

# 2018 RESULTS REPORT

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**California Dig Safe Board**

**January 9, 2019**







# The Dig Safe Board 2018 Results Report January 9, 2018

## Board

Jessica Arden, Chair  
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Ron Bianchini  
Randy Charland  
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Deborah Yang, Legal Council  
Jason Corsey, Chief of Investigations  
Carla Newman, Supervising Investigator  
Anna Brown, Supervising Investigator  
Diana Lopez, Special Investigator  
Jason Neyer, Policy Analyst  
Misty Catano, Administrative Analyst  
Kerstin Lock Tomlinson, Education & Outreach Officer

*For a hard copy of this report, please contact the California Dig Safe Board at the Office of the State Fire Marshal at (916) 568-3800. The report may also be accessed on the Board's website:  
<http://digsafe.fire.ca.gov>.*



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## INTRODUCTION

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This report details the work done by the Underground Facilities Safe Excavation Board (“Dig Safe Board”) in its first full year of operation and includes activities performed to execute the Board’s 2018 Plan<sup>1</sup>, operational activities required to start the program that had not been fully understood at the time the Plan was drafted, and work performed in response to unexpected challenges the year presented.

Under the Dig Safe Act of 2016<sup>2</sup>, the Board is expected to coordinate the state’s safe digging education and outreach, develop safe digging standards where none exist, investigate possible violations of the state’s safe digging laws, and enforce the state’s safe digging laws within its jurisdiction. To meet these Legislative requirements, the Board’s 2018 Plan identified the following milestones:

- Begin investigations by the beginning of 2019
- Establish a funding source by July 1, 2019
- Develop minimum standards for onsite meetings in areas of continual excavation by January 1, 2020<sup>3</sup>
- Begin enforcement of Board-jurisdictional actors on July 1, 2020<sup>4</sup>

The Board is scheduled to undergo legislative review in 2020<sup>5</sup>. During this review, the Board is expected to demonstrate its progress to the Legislature.

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<sup>1</sup> The Dig Safe Board’s “2018 Plan” can be found on the Board’s website: <http://digsafe.fire.ca.gov>

<sup>2</sup> SB661, Chapter 809, Statutes of 2016. Updates existing Government Code 4216 to create the Dig Safe Board.

<sup>3</sup> GOV 4216.11

<sup>4</sup> GOV 4216.6 (e)

<sup>5</sup> GOV 4216.12(c)

To meet these Legislative expectations, the Board and staff developed a 2018 Plan, which established the following strategic objectives:

<b>Create an Area of Continual Excavation Process</b>	<i>Develop procedures through regulation for an annual ticket process for agricultural and flood control operations that facilitates effective communication between subsurface installation owners and excavators and minimizes or eliminates the impact to operations on land where no subsurface installations exist.</i>
<b>Develop an Education &amp; Enforcement Program</b>	<i>Develop an education and enforcement program that allows Board staff to investigate accidents and the Board to enforce safe excavation laws through direction to relevant education and citations.</i>
<b>Develop Processes for Continual Learning</b>	<i>Develop a framework for continual improvement through the analysis of data collected, through standard development, and through the adoption of periodic review processes.</i>
<b>Establish Stable Funding for Board Operations</b>	<i>Develop through regulation a stable funding source by levying a fee on members of the one call centers and explore options for federal funding.</i>

Each strategic objective had one or more associated strategic activities undertaken by the Board. While the strategic objectives were intended to span multiple years, strategic activities were designed to be completable within the one-year plan horizon.

Additionally, Board staff laid much of the groundwork for administering the safety programs under development in 2018, including hiring, identifying office space in Southern California, and preparing to support the Board’s investigative function. These items were outside the scope of the 2018 Plan, but will be included in the 2019 Plan.

Currently, no global metric or set of metrics exists for measuring the Board’s success in improving safety through the regulations and standards it is tasked with creating, and the education and outreach it is responsible for coordinating. Because of this, the Board and staff will determine measurement strategies for activities under each of the strategic objectives listed above to determine progress and success. This is a task the Board and staff will undertake in 2019.



## CREATE AN AREA OF CONTINUAL EXCAVATION PROCESS

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When lawmakers passed the Dig Safe Act of 2016, they acknowledged that existing law had not been suitable for agricultural activities and authorized the Board to create an annual ticket notification system that would allow farmers, growers and flood control operations across the state to call the appropriate regional notification (“one call”) center once a year, at their convenience, and request a ticket for normal farming practices. In cases where a high-priority line<sup>6</sup> is present, an on-site meeting between the excavator and the subsurface installation owner (“operator”) would occur—and both sides would discuss and agree on the safe excavation practices to be used when operating over the line.

In 2017, concerned with the potential for incongruent expectations and inconsistent processes between farmers and the myriad of operators, the Legislature amended the Dig Safe Act to require the Board to develop regulations outlining minimum standards for what needed to be discussed in an onsite meeting<sup>7</sup>. This type of notification process is new,<sup>8</sup> and regulating safety in the agricultural community will prove difficult for the Board. Data from the Common Ground Alliance (CGA) and the Pipeline Hazardous Materials Safety Administration (PHMSA) show excavation damage on agricultural land is rare. Figures from the CGA’s 2017 DIRT Report show only nine of the nearly 10,000 dig-in accidents were agriculture

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<sup>6</sup> “High priority” is defined as petroleum pipelines, natural gas transmission pipelines, pressurized sewer pipelines, high-voltage ( $\geq 60$  kV) electric lines, and hazmat pipelines.

<sup>7</sup> GOV 4216.11

<sup>8</sup> Such a system has been implemented in Connecticut but is otherwise novel.

related.<sup>9</sup> While a review of natural gas incident reports<sup>10</sup> from PHMSA found, there were only 21-agriculture related dig-in accidents between 2005 and 2016.

## **Strategic Activity: Outreach & Piloting**

To develop an annual ticket notification system, the Board focused on creating a system where compliance is well-suited to normal farming practices. Board members and staff spent a considerable amount of time learning from farmers and operators about the current process, what works, what doesn't and where both sides would like to see improvements.

Initially, the Board and staff hoped to develop a pilot program to test out potential onsite meeting requirements before finalizing regulations, and discussed this possibility at its June Board meeting in Sacramento. However, the Board decided against doing so when faced with the associated legal hurdles. Farmers would need to overlay pilot activities over existing notification requirements. While the Board could choose to forgive deviations from existing law, this forgiveness would not extend to the courts, potentially exposing both farmers and operators to liability in the event of an accident.

In lieu of a pilot program, Members Voss and Johns, with the assistance of staff, aggressively pursued an agenda of outreach and information gathering to support proposed regulations that were released in December 2018. The overall impression members and staff took away from this outreach was that both sides—farmers and operators—generally treated the onsite meeting requirements as an exercise in compliance and minimizing liability in the case of an incident, leaving the full value of safety communication left untapped. An indicator of the success of the regulations will likely be the extent to which farmers and operators find these interactions valuable beyond the fulfillment of a compliance requirement.

### **BAKERSFIELD WORKSHOP**



*Board Members discuss daily farming practices*

The Board's outreach efforts began at a July workshop at the Kern Agricultural Pavilion in Bakersfield. Board members split into two groups and spent the morning with representatives from two local farming operations, where they observed daily farming practices. Members also observed the farming equipment used in agricultural operations, and how deep the machinery penetrates the soil.

Later, at a meeting held at the Kern Agricultural Pavilion, Board members and staff heard from farmers and operators about the onsite meeting process under the current law. Farmers raised concerns about inconsistency in information provided by different operators and about potholing requirements. Meanwhile, operators discussed the issue of

<sup>9</sup> Damages reported to the CGA Damage Information Reporting Tool (DIRT) are generally submitted by the infrastructure owner, not the excavator, and submitters are limited to identifying a single root cause. In the case of multiple root causes, failure to notify the one call center is generally listed as the sole root cause.

<sup>10</sup> A reportable incident is defined by CFR 191.3 as: 1.) An event that involves the release of gas from a pipeline, and results in one of the following: death, personal injury, estimated property damage of \$50,000 or more, unintentional gas loss of 3,000,000 cubic feet. 2.) An event that results in an emergency shutdown of an LNG facility or underground natural gas storage facility. 3.) An event that is significant in judgement of the operator.

depth knowledge and some discussed the use of a standard form for onsite meetings with agriculture operators.



*Board Members discuss current onsite meeting practices with operators & farmers at Kern Agricultural Pavilion*

Following this workshop, staff was asked to research onsite meeting protocol among operators across the state, and find out whether those operators used a standard form or a checklist specific to agricultural activities. Staff reached out to operators of different varieties, including: natural gas, water, and electricity to discuss their onsite meeting procedures, as it pertains specifically to agriculture.

## OPERATOR OUTREACH

Following the workshop in Bakersfield, Board members and staff spent several months conducting outreach to operators to learn more about the onsite meeting process. In August, Representatives from PG&E and SoCalGas made presentations at a Board meeting in Westlake Village, discussing current damage prevention practices, including patrols of subsurface installations through agricultural land on the ground and in the air.

In September, staff contacted some of California’s major operators to discuss onsite meeting protocol, whether they had a specific policy for agriculture, and the potential use of a standard form or checklist. Some operators sent the Board their forms, which included: a section for the Underground Service Alert (“USA”) Ticket number, date, location of excavation, and name.

In October, staff met with the Western Petroleum Association (WSPA) to discuss the creation of its onsite meeting survey, in an effort to generate more feedback.

## ON-SITE MEETING SURVEYS

Using the information gathered in Bakersfield, along with the information obtained by operators, staff created a pair of online surveys to gather more input about the onsite meeting process from stakeholders in the underground utility and agriculture industries. The survey was distributed to county farm bureaus around the state, and advertised in those bureaus’ weekly electronic newsletters (*see page 11, FARM BUREAU PRESENTATIONS*).

## The Dig Safe Board

Staff also worked with the one call centers in Northern and Southern California to distribute the survey to their members<sup>11</sup> for participation, and used Board member contacts to distribute the survey to petroleum, oil and natural gas pipeline operators. Survey questions were designed to retrieve as many details as possible about the current onsite meeting process.



*Online agriculture survey developed by Dig Safe Board staff*

Farmers who participated in the survey were asked about the operators they work with, how often onsite meetings are held, what the farmer's expectations of an onsite meeting were, whether the operator representative accommodated the farmer's schedule, the representatives' knowledge of farming practices, whether the operator used a standard form and what is included on that form, whether the farmer got a copy of the form, if the farmer got all the resources they needed to operate safely around

underground infrastructure following the onsite meeting, and the types of equipment they call 811 for, before using.

A separate survey was created for operators, with specific questions about their onsite meeting protocol. Operators and operator representatives who participated in the survey were asked questions about the farmers they work with, whether they use a standard form or checklist, if no checklist is used, how they ensure the information given at each onsite meeting is consistent, whether depth of the lines was shared and why, the types of equipment that cause concern when operated over an underground facility and why; and how often disagreements with farmers happen.



*Online operator survey developed by Dig Safe Board Staff*

The Dig Safe Board received a total of 21 responses to its online surveys, 10 of the responses represented agricultural operations across the state, while 11 of the responses represented different operators from around the state.

Of the 10 agriculture responses the Board received, five counties were represented including: Kern, Tulare, San Luis Obispo, Sutter and San Joaquin counties. Comments from farmers were consistent with what the Board heard during the Bakersfield workshop. Farmers voiced concerns about consistency in the onsite meeting process, and discussed their frustration with the current law and the frequency at which they must call 811 before performing their daily agricultural activities.

