last one.

The Dig Safe Board adopted reporting requirements earlier this year so that they would be notified of – and thus able to investigate – this broader universe of incidents.²⁶

Statute also directs the Board to enforce penalties resulting from investigation, with the exception of entities who are already under the enforcement of the CPUC, the Contractors' State License Board, or the Office of the State Fire Marshal. While the majority of enforcement action will be forwarded to those three bodies, parties for which the Dig Safe Board has enforcing authority include farmers, unlicensed contractors, homeowners engaged in permitted work, and homeowners in their second or subsequent home. The Board expects to begin referring violations to other state agencies for enforcement in early 2020 and will begin direct enforcement actions on July 1, 2020.²⁷ It is unclear what – if any – jurisdictional concerns or conflicting prioritizations might arise between these agencies on enforcement actions.

²⁵ California Dig Safe Board Legislative Review Report; October 18, 2019; pg. 69

²⁶ Section 4100(a) of Title 19 of the California Code of Regulations (pending)

²⁷ California Dig Safe Board Legislative Review Report; October 18, 2019; pg. 79

The ongoing proceeding at the CPUC into PG&E's locate and mark practices²⁸ might present an early case. In October, PG&E, the CPUC's Safety & Enforcement Division, and the Coalition of California Utility Employees reached a settlement agreement in the locate and mark proceeding.²⁹ The settlement agreement is pending before the CPUC and the subject of ongoing evidentiary hearings, so it is worth noting the decision of the CPUC could change from the exact terms of the settlement. Nevertheless, the settlement agreement directs \$5 million in penalties to the General Fund and \$60 million to system enhancements – such as hiring additional locate and mark personnel, improving employee training, and updating information systems.³⁰

Statute directs the CPUC to deposit penalties from enforcement actions against utilities to the General Fund.³¹ Curiously, statute also directs deposition of penalties into the Safe Energy Infrastructure and Excavation Fund – the fund established under SB 661 to fund educational outreach of the Dig Safe Board – from enforcement actions “*following a recommendation*” of the Dig Safe Board to the appropriate enforcement agency.³² The CPUC, not the Dig Safe Board, brought the investigation against PG&E in the locate and mark proceeding. As a consequence, statute seems to exclude any funds being directed toward the education and outreach efforts of the Dig Safe Board. Given the potential benefit early education efforts may have had on the locate and mark case, the Legislature should consider whether assessed penalties directed toward education and outreach bodies like the Dig Safe Board might be prudent in future cases, and make appropriate statutory adjustments to those ends.

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²⁸ OII 18-12-007

²⁹ Filed October 3, 2019; <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M316/K988/316988834.PDF>

³⁰ *Ibid.* pg. 8

³¹ Public Utilities Code §409(b)

³² Government Code §4216.6(f)