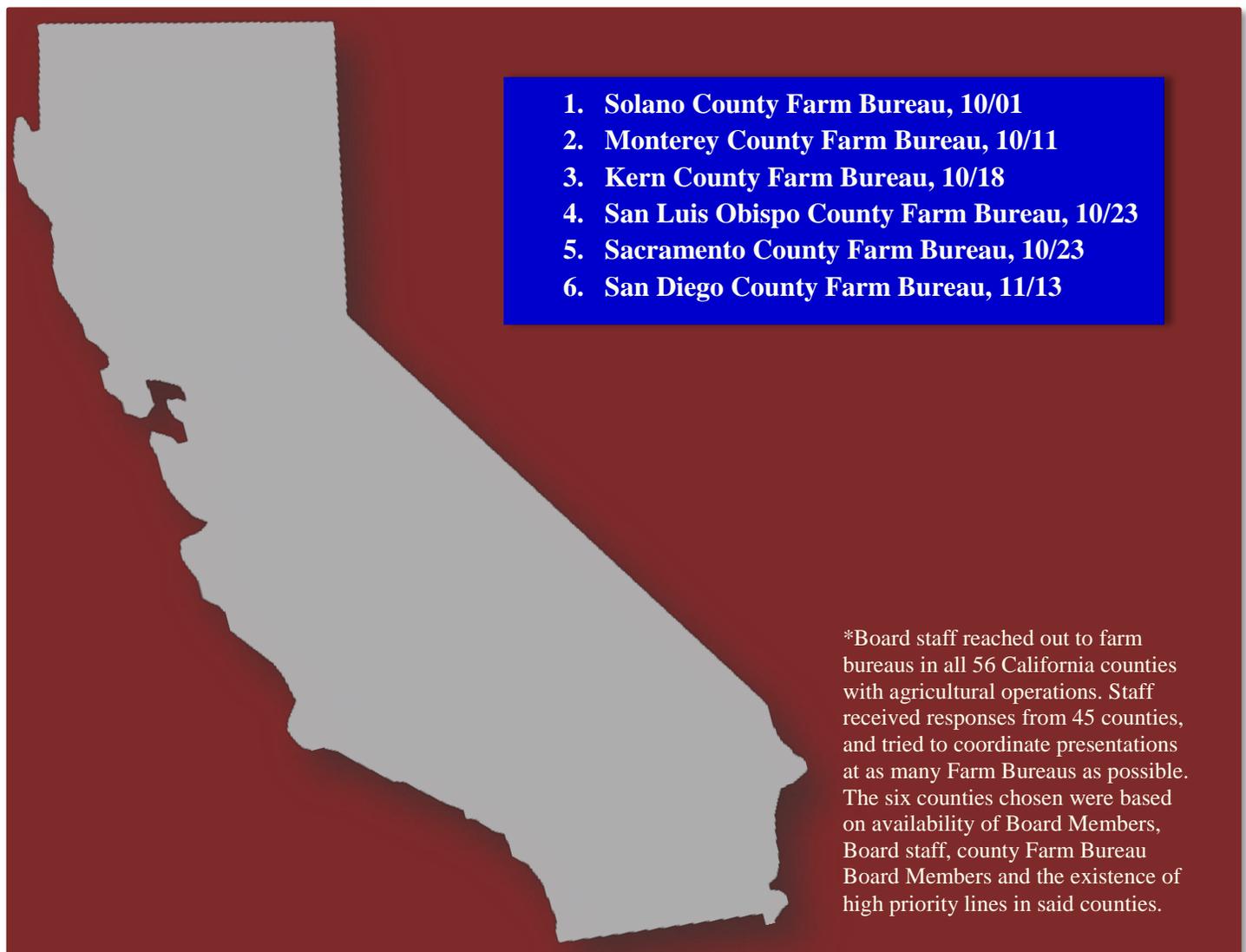
<sup>11</sup> "One Call Center member" refers to each of the associations of owners and operators of subsurface installations (water, gas, electric, sewer, telecommunications, etc.) that belong to the non-profit

Meanwhile, of the 11 operator responses the Board received, five industries were represented including: telecommunications, water treatment, natural gas, oil, and utility districts. Operators explained their onsite meeting process, and whether they used a standard form or checklist. Participants also discussed disagreements with farmers and how those disagreements are managed.

### FARM BUREAU PRESENTATIONS

As part of their outreach efforts to learn about the onsite meeting process, Board members and staff spoke to county Farm Bureaus around the state in the months of October and November. The goals of the discussions were to generate interest in the online survey, listen to the agricultural community's concerns and expectations about the upcoming draft regulations the Board would introduce to the public in December, and develop relationships that would be needed to educate farmers about the new regulations once they were in place.

The map below illustrates the scope of Board's efforts to reach as many farming communities around the state as possible. \*

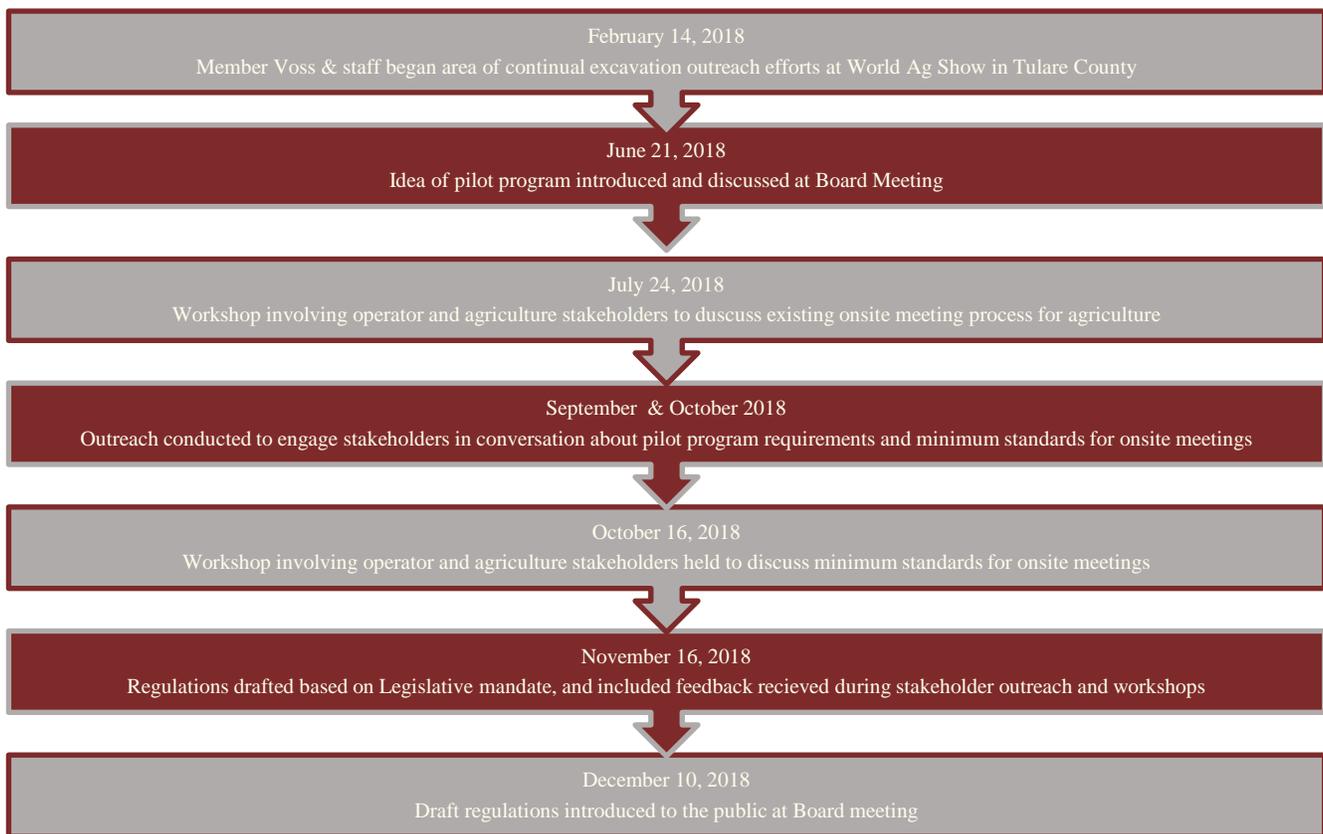


The feedback from farmers around the state was consistent with what the Board heard during its workshop in Bakersfield and in the online surveys completed by staff. All the feedback received during the Board’s outreach efforts was used to draft the regulations for minimum standards at onsite meetings.

## Draft Regulation Development

Following the Board’s outreach efforts, including the online survey, the proposed draft regulations writing process for minimum standards during onsite meetings in areas of continual excavation began in November. Staff used feedback received from famers and operators during the various Board meetings, workshops, presentations, and outreach efforts held throughout the year, to create a process that promotes shared responsibility for safety while remaining consistent with common sense and experience.

Below is a timeline showing the development process for the draft regulations:



The proposed draft regulations were presented to stakeholders and the public at the Board’s December Meeting at the State Capitol. In accordance with the Board’s statutory requirement, the proposal outlines minimum standards for onsite meetings in the presence of a high priority line, including:

1. Requirement for operator to either:
  - a) locate and field mark prior to the onsite meeting, including the use of an agreed upon marking method as outlined in the most recent version of CGA Best Practices guide; or
  - b) provide information to the excavator where the high priority line is located.
2. Requirement for onsite meeting to be held at a mutually agreed upon date and time that

- does not “unreasonably disrupt the excavator’s or operator’s business operations.”
3. Requirement for onsite meeting to include farm owner/lessee or owner/lessee’s authorized representative with knowledge of farming operations, and authority to develop and agree to an area of continual excavation plan.
  4. Requirement for onsite meeting to include operator or operator’s authorized representative with knowledge of high priority line location, and authority to develop and agree to an area of continual excavation plan.
  5. Provision to address situation where operator’s understanding of the location of the high priority line is different than the farmer’s understanding of the location, and the operator’s responsibility to demonstrate his/her understanding by providing supporting records or potholing.

Members, staff and stakeholders discussed the proposed draft regulations, including the decision to include a standard form and the outreach efforts done by staff and members. Board members and the public also spent significant time discussing how to roll out the regulations, including educating farmers and operators and determining whether the individual interactions were effective. These activities and success measures will need to be decided in 2019. The Board will vote on the proposed regulations in 2019.

Meanwhile, the renewal process for one call center tickets when a farmer’s land is known not to have any subsurface installations will be included in a separate rulemaking package in 2019.



## DEVELOP AN EDUCATION & ENFORCEMENT PROGRAM

One of the Board’s responsibilities is to enforce the state’s safe digging laws, and the Legislature directed the Board to do so progressively, by treating offenses committed out of ignorance as an opportunity to educate, but using citations for instances where education was deemed insufficient sanction. In its 2018 Plan, the Board outlined the development of an education and enforcement program as one of its strategic objectives.

This is a sizeable task that would require building an education and enforcement program from the ground up—including the creation of an Investigations Division. To do this successfully, the Board identified a series of strategic activities it would need to complete in 2018:



The Board’s success in completing these tasks would rely on in-depth research about the resources available in states with further developed safe digging programs, and the excavation safety information that already exists in California. The Board would also need to hire investigators who would be responsible for developing enforcement policies and standards.

## Strategic Activity: Identify Relevant Education

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To adopt a graduated enforcement program,<sup>12</sup> the Board needed to identify relevant, affordable education that could serve as an alternative sanction to a monetary fine for violators made out of ignorance of safety statutes. The Board would also have to decide who would be required to take the course, in an industry where companies range in size from a small operation consisting of a sole owner-operator, to a large operation consisting of hundreds to thousands of employees.

Ultimately, the Board found no existing relevant courses, and decided to build one in-house using curricula developed from existing source material.

### CANVASSING THE STATES

Research into relevant education began in January, when staff contacted other states with established safe excavation programs to learn about the different training options available, along with the types of programs that see the most success.

Through research staff discovered no standard exists for how states should use educational training as a corrective measure, but there were patterns in the programs states tend to use. Staff discovered most educational training programs in other states were usually part of a three-step escalation of enforcement that started with a warning, graduated to education, and ended with a fine. In these cases, states use warnings to try to curb bad behavior before sending the actor to an education course. And if neither tactic worked, the violator is then issued a fine.

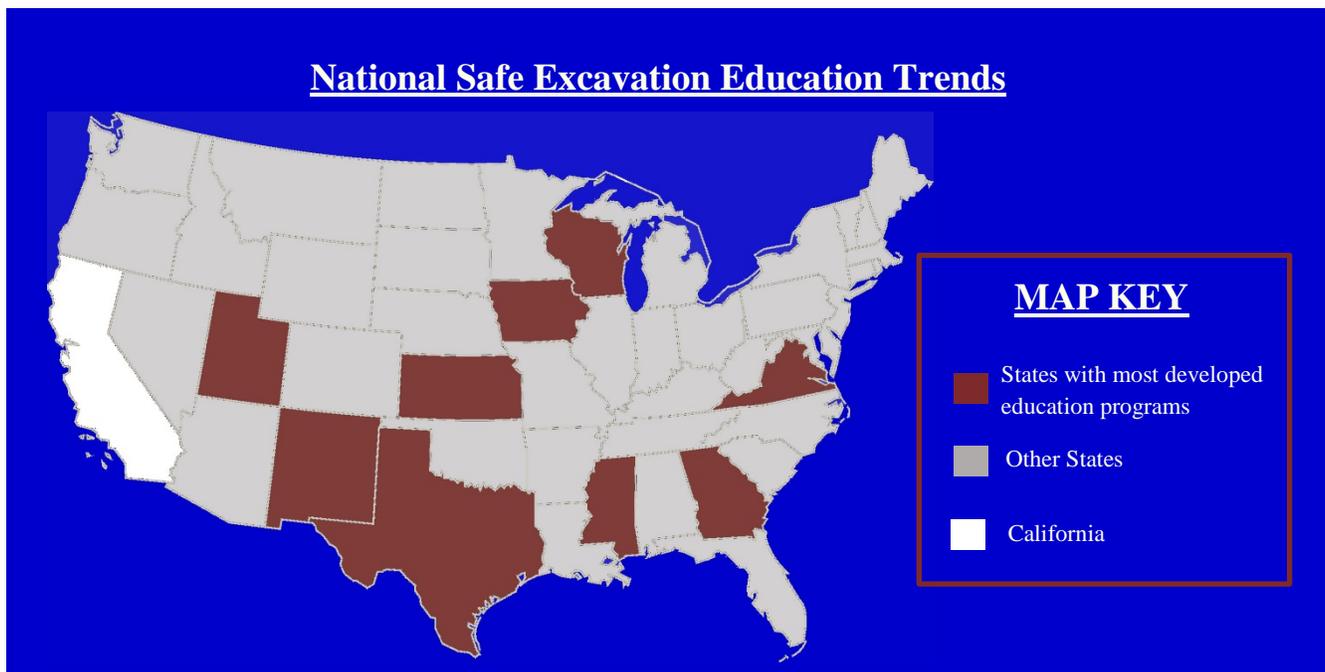


*Pyramid Illustrates Three-Step Escalation of Enforcement used by most states*

Through the research process, Staff spoke to representatives from safe digging programs in nine states. This decision was based on the safe excavation education programs in each state—and how developed and successful each program was. It was important to contact the states with the most developed programs, in order to identify national educational trends.

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<sup>12</sup> GOV 4216.19



*Map of states contacted by the Dig Safe Board, with the most developed education programs*

Based on information gathered from other states, it was clear educational offerings varied significantly. Staff discovered the most used form of educational training across the nation is conducted by a trainer, in a classroom setting. Most states also offer some sort of online educational material, but staff found that only a few states offer online material that satisfies an ordered requirement. However, the most developed programs offer in-person and online instruction that could be used for general education or to satisfy a violation.

Once staff had an idea of the national trends, research began in to the educational resources already available in California. The idea was to find what already existed, and if there was an opportunity to use current courses and/or trainings to satisfy the education in-lieu of fines requirement.

Through research, staff discovered California lacked educational courses specific to excavation around underground facilities that was paired with testing that could be used to satisfy the Board’s sanction. Staff identified several courses containing material related to excavation near buried infrastructure, such as OSHA 10-HOUR, OSHA 30-HOUR, and OSHA #3015 (“Excavation, Trenching, and Soil”), but none solely focused on the requirements of Government Code 4216 and all omitted important information relevant to it.

It became clear, the Board would need to create a class specific to excavation near buried infrastructure. For the course to satisfy a sanction, it would need to be followed by a test that allowed students to demonstrate their understanding of the material.

## **EDUCATIONAL CURRICULUM**

Once it was decided the Dig Safe Board would need to create its own educational course, the question shifted to what should be included in the course, and who should be required to attend?

At a February workshop in Monrovia, Board members, staff, and stakeholders discussed the structure of the Board’s future educational program, and the need for it to be diverse both in the information provided

and the method by which it is delivered to be sure to reach as many people in as many locations as possible.

Later at an April Board meeting in Long Beach, stakeholders suggested sourcing educational material from the Common Ground Alliance (“CGA”). Further research into the educational offerings of other states (*see page 15, CANVASSING THE STATES*) found an emphasis on the 811-ticketing process and the state’s government code related to underground utilities.



Using the information gathered through research and the feedback given by stakeholders, members directed staff to create an educational course focused on material from Government Code 4216, the one call centers, and the CGA Best Practices Handbook<sup>13</sup>. The Dig Safe Board’s curriculum will focus on case studies of past dig-in incidents in California and across the nation to provide context, and will emphasize the importance of communication and how different work practices related to underground facilities affect one another.

Currently staff, at the direction of the Board, is creating an educational course that can be taken to satisfy its sanction. The course is expected to be ready in March of 2019 and provide an early opportunity in the enforcement process to educate before increasing enforcement action.

## IN-HOUSE PROGRAM DEVELOPMENT

The Board needed to decide who would develop and offer the course, and discussed whether the Board should outsource its course requirements to an outside organization, or use its member knowledge and staff resources to design the course in-house.

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<sup>13</sup> The CGA Best Practices Handbook is an annual guide released by the Common Ground Alliance used as a resource in the industry for underground damage prevention.

<u>Outsourcing Development</u>	<u>In-House Development</u>
<b>ADVANTAGES:</b> <ul style="list-style-type: none"><li>• Course Created at No Cost</li><li>• Classroom, Onsite &amp; Online</li><li>• Spanish Option</li><li>• Limited Use of Staff Resources</li></ul>	<b>ADVANTAGES:</b> <ul style="list-style-type: none"><li>• Course Created at No Cost</li><li>• Full Control of Course</li><li>• Spanish Option</li><li>• Lower Cost to End User</li></ul>
<b>DISADVANTAGES:</b> <ul style="list-style-type: none"><li>• Higher Cost to End-User</li><li>• Continual Monitoring to Ensure Standards Met</li></ul>	<b>DISADVANTAGES:</b> <ul style="list-style-type: none"><li>• Sole Focus on Classroom Courses</li><li>• Use of Limited Staff Resources</li></ul>

*Staff Breakdown of the Advantages & Disadvantages to Education Program Development Options*

Staff began its research on outsourcing requirements in the late spring, identifying the internal state requirements to contract with an outside organization. In April, staff met with California State University, Sacramento’s (“Sacramento State”) College of Continuing Education<sup>14</sup> to discuss the possibility of contracting out the building of the Board’s educational curriculum, and what doing so would entail. Outsourcing would allow the Board to offer classroom, onsite, and online courses to satisfy its sanction and organizations selected to create the courses would do so at no cost to the Board, but would collect course fees to recoup their costs. However, staff resources to conduct the courses would be limited.

At the Board’s August meeting in Westlake Village, the possibility of offering courses in-house, conducted by staff, was discussed for the first time. Board members discussed the possibility of collaborating with Member Del Toro’s company ehs Inc.—which specializes in the development of health and safety education and curriculum across the nation—to build the course curriculum, and run it in-house using staff as instructors. This possibility was not considered earlier because of its use of staff resources. Bringing the development of an educational course in-house would require the Board to focus solely on classroom courses. The Board would create the course and content, use staff as instructors, and use current office space to host classes.

Following staff research, the in-house course creation option was chosen over outsourcing because the Board would have full control over course content, and the cost to end-users would likely be lower than if course production had been outsourced.

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<sup>14</sup> Sacramento State’s College of Continuing Education specializes in providing courses and learning opportunities to various industries across the state and the country.



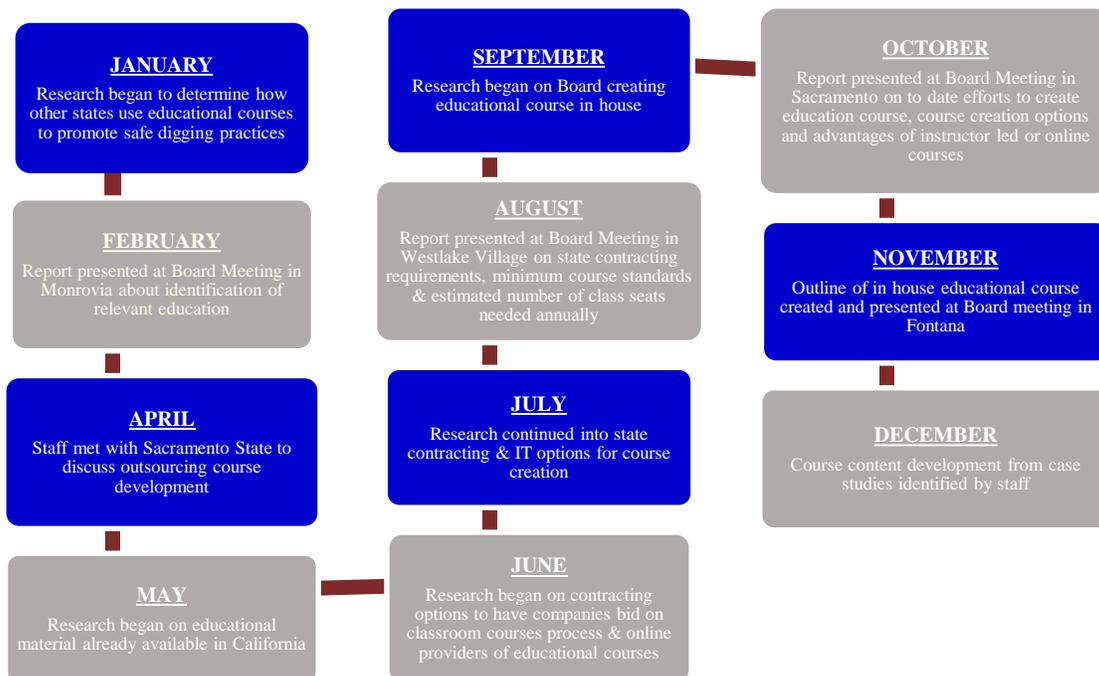
Staff works with Member Del Toro & ehs Inc. staff to create educational course outline in Irvine

In November, staff traveled to Irvine to meet with Member Del Toro and her staff at ehs Inc. to begin developing an outline of the education in-lieu of fines curriculum. Staff, with the guidance of ehs Inc. employees, decided on a multimedia course that uses video, PowerPoint and a third-party trivia app to teach students the information in an engaging way.

Videos would be produced by Dig Board staff, and cover information from various case studies on past dig-in accidents, while the PowerPoint would cover the specific safety information needed to meet the Board’s statutory requirement. Staff presented the course outline to the Board, stakeholders and the public at its November meeting in Fontana.

meeting in Fontana.

As 2018 ends, the Dig Safe Board has identified relevant and affordable educational material to develop into a course that the Board may offer to one call law violators in-lieu of receiving a fine. The timeline below illustrates the work done so far to create the Board’s educational curricula:



The Board will continue work to create its education in-lieu of fines class in 2019 using member and staff resources to build the curriculum and materials. Once the course is completed, staff will act as instructors, with those fluent in Spanish being utilized to teach courses to Spanish language audiences. The course will be hosted in the Dig Safe Board’s current office space, as in-classroom training with the potential to expand to onsite and online formats in the future.

As for who should be taking this course, the Board has yet to decide. At meetings in February, April, August, October and November members, staff and stakeholders have discussed various ideas about who should attend the Board's class to fulfill a sanction. Excavators have been mentioned, along with operator representatives and line locators. An idea to include multiple employees from a company was discussed. The idea would be to have multiple levels of the company represented, i.e. excavator, project manager, supervisor. These decisions are likely to be case-specific and determined by the Board in its enforcement actions.

## **Strategic Activity: Standards for Demonstrating Compliance**

Statute requires the Board to develop standards for excavators, locators, and operators to demonstrate compliance with delineation, notification, and locate and mark requirements. Such a standard would allow for the efficient and timely investigation of accidents. This element is non-regulatory, and has no statutory deadline. In the face of more pressing statutory and operational requirements, the Board did not engage in this activity in 2018 and will need to do so in 2019 and beyond.

## **Strategic Activity: Board Notification of Incidents**

Currently in California, excavators are required to notify operators of damage and call 911 in the case of damage to a high priority line or any natural gas line in which natural gas is released. There is currently no requirement, however, for anyone to notify the Board. To investigate accidents, the Board needs to learn about damage in a timely manner and create an incident reporting process through regulation.

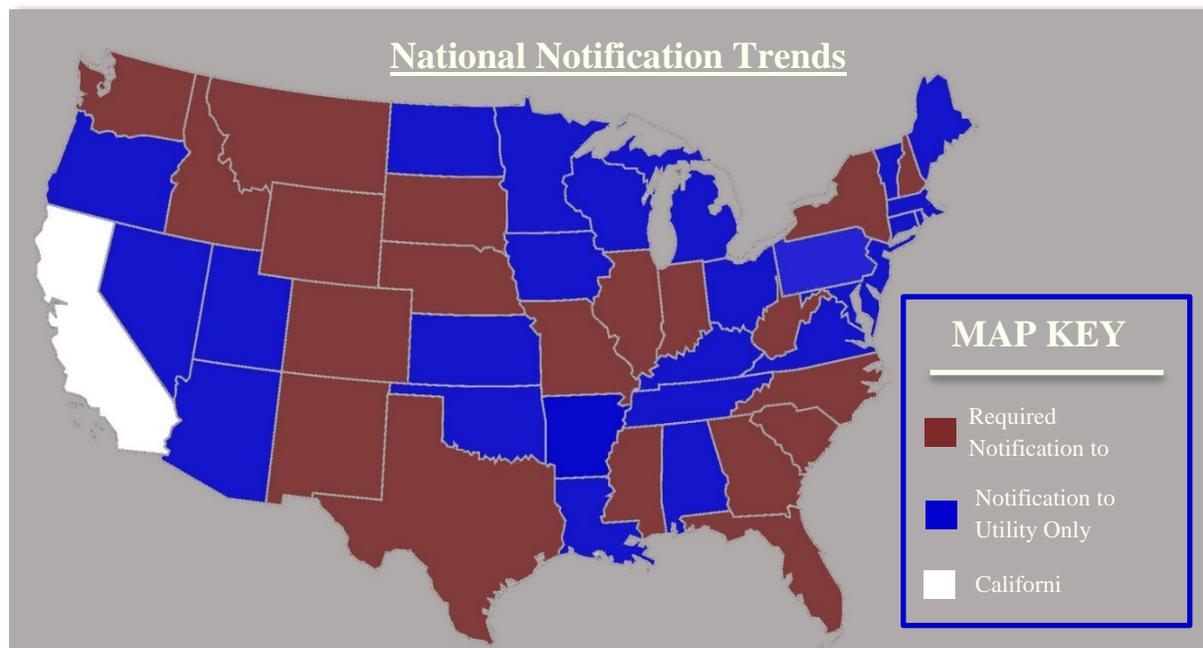
This task would require a substantial amount of research into national notification trends, which began with contact to one call centers in every state, except Alaska and Hawaii, to find out how their incident reporting programs work.

Through this process, staff discovered that nearly half of all states contacted require mandatory incident reporting to the one call center or another state level body. Meanwhile, some states like Maryland may inadvertently discourage incident reporting by charging a fee to the person who submits the report. A few states at the forefront of excavation damage reporting (Indiana, Texas, and Virginia) require mandatory reporting by both the operator and excavator.<sup>15</sup>

All incident reporting in the United States requires essential information, including: date, time, location, parties involved, work being done, description of damage, and perceived reason incident occurred. However, staff found the more information reported about an incident, the more information an investigator has before visiting the site of the incident. States with the most effective excavation damage prevention programs require immediate reporting along with a secondary report that contains more details about the incident.

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<sup>15</sup> In its "A Study of One Call Systems and Damage Prevention Practices," PHMSA took the position that all operators, excavators, locators and any other stakeholder should report an incident.



*Illustration of National Notification Trends Based on Dig Safe Board Staff Outreach*

Staff presented its research on incident reporting at the Board’s February meeting in Monrovia noting the inconsistencies in who was required to report and what type of incidents are considered reportable.<sup>16</sup> Members, staff, and stakeholders discussed the data, including the time requirements and reporting methods used. The discussion touched on the various data sources available in California, and members suggested staff start with the CGA DIRT Report.<sup>17</sup>

Through research staff discovered roughly 5,000 incidents involving excavation damage to natural gas pipelines occur each year in California.<sup>18</sup> Thousands more are known to impact the state’s other subsurface installations.<sup>19</sup> Of these, however, only about 100 are reported in a timely manner to the state’s Public Utilities Commission,<sup>20</sup> with a handful of others reported to the Office of the State Fire Marshal.

To address this issue, staff proposed the idea of establishing a requirement through regulations for excavators and operators to provide damage notifications to the appropriate one call center and damage reports to the Board. Draft regulations were discussed at a workshop during the Board’s June meeting in Sacramento. A revised proposal was discussed again during the Board’s December meeting at the State Capitol.

<sup>16</sup> Through research, staff found reporting thresholds vary greatly from state to state and utility to utility ranging from reporting near misses in Virginia, to only having to report incidents which result in damages of \$50,000 or more in California.

<sup>17</sup> The Common Ground Alliance publishes an annual report based on data entered into the non-profit’s Damage Information Reporting Tool by underground utility operators each year.

<sup>18</sup> California Regional Common Ground Alliance “2015 Facility Event Report”

<sup>19</sup> Common Ground Alliance, 2017 Damage Incident Reporting Tool Interactive Tool.

<http://commongroundalliance.com/dirt-interactive-report>

<sup>20</sup> Crowe Horwath, *Gas Safety and Reliability Branch Management and Operations Review: Report and Recommendations*, February 23, 2015 p. 1-6.

In accordance with the Board’s statutory requirement, the proposal outlined the requirements for damage notifications by excavators, including:

1. A requirement to notify the appropriate regional notification center if damage causes injury or fatality and when damage to:
  - a. a natural gas or hazardous liquid pipeline results the escape of flammable, toxic, or corrosive gas or liquid, or
  - b. a high-priority line of any kind.
2. A requirement to notify 911 or other emergency responders, and provide notification to the one call center through the website.
3. A provision directing the one call centers to notify the Board of an incident, and how soon to do so.

Members, staff, and stakeholders discussed the proposed draft regulations, including the requirement for excavators to notify one call centers of incidents through their websites. Concerns were raised about the lack of access to the internet in certain parts of the state, and it was suggested that a phone number be provided to those who can’t get to the websites, and suggestions were made that a hotline be set up through the one call centers, that was funneled directly to the Board.

For the regulations to be in effect January 1, 2020, the Board is expected to approve a draft of notification regulations in February in advance of the 45-day public written comment period.

## **Strategic Activity: Inter-Agency Enforcement Coordination**

The Board is not expected to operate by itself, but instead will work with the Contractors State License Board (CSLB), the Public Utilities Commission (PUC), and the Office of the State Fire Marshal (OSFM) to oversee the industry.<sup>21</sup> Collaboration with these agencies will allow the Board to provide staff the information they need to conduct investigations in an effective manner. In its 2018 Plan, the Board recognized the importance of creating a process for inter-agency enforcement coordination by outlining it as a strategic activity.



In October, the Board adopted a Memorandum of Understanding<sup>22</sup> with the PUC. The MOU set a commitment between the PUC and the Dig Safe Board to collaborate to increase public safety. In

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<sup>21</sup> GOV 4216.6 (c)

<sup>22</sup> “Memorandum of Understanding” refers to a type of agreement between two or more parties. It expresses a convergence

November, the Board adopted a similar Memorandum of Understanding with the Contractors State Licensing Board. Both documents were designed to further the Board's function under the Dig Safe Act by allowing for information sharing practices, cooperation among the agencies, and increasing the Board's resources to effectively carry out its responsibilities.

Given the Board's close association with the Office of the State Fire Marshal, the nature of the need for an MOU is still under examination.

## **Enforcement Program Development**

Amid the work to complete the strategic activities outlined above, the Board concentrated on building an effective enforcement program from the ground up. Doing so required the development of an enforcement philosophy, the hiring of a team of investigators who would be responsible for developing a process and procedure for investigations, and the development of a strategy for where investigations would begin.

### **STATUTORY CLEAN-UP**

A 2017 amendment to the Dig Safe Act of 2016 pushed back several implementation dates to give the Board more time to start operations. When the start date for Board enforcement was pushed back to July 1, 2020, a drafting error was introduced that prohibited Board staff from investigating accidents until that date. As the Board is only one of several enforcement entities,<sup>23</sup> this change would have prevented investigators from doing work for more than a year and inhibited the other enforcement agencies abilities to enforce against one call law violators under their own jurisdictions.

Board staff assisted the Department of Finance and the Governor's Office in preparing a state Budget item to rectify this error. Members adopted a resolution at the April Board meeting in Long Beach, in support of the Governor's proposal. The Legislature passed this item as a part of the 2018-19 Budget, signed by the Governor in June.

### **INVESTIGATIONS STAFF**

The state's 2017-18 Budget authorized the Board to hire 13 staff members as investigators, 12 of whom were authorized to be hired beginning July 1, 2018. Analysis of dig-in data<sup>24</sup> had indicated that roughly two-thirds of natural gas damages occur in Southern California, so investigators would be split in that ratio in Sacramento and Los Angeles County offices. Before those investigators were hired, the Board recognized the importance of an education and outreach officer who would be responsible for organizing the Board's education and outreach efforts, and promoting safe digging practices across the state. To create this position, staff reclassified one investigator position (*see page 39, Education & Outreach*).

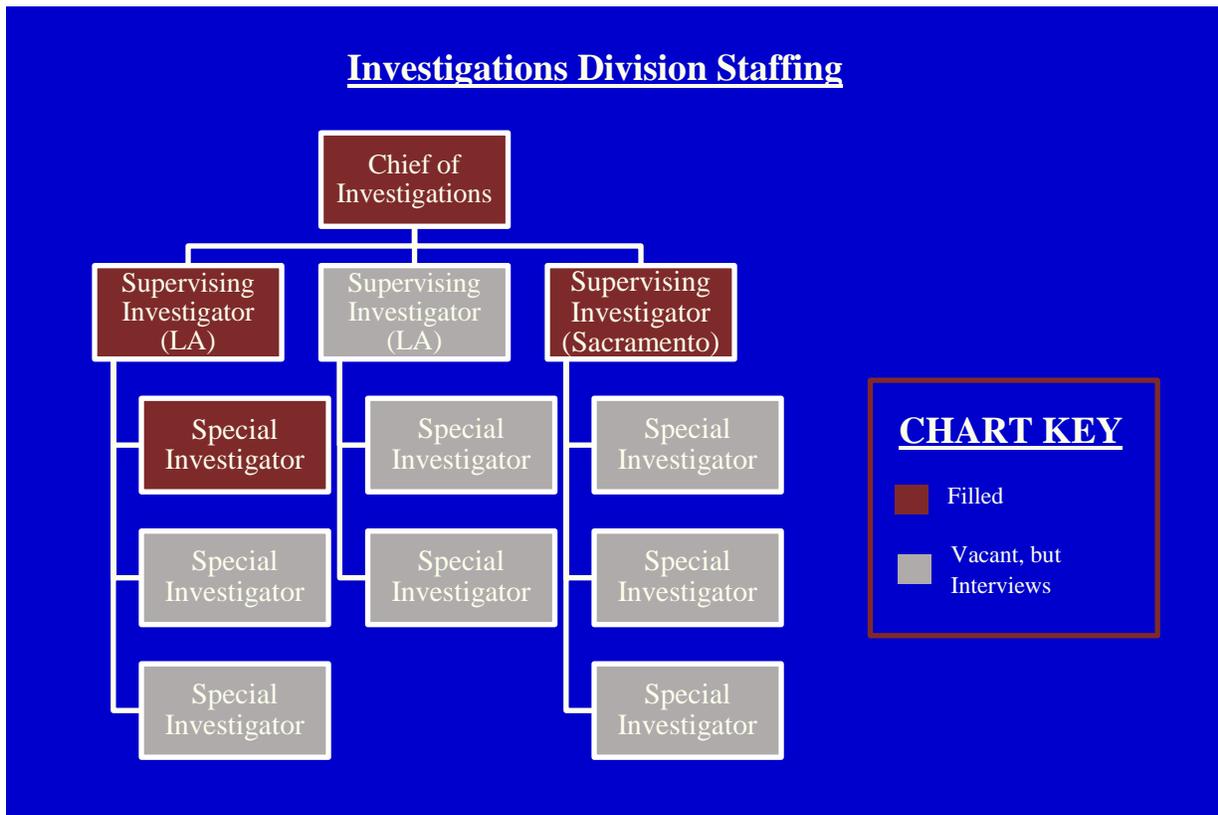
With one position reclassified, staff began the process of building its Investigations Division in the summer of 2018.

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of will between the parties, indicating an intended common line of action. It is often used either in cases where parties do not imply a legal commitment or in situations where the parties cannot create a legally enforceable agreement.

<sup>23</sup> Other Enforcement entities include the Contractors State License Board, the Public Utilities Commission, and the Office of the State Fire Marshal

<sup>24</sup> 2015 CARCGA Facility Event Report



*Organizational Chart Illustrating Dig Safe Board Investigations Division staff hiring*

The Board hired its Chief of Investigations in July, followed by two Supervising Investigators—one stationed in Northern California and one stationed in Southern California, hired in October and November, respectively. Staff has completed the interview process for the Special Investigator Candidates, and those positions are expected to be filled in early 2019.

The investigations division is developing policies and procedures for its future investigations, including: creating an incident intake and distribution process, an incident reporting format, field and desk investigation protocols, a case tracking spreadsheet, and the investigation division policy and procedure manual. These policies and procedures will act as the foundation for the newly-formed Dig Safe Board investigations division and will guide the Board’s investigators as they navigate new enforcement territory.

In addition to creating policies and procedures, the investigations division also spent 2018 creating the Dig Safe Academy Curriculum—a series of trainings designed for newly hired investigators to participate in. The curriculum will prepare staff for future investigations, as well as teach them about the underground excavation industry. Training will include OSHA safety training, location and marking training, field visits with industry operators and the one call centers. This is important because most of investigators will not be familiar with the industry, and will need help gaining the knowledge needed to understand the complexities of the issues the Board regulates.

**ENFORCEMENT PHILOSOPHY**

The Dig Safe Board has yet to develop enforcement regulations and has yet to perform an investigation, but in the public reports, speech of members and staff, and interactions with various sectors of the interested public, it has already implied an approach to its Legislative charge that focuses on the outcomes of Board interventions—namely safe excavation—instead of the tools it wants to use to do so.

The Board has already adopted a policy to commit to a culture of continual learning based on the development and free exchange of safety information.



*Board members, staff, and stakeholders discuss proposed enforcement philosophy in Sacramento*

At the Board’s October meeting in Sacramento, staff introduced a proposed enforcement philosophy for discussion that would memorialize this approach as a Board policy. Inspired by the Federal Aviation Administration’s (“FAA”) Compliance Philosophy, the proposed enforcement philosophy recognizes that most people go to work with the intention to act safely, and that the appropriate tool for correcting an unintentional error is rarely a monetary penalty. Conversely, reckless action—which includes repeated violation of safety statute—is unlikely to be cured by education and merits punitive action.

Additionally, the enforcement philosophy would clarify that the Board’s responsibility is to promote and enforce safety and its resources are not to be used as a means for parties to collect damages from each other. A liability focus inhibits the free flow of safety information—a value adopted by the Board in policy.

The Board plans to adopt an enforcement philosophy as a policy in January 2019. Doing so will help the Board assert its leadership and set expectations for the public and stakeholders.

## DRAFT REGULATION DEVELOPMENT

To begin enforcement of Board-jurisdictional actors on July 1, 2020, the Board would need to create a package of regulations that defined its authority to investigate dig-in accidents and collect evidence and outlined the sanctions the Board could levy against any party found in violation of the Dig Safe Act.

Using the research and feedback received from members, stakeholders, and the public at Board meetings and workshops, staff began writing the proposed draft regulations in November.

Below is a timeline showing the development process for the draft regulations:



The proposed draft regulations were presented to stakeholders and the public at the Board’s December Meeting at the State Capitol. In accordance with the Board’s statutory requirement, the proposal includes:

1. A definition of the duties of the Board’s investigative staff including:
  - a. what the investigators are authorized to do including collect evidence, conduct interviews and issue notices of probable violations and information letters.
2. The requirements for excavators, operators, and other stakeholders when the Board’s investigators request access to sites, facilities, and/or records and how the Board can respond in cases of obstruction.
3. An outline of the sanctions the Board can levy on any person found in violation of the Dig Safe Act, including:
  - a. the types of sanctions available to the Board, and
  - b. the guidelines the Board must use to consider a sanction,
4. How the Board can enforce violations, including:
  - a. the notification of a probable violation,
  - b. the timeline in which a person must respond to the notice,
  - c. the protocol and circumstances surrounding a hearing before the Board,
  - d. the protocol and circumstances for reconsideration requests, and
  - e. how penalties must be paid, and what happens if those penalties are not paid

The Board plans to further discuss the proposed regulations during the January Board meeting and vote to open the 45-day public comment period in February 2019.

### NO TICKET-NO RESPONSE INVESTIGATIONS

As the Board continued to build its investigations division and create rules for how it will operate within the industry, members and staff needed to decide where investigations should begin. At an October meeting in Sacramento, staff presented the idea of starting with investigations into “no call” and “no response” cases.



Per the 2016 CGA DIRT report, California had 10,074 reported damages in 2016, 45% of which involved excavators not having a USA Ticket. Meanwhile, no responses from operators hinder the excavation process by causing work stoppages which, in turn, cause the excavators time and money. No responses also cause unnecessary safety risks to excavators due to unidentified subsurface installations.

The Board can get “no response” case information from the one call centers per Government Code 4216<sup>25</sup>, but would need the participation of operators<sup>26</sup> to obtain information on “no call” damages because there is no requirement for operators to report the information to the Dig Safe Board. Staff proposed a condition to its request for voluntary participation from the operators in October, explaining that they would have to provide all “no call” tickets available for the dates requested by the Board. This proposal, consistent with the Board’s proposed enforcement philosophy, would eliminate perception that an operator was only submitting accidents for investigations in which the excavator has not yet paid the damages.

Investigations into “no call” and “no response” cases are expected to begin in the spring of 2019.

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<sup>25</sup> GOV 4216.3 (d)

<sup>26</sup> GOV 4216.4 (c) (1)



## DEVELOP PROCESSES FOR CONTINUAL LEARNING

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When lawmakers passed the Dig Safe Act of 2016, they directed the Board to develop standards and make recommendations to the Legislature for improvement. Doing so will allow the Board to create a healthy safety culture that has processes for continual learning and promotes communication between stakeholders. Creating such a culture will also allow the Board to measure its success, and maintain the trust and confidence of lawmakers and the people of California.

One strategic objective outlined in the Board's 2018 Plan is the development of framework for continual improvement through data analysis, standard development, and the adoption of a periodic review process. To do this successfully, the Board identified two strategic activities it would need to complete in 2018 including: 1.) the development of a baseline assessment of excavation in California prior to the Board's creation and, 2.) the development of reasonable care standards for road grading and hand tool excavation.

The Board's success in completing these tasks would rely on research into California's existing safety standards, feedback from stakeholders about the current underground excavation process, and analysis of existing dig-in accident data. This information could be used to develop a process to demonstrate the Board's improvement.

### **Strategic Activity: Baseline Safety Assessment**

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The Board's success in making California excavation safer cannot be determined without understanding how safe California is without Board intervention. The process of creating such an assessment allows

the Board an opportunity to develop analytical approaches to program evaluation that may prove useful during Legislative review in 2020.

During the Board's investigation, it became clear that no global metric or set of metrics was useful in evaluating the state's progress. Excavation and infrastructure comes in different types and activity is performed by a plethora of actors, creating situations not reducible to statewide metrics. Rather, tools like event trees can organize complexity instead of eliminating it and allow for the evaluation of targeted Board interventions.

## MONROVIA WORKSHOP

The Board began its discussion on baseline safety during a workshop at the Office of the State Fire Marshal in Monrovia. Staff presented a report on baseline safety assessment research, highlighting the need for a safety-first approach to regulations and how to demonstrate program effectiveness.

Members, staff and stakeholders discussed the data already available from PHMSA, the Common Ground Alliance (CGA), and the PUC, including the challenges these datasets posed. The group also discussed the need to understand how other entities determine their own levels of safety and the effectiveness of their damage prevention practices. Several operators suggested they make presentations about their safety assessment programs at a later date.

## OPERATOR SAFETY PRESENTATIONS



*Board reviews safety assessment presentations from operators at August meeting in Westlake Village*

Following the February workshop in Monrovia, staff reached out to six operators representing a variety of industries-- including natural gas, oil, telecommunications, water treatment, and utility districts-- to schedule presentations at the Board's August meeting in Westlake Village about how their companies assess the success of their damage prevention programs. Representatives from two companies—PG&E and SoCalGas—agreed to make presentations.

Each company was asked to include the answers to the following questions in its presentation:

1. What process do you use to assess the success of a damage prevention program?
2. How do you collect data?
3. How do you analyze data?
4. How do you incorporate other information not easily captured in data?
5. How do you communicate risks, internally and externally?
6. What does your data and information tell you about the state

of excavation safety?

7. Does your data illustrate any possible ways to improve?

The questions were designed to get an in-depth look at data collection and how that data is used to assess the success of each company’s damage prevention program and if the companies use the data they collect to look for ways to improve their program. The Board was also looking to learn how companies work to create a healthy safety culture, both among their employees and with the public.

## DECEMBER SAFETY MODELING PRESENTATION



*The Board’s Executive Officer discusses options for Board to develop a baseline safety assessment at December meeting at the State Capitol*

During the Board’s December meeting at the State Capitol, staff presented research conclusions about baseline safety assessments, which were that:

1. A better index than “damages per thousand tickets” could be created to compare state programs, but that indicators oversimplified the complexity of the state’s excavation ecosystem and couldn’t be used in evaluating the success of Board actions.
2. Risk management can assist the Board in determining where to focus resources, but that sufficient data only exists to do so for natural gas, and using risk management to compare the consequences of damage to different types of infrastructure has little value as the quantification of the different types of consequences is too arbitrary.
3. Event trees are an effective tool to model and measure success for a targeted area of a large system without requiring the same level of detail for every component of it. This allows the Board to use an iterative approach to improving its understanding over time instead of requiring it to evaluate the entirety of the complex system all at once.

To reap the benefit of tools like event trees, data collection, and modelling need to be integrated into the development of a program. Figure 1 shows an example of how an event tree can be used to model the success of an intervention involving a change in the ratio of hand tool-to-power tool use.

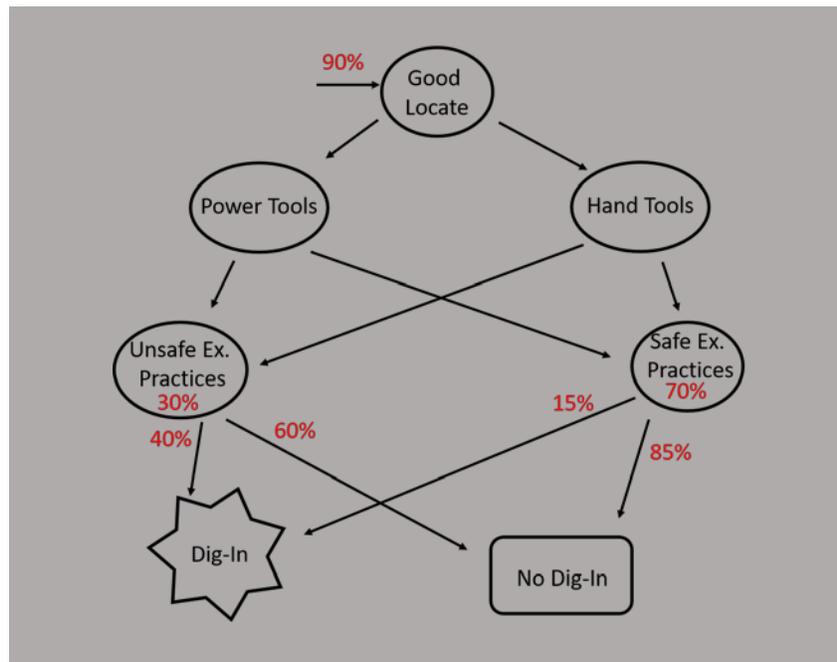


Figure 1: Simple event tree for modeling the safety impacts of power tool use compared to hand tool use

## Strategic Activity: Reasonable Care Standards

The Legislature tasked the Board with the development of two specific reasonable standards of care:

1. The safe application of potholes in determining depth of subsurface installations in advance of road grading activities.
2. The amount of hand tool excavation around subsurface installations one should perform to be confident in finding all the marked installations.

The Legislature felt the development of these standards will help address some of the existing conflict between operators and excavators, by creating a standard set of guidelines for the industry to work within. However, the Board is not limited to the creation of the standards listed above, and may find other types of activities that could also benefit from standardization.

The Board, on discussing the required standards, decided that, given that the standards would be (at least at first) non-regulatory, that industry stakeholders should work together to develop a proposal, and the California Regional Common Ground Alliance (CARCGA)<sup>27</sup> was chosen to lead the effort. CARCGA was charged with first developing a proposal for standards of reasonable care in roadbuilding and has met several times to do so. The non-profit's work is ongoing.

<sup>27</sup> CARCGA is a non-profit operating as a regional partner of the national Common Ground Alliance in California.

## CARCGA COMMITTEE MEETINGS

The Board's discussion about developing reasonable care standards began at a June Board meeting in Sacramento. Board members, staff, and stakeholders discussed the Board's statutory responsibility to develop reasonable care standards as well as provide background on the Legislative intent, and the meaning and application of standards. The Board wished to see the standard development be stakeholder-led and directed staff to work with CARCGA to develop such a process.

In August at a meeting in Westlake Village, the Board discussed the logistics of CARCGA holding stakeholder discussions to develop reasonable care standards. The Board gave CARCGA parameters by which to hold these discussions, including meetings that are: open to the public, noticed in advance, available for attendance both in-person, by telephone, or by website, and in ADA-compliant locations. Additionally, the Board directed CARCGA to start with the standard pertaining to reasonable care in road grading activities, as the legislative requirements for what needed to be considered were simpler.

In September and November, CARCGA's Subsurface Safety & Incident Prevention (SSIP) Committee<sup>28</sup> held discussions on the following questions provided by the Board:

- What constitutes reasonable care, as required by paragraph (1) of subdivision (a) of Section 4216.4, in grading activities on road shoulders and dirt roads which may include standards for potholing.
- Determine if standards for reasonable care in the grading activities on road shoulders and dirt roads differ from general roadbuilding activities.  
If so, how?
- Identify what circumstances might make a subsurface installation whose exact location has been determined in one location be at a different depth at a nearby location.

Representatives from CARCGA's SSIP Committee presented their findings at the Board's November meeting in Fontana. CARCGA's SSIP Committee held another discussion in December, and it may be prepared to make an initial recommendation to the Board in early 2019.

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<sup>28</sup> CARCGA's SSIP Committee is responsible for discussing safety and incident prevention issues around subsurface installations, and making recommendations to CARCGA and the Dig Safe Board.



## ESTABLISH STABLE FUNDING FOR BOARD OPERATIONS

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When the Legislature created the Dig Safe Board, it outlined sources to fund its operations. Specifically, it identified one call center members as the primary feepayers, but it also allowed for the Board to be funded by a federal grant.

### Startup Loan Repayment Extension

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The 2017-18 Budget Act first funded the Board through a two-year startup loan<sup>29</sup> to carry the Board until July 1, 2019, upon which time it was expected that the Board would be generating its own revenue through the collection of fees. The 2017-18 Budget Act also, however, set the loan repayment date to the same day. As fees were not expected to be in effect until January 1, 2019, this would have created an enormous one-time financial hit to one call center members.

In response, staff assisted the Department of Finance and the Governor's Office in preparing a state Budget item to allow the Board to repay that loan over an additional two years until repayment on July 1, 2021. Members adopted a resolution at the Board's April meeting in Long Beach in support of the Governor's proposal. The Legislature passed this item as a part of the 2018-19 Budget, signed by the Governor in June.

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<sup>29</sup> From the California High-Cost Fund-B Administrative Committee Fund (\$7,406,000 principal and 1.48% interest).

## Strategic Activity: Fee Levied Upon Utility Members of the One Call Centers

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The Legislature authorized the Board to levy a fee on the members of the one call centers using the same method the one call centers use to fund their operations. Both USA North and DigAlert charge member subsurface installation owners a fee per locate requests the members receive.

$$\text{Fee} = \frac{\text{member located request transmissions (previous year)}}{\text{statewide locate request transmissions (previous year)}} \times \text{Board operational expenses (current year)}$$

Figure 2: Dig Safe Board proposed formula to calculate one call center member fees

The Board fee is calculated based on the number of member locate requests received, divided by the statewide total of locate requests and multiplied by the Board's operational expenses (*Figure 2*). More detail on the one call center member fee will be published in the Board's 2019 Cost Report<sup>30</sup> following the release of the Governor's Budget on January 10, 2019.

As outlined in statute,<sup>31</sup> money collected from the Board's fee will be used to promote safe excavation practices through education, outreach, standard development, and enforcement activities by funding the Board's annual operation costs.

### FEE PROPOSAL INTRODUCED & ADOPTED

Staff introduced a proposed draft regulation to establish a fee on one call center members at the Board's April meeting in Long Beach. The proposal established the fee, and the amount operators would have to pay, including late fees, to the Board to ensure it could repay its startup loan, and have enough money to cover the Board's annual cost of operations.

Board Members, staff and stakeholders discussed the proposal, and asked questions about the definition of locate request transmission<sup>32</sup> and billable transmissions<sup>33</sup>, how delinquent payments would be handled, whether delinquent payments would impact on an operator's membership with the one call center, and when fee collection would begin. The Board also discussed the challenge of communicating the fee to members of both one-call centers, as each has different ticket type definitions. Following the meeting, representatives from both one-call centers met to develop a standardized ticket for both centers. The ticket changes are expected to be implemented in March 2019.

Following this discussion, the Board approved the adoption of the proposed draft regulations to establish its fee. The approved draft regulations were sent to the Office of Administrative Law ("OAL"),<sup>34</sup> following the Board's approval. OAL advised staff to make minor, clarifying changes to the proposed

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<sup>30</sup> The Dig Safe Board's 2019 Cost Report will be available on its website: <http://digsafe.fire.ca.gov>

<sup>31</sup> GOV 4216.16 (b)

<sup>32</sup> "Locate Request Transmissions" refers to the number of billable locate request transmissions the one call center member received in the previous calendar year.

<sup>33</sup> "Billable Transmissions" refers to transmissions that stem from new, renewal, and remark tickets.

<sup>34</sup> The Office of Administrative Law is a government organization that ensures state agency regulations are clear, necessary, legally valid, and available to the public.

regulation text which staff revised. The fee proposal opened to a 45-day public comment period in the Spring of 2018.

Pursuant to the Administrative Procedures Act, a notice was sent to one call center members via standard or electronic mail. The notice explained the proposal, and the changes to the language made following suggestions by OAL. Those notices were sent to one call center members at least 45 days prior to close of the public comment period.

The Board also held a public webinar on May 22, 2018, facilitated by DigAlert, discussing the fee proposal, how one call center members would calculate the fee, and what the money collected would be used for. The webinar also explained the Board's loan repayment requirement, and when operators could expect to see the fee increase on its bill. The purpose of the webinar was to educate operators, the one call centers, and other stakeholders about the proposed fee.

In August, at a meeting in Westlake Village, the Board provided final approval of the regulation. The Office of Administrative Law approved the regulation on November 30, 2018, and the regulation became effective January 1, 2019.

## **Strategic Activity: Federal Reimbursement Through the State Base Grant**

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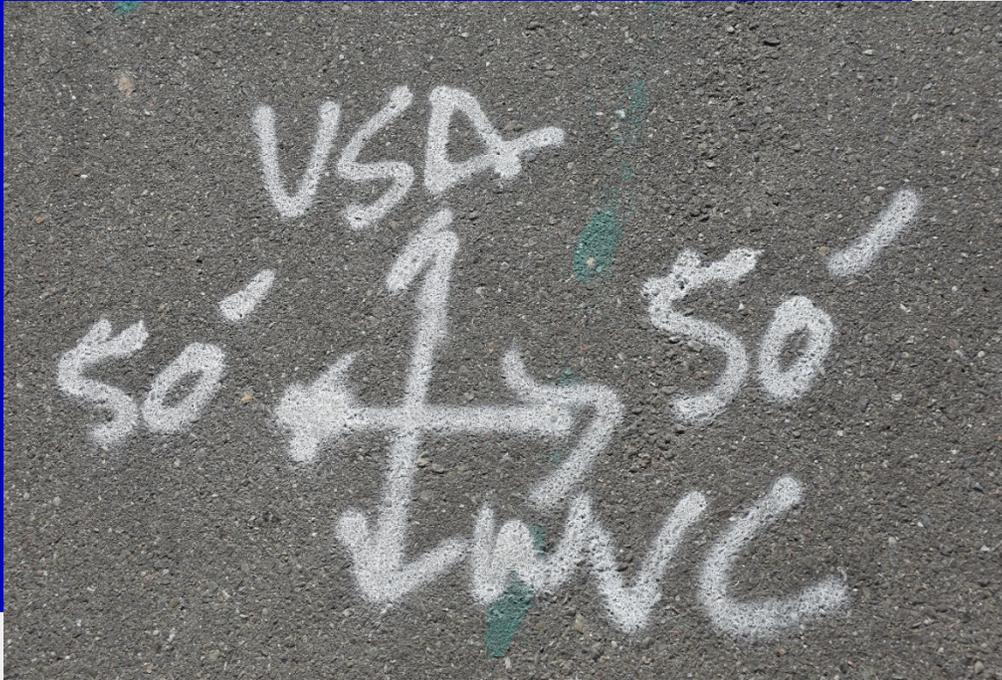
Aside from imposing a fee on California's one call center members, the Board acknowledged the possibility of obtaining a federal grant in its 2018 Plan. The Public Utilities Commission and the Office of the State Fire Marshal are state pipeline safety programs recognized by the federal Department of Transportation to enforce federal pipeline safety regulations on the federal government's behalf, and so the federal government reimburses them for a signification percentage of their pipeline safety expenses through the "State Base Grant." Given the Board's administrative connection to the Office of the State Fire Marshal, federal regulators indicated that some percentage of Board expenses associated with the direct costs of natural gas and hazardous liquid pipeline investigations might be reimbursable.

During the 2018 year, staff had several discussions with federal regulators and with partners within the Office of the State Fire Marshal. Difficulties emerged in putting Board operations under the State Fire Marshal's portion of the grant, including prescriptive requirements that investigators complete activities outside the Board's scope, including 80 days of pipeline inspections and training requirements suitable to pipeline engineers. At this time, it appears unlikely that any Board activities would be reimbursable through the "State Base Grant."

## **State Damage Prevention Grant**

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While the Board may not be eligible for the State Base Grant, staff were able to assist DigAlert in obtaining a federal \$70,000 State Damage Prevention Grant to build information technology infrastructure to forward damage reports received by the one call centers to Board staff for investigation. For an entity to be eligible for the grant, the Department of Transportation must receive a letter from the state's Governor identifying the entity as the designated recipient for it. Governor Brown provided the letter to the Department of Transportation in late August, and DigAlert received the grant shortly thereafter.



## ASSEMBLY BILL 1914

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Before lawmakers passed the Dig Safe Act of 2016, an excavator could use power tools in the tolerance zone<sup>35</sup> before locating the marked utility, as long as they had the operator’s consent. The practice was seen as dangerous because it could lead to damage, injury, or even death if an excavator hit an underground facility and, lawmakers prohibited the mutual agreement exemption when they passed the Act.

The Dig Safe Act also defined hand tools for the first time, stating that it “is not powered by a motor, engine, hydraulic, or pneumatic device.” It is not clear that this definition is widely known, as Board members have received anecdotal reports that handheld drills and small electronic and pneumatic chipping devices are still thought of as “hand tools,” even though statute is clear they are not.

In 2018 the Legislature passed Assembly Bill 1914 (AB 1914), which required the Board to adopt regulations by July 1, 2020 to determine the type of power-operated or boring equipment excavators may use to find the exact location of subsurface installations in accordance with Legislative review in 2020. Development of such regulations was not outlined in the Board’s 2018 Plan because AB 1914 was not introduced until June 2018.

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<sup>35</sup> “Tolerance Zone” refers to a set distance from a subsurface installation that an excavator may dig without having to use hand tools. This is usually 24-inches, or two feet, on either side of the subsurface installation, and is marked by the operator.

## Legislation Introduced & Passed



*Timeline of Assembly Bill 1914 Introduction, Amendment, and Passage*

On June 25, Assemblymember Heath Flora introduced AB 1914 to amend Government Code 4216.4 to allow excavators to use power-operated or boring equipment in the tolerance zone with the permission of the operator. The bill was amended in the Senate Business, Professions and Economic Development committee on July 5 to require the Board to determine by July 1, 2020 what tools might be appropriate for use within the tolerance zone and under what condition. Prior to that date, however, the amendments allowed use of power operated or boring equipment with the agreement of the operator. The amendments required the Board to develop guidelines for the use of such tools in the tolerance zone, but they were not clear as to the legal force these guidelines have.

At a July 24 meeting in Bakersfield, the Board discussed a proposed amendment to AB 1914 that would give the Board the discretion to determine the type of hand-held motorized power-operated equipment and the maximum force that may be used in the tolerance zone prior to exposing the subsurface installation. The recommended changes would also allow the Board to determine the soil type(s) on which equipment may or may not be used within the tolerance zone prior to exposing the subsurface installation. The Board voted to oppose AB 1914 unless the bill was amended to address the Board's concerns.

On August 24, the Senate amended AB 1914 to include the Board's proposed changes and voted to pass the bill four days later. The Assembly voted to pass the bill on August 31<sup>st</sup>, sending it to the Governor's desk, where he signed it into law on September 23, 2018.

During the Legislative discussion, staff indicated to the Senate Appropriations Committee that the Board would need additional resources to complete regulations by the July 1, 2020 deadline given the large number of other regulations and startup activities the Board was already charged by the Legislature with undertaking. Staff is currently exploring options to meet this resource need.

## **Initial AB 1914 Implementation Discussion**



*Dig Safe Board members in Fontana City Hall Chambers ahead of November Board meeting to discuss AB 1914 implementation*

At a November Board meeting in Fontana, the Board discussed how to proceed with the development of regulations for AB 1914 for the first time.

Members, staff and stakeholders addressed questions regarding where the regulation should fall on the spectrum of “management-based”<sup>36</sup> vs “prescriptive,”<sup>37</sup> whether it should require communication of the intent to use power tools, and how the regulation should be monitored.

The Board will develop a regulation adoption timeline for AB 1914, begin research, and schedule outreach efforts starting in 2019.

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<sup>36</sup> “Management-Based” refers to regulations that direct regulated organizations to engage in the planning process that aims toward the achievement of public goals, offering flexibility in how they achieve those goals.

<sup>37</sup> “Prescriptive” refers to regulations that create clear, specific, and often rigid requirements.



## EDUCATION & OUTREACH

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One of the Dig Safe Board’s core responsibilities is to coordinate the state’s education and outreach activities to encourage safe excavation practices among stakeholders and the public. Pursuant to Government Code 4216.17, the Board is required to meet annually “to understand the existing education and outreach efforts among state and local government agencies, California operators, regional notification centers, and trade associations that fund outreach and education programs that encourage safe excavation practices.”

The Board is also expected to facilitate a discussion on how to coordinate existing education and outreach efforts, and determine the areas where additional education and outreach efforts may be needed. The Legislature included this requirement in the Dig Safe Act, to recognize the importance of educating stakeholders and the public about safe digging practices to prevent damage, injury, and potentially death.

Through the development of this startup agency, the Board highlighted to staff and to the public the importance of an education and outreach officer dedicated to developing a statewide program that educates Californians about safe excavation practices and encourages thoughtful communication among stakeholders.

### Education & Outreach Meeting

To meet its statutory requirement to coordinate the state’s education and outreach about safe digging practices, the Board held its first education and outreach meeting on April 19 in Long Beach. The purpose of the meeting was to better understand which groups have the highest need for education and outreach, how to coordinate education efforts on a statewide level and how to use fines from penalties to fund additional education and outreach efforts by the Board.

## Dig Safe Board Education and Outreach Survey

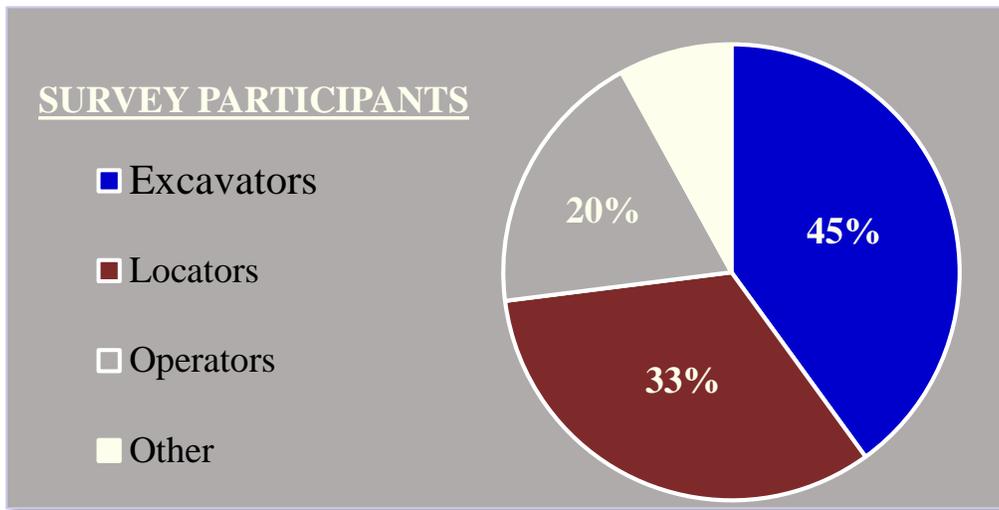


Online survey created for Dig Safe Board's yearly education & outreach meeting in April.

Before the meeting, staff created an online survey to gain a better understanding of which groups to focus its educational efforts on. The survey was posted to the Dig Safe Board's website, and was compiled of nine questions about the participants' current job duties, their experiences with the USA ticketing process, how they learn about safe excavation practices, the type of educational resources preferred, how they would like to be communicated with, and who they believe the Dig Safe Board should focus its

education and outreach efforts on. The survey was sent to excavators, operators, line locators, and other Board stakeholders to allow for a well-rounded series of responses that the Board could use to inform its future outreach decisions.

The Board received 151 responses to the survey from excavators, operators, locators and other stakeholders. The details of the survey were shared at the April meeting:



Most of the survey participants told the Board it needed to focus its education and outreach efforts on homeowners, landscapers, and utility companies.

Participants believed online and social media campaigns were the most effective way to get their attention about safe excavation, followed by television, radio and print ads. Some participants said they would like to attend safety talks or events. Participants were asked about their preferred method of training, which they told the Board they would rather have employer customized training that pertained to their workplace, followed by onsite hands-on training, online informational resources, and training videos.

The survey asked participants about the best way to capture their attention when it came to safe digging practices, and they told the Board they would prefer a straight to the point message about the dangers,

followed by testimonials from an injured person or the family of a person killed. Others said they would like to know about the financial impact a dig-in accident had on a company.

Finally, the survey asked about how participants learned about safe excavation practices, and the majority told the Board they were taught by their employers, who they say provide safe excavation training and guidance once the underground lines are located and marked.

The Board plans to use the survey results to help measure its effectiveness in educating the public about safe digging practices on a statewide level.

## **Education & Outreach Officer**

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Through the results of the April Education and Outreach meeting, along with research and development of its education and enforcement programs (*see page 14, DEVELOPMENT OF AN EDUCATION & ENFORCEMENT PROGRAM*), the Board recognized the importance of creating a new position to oversee its education and outreach efforts and staff reclassified one of its Special Investigator positions to create an Education and Outreach Officer position. Such a position would be critical for developing the Board's education and outreach program, a requirement laid out by the Legislature in the Dig Safe Act.

The Board's Education and Outreach Officer is responsible for:

- Developing and implementing monthly educational public workshops related to underground facilities
- Creating statewide marketing campaigns promoting the Dig Safe Board and educational workshops
- Analyzing the effectiveness of the Dig Safe Board and other safe excavation media campaigns
- Creating new educational materials including lesson plans, reports & technical information

Since being hired in mid-August, the Board's Education and Outreach Officer has conducted outreach with farmers and operators for area of continual excavation (*see page 8, Strategic Activity: Outreach and Piloting*), and assisted in the development of the Board's education in-lieu of fines course (*see page 15, Strategic Activity: Identification of Relevant Education*).

The position is also responsible for maintaining the Board's website, and will be responsible for responding to media requests for interviews and information.

## **Outreach Opportunities**

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As part of the Board's efforts to become educators on the statewide level, staff spent a considerable amount of time attending industry events, workshops, and trainings to educate the public about the newly formed Dig Safe Board, and learn from stakeholders about the complicated industry they regulate.

The table below highlights a selection of outreach opportunities staff took part in this year:

## 2018 OUTREACH OPPORTUNITIES

<b>Pipeline Safety Conference</b>	<b>April 18, 2018</b>	Staff & Members Del Toro, Johns, Munoz, and Voss attended OSFM’s Pipeline Safety Conference in Long Beach to gain a better understanding of the regulations that pertain to the safe operation of pipelines that transport hazardous liquid throughout California.
<b>CARCGA Mock Strike Event</b>	<b>April 27, 2018</b>	Staff attended CARCGA’s safety expo and mock-strike event in Sacramento, designed to teach excavators about the safety risks around underground infrastructure. Staff made connections with stakeholders and discussed the Board’s duties. The Executive Officer delivered the Key Note speech at the event.
<b>Associated General Contractors Legislative Summit</b>	<b>May 14-15, 2018</b>	The Executive Officer spoke at the Associated General Contractors Legislative Summit in Sacramento to educate members about the Board, its role in the industry, and how upcoming regulation and standard development would impact them.
<b>Utility Public Safety Alliance Regional Meeting</b>	<b>September 11, 2018</b>	Staff attended the Utility Public Safety Alliance’s regional meeting in Sacramento, where the Executive Officer delivered a presentation about the regulators perspective as it pertains to safety around underground facilities.

Throughout the year, the Dig Safe Board also attended Board Meetings for the California Regional Common Ground Alliance (CARCGA), DigAlert, and USA North 811 to conduct outreach and provide stakeholders with an understanding of the Board’s role in the industry, and the status of regulation and standard development.



## ADMINISTRATION

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The Dig Safe Board, as a government startup, must develop a successful government agency from scratch to fulfill its legislative charge. To do this, staff must work diligently to build a strong administration that supports the Board's work.

While many of the Board's administrative foundations are largely built--like revenue collection, budgeting, feepayer communication, vehicle acquisition, and Board Member orientation--some are just beginning, including:

- Opening a Southern California office
- Acquiring a case management system
- Supporting Investigations Division startup

In addition to these major projects, Board staff must also work consistently to maintain the Board's website, act as administrative support for its Board meetings, hire and train new staff, and more.

## Board Members

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The Dig Safe Board is made up of nine appointed members—seven appointed by the Governor, one by the Speaker of the Assembly, and one by the Senate Rules Committee. Most Board Members were appointed in 2017, while Member Amparo Munoz was appointed by the Speaker of the Assembly on April 11, 2018.

The Dig Safe Board



*Jessica Arden, Chair  
Appointed December 18, 2017*



*Vincent Bernacchi  
Appointed December 18, 2017*



*Ron Bianchini  
Appointed December 18, 2017*



*Randy Charland  
Appointed September 17, 2017*



*Marjorie Del Toro  
Appointed December 18, 2017*



*William Johns  
Appointed December 18, 2017*



*Marshall Johnson  
Appointed December 18, 2017*



*Amparo Munoz  
Appointed April 11, 2018*



*Carl Voss  
Appointed December 18, 2017*

The Board met for the first time on January 9, 2018 in Sacramento where it elected Jessica Arden as chair.



*Board Members pose at the State Capitol on Member Bernacchi's last day serving on the Dig Safe Board*



*Member Bernacchi thanks Board Members, staff, and stakeholders at December Board Meeting after announcing retirement*

As 2018 came to an end, four of the Board's Members (Bernacchi, Del Toro, Johnson and Voss) reached the end of their two-year term limit.<sup>38</sup> Member Bernacchi made the decision not to re-apply for his position, announcing his retirement at the Board's December meeting at the State Capitol.

Meanwhile, Members Del Toro, Johnson and Voss were reappointed by the Governor on January 2, 2019.

## **Board Meetings**

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To meet its Legislative requirements,<sup>39</sup> the Board must meet at least once every three months to discuss its business and receive feedback from its stakeholders. Over the course of 2018, the Board held nine meetings around the state:

- January 09, 2018:** Training & Business Meetings  
Held at the Natural Resources Building in Sacramento, CA
- February 22-23, 2018:** Incident Reporting, Baseline Safety Assessment and Education Meetings  
Held at the Office of the State Fire Marshal in Monrovia, CA
- April 19, 2018:** Legislation-Investigations, Legislation-Loan Repayment, Initiation of Rulemaking on Fees, Education & Outreach  
Held at the Hilton's Catalina Room in Long Beach, CA
- June 21, 2018:** Election of Interim Chair, Process for Standard Development, Proposed Draft Regulations  
Held at the Office of the State Fire Marshal in Sacramento, CA
- July 24, 2018:** AB 1914 Position, Area of Continual Excavation  
Held at the Kern County Agriculture Pavilion in Bakersfield, CA
- August 20-21, 2018:** Regulations on Fees, Education Curricula, Area of Continual Excavation, Reasonable Care Standards, Baseline Safety Assessment  
Held at Westlake Village City Hall in Westlake Village, CA
- October 15-16, 2018:** Election of Interim Chair, MOU-California Public Utilities Commission, Enforcement Policy, Investigations, Damage Notification, Education, Area of Continual Excavation  
Held at the Office of the State Fire Marshal in Sacramento, CA
- November 8, 2018:** MOU-Contractors State Licensing Board, CARCGA Standards Report, In-House Education Development, Confidential and Anonymous Reporting, AB 1914  
Held at Fontana City Hall in Fontana, CA
- December 10-11, 2018:** Draft Regulations on Area of Continual Excavation, Investigations and Enforcement  
Held at the State Capitol in Sacramento, CA

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<sup>38</sup> Terms officially started January 1, 2017. Terms are four years, but statute calls for a staggering of terms, leaving four inaugural members with only two-year terms, to preserve continuity and prevent an empty Board.

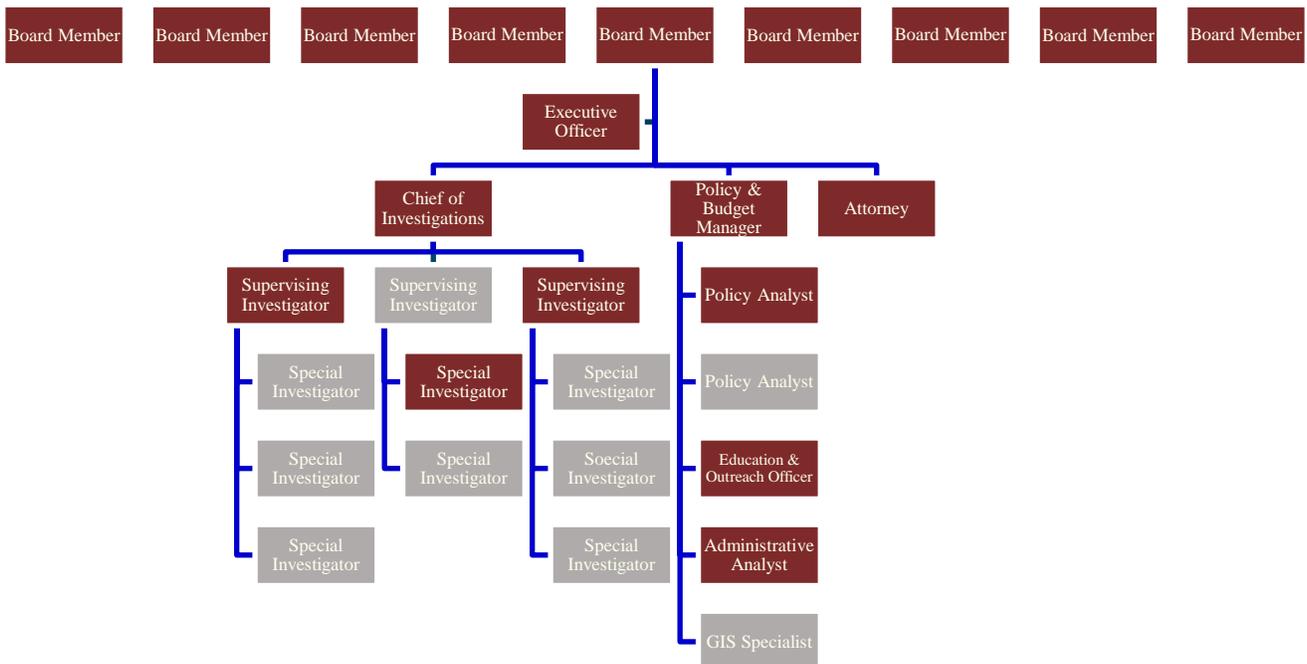
<sup>39</sup> GOV 4216.15

## Board Staff

The work of the Board is supported by a diverse professional staff made up of investigators, an attorney, policy analysts, communication specialists, and administrative support. The job of staff is to create, maintain, and support a successful Government agency.

### HIRING

The Legislature authorized funding for the Board in the Budget Act of 2017-18<sup>40</sup>, including 21 positions—nine authorized for fiscal year 2017-18, and twelve for the 2018-19 year. Year one hires focused on Board operations and regulation developments, while year two hires focused on investigations. Staff levels started with four at the beginning of 2018, with more hired throughout the year.



Organizational Chart showing Dig Safe Board Hires at the end of 2018, Maroon represents the filled positions

Currently staff consists of ten employees, including:

**Executive Officer:** Directs the development of regulations implementing the Dig Safe Act of 2016 as well as non-regulatory standards required by the Legislature. Serves as a liaison between the Board and the Legislature, between the Board and external stakeholders, and between the Board and the media.

**Policy and Budget Manager:** Manages the Board’s budget, including the preparation of federal grant applications, the preparation of reports to federal agencies, and the establishment and maintenance of internal controls in compliance with federal statutes and regulations. Responsible

<sup>40</sup> Chapter 14, Statutes of 2017

for the planning and execution of the annual safe digging education and outreach stakeholder meeting.

**Attorney:** Provides direction and assistance to the Dig Safe Board and Board staff in drafting, amending, and updating rules, regulations, standards, procedures, and guidance to implement the provisions of the Dig Safe Act of 2016.

**Chief of Investigations:** Plans, organizes, and directs a statewide investigation program that conducts excavation accident investigations; develops division policy and procedure; reviews and evaluates reports; and directs or participates in the more difficult or confidential field investigations. Directs the work of a staff in the investigation of suspected violations of provisions of laws, rules, or regulations; develops and maintains cooperation with law enforcement agencies, fire departments and affiliated state agencies; evaluates the performance of staff members and takes appropriate action.

**Supervising Investigators (2):** Conducts and supervises special investigators in conducting, excavation safety accident investigations, including field investigations, to determine proximate and contributing causes. Responsible, through own actions or supervision of special investigators, for documenting and obtaining incident scene documentation prepared by parties and state and local agencies, for collecting, cataloging, and preserving evidence, conducting interviews with persons involved with the accident, and maintaining confidentiality of information gathered.

**Special Investigator (1):** Conducts excavation safety accident investigations, including field investigations, to determine proximate and contributing causes. Documents incident scenes and obtains documentation prepared by parties and state and local agencies. Collects, catalogs, and preserves evidence, conducts interviews with persons involved with the accident, and maintains confidentiality of information gathered.

**Policy Analyst (1):** Develops work and products that guide the Board's policy decisions, including those that aid the understanding of California's baseline state of excavation safety, propose strategies to improve safety, and that develop metrics and other tools to evaluate progress.

**Administrative Analyst:** Develops processes, workflows, and project tracking tools, creates automated report tools to provide transparency into the Board's administrative operations for the administrative accountability program for the Dig Safe Board. Provides analytical services involving research, data gathering, analyze trends and interpret patterns, evaluation and verbal and written reports to management to prioritize business needs.

**Education and Outreach Officer:** Develops and implements monthly educational public workshops related to underground facilities. Creates statewide marketing campaigns promoting the Dig Safe Board and the educational workshops. Creates new education and outreach programs and materials including lesson plans, reports, and technical information to present to a wide range of people for education.

Four Special Investigator positions in Sacramento and Los Angeles were filled in 2018, along with a GIS Specialist position. The GIS Specialist will assist investigators in the mapping of accident scenes. All five new employees are expected to start in January and February of 2019. Staff also conducted

interviews for a second Policy Analyst in November and December of 2018, and expects to fill the position in early 2019.

## TRAINING

Each staff member must undergo the required state training, as well as industry training to learn about the industry in which they regulate. Below is a timeline of the training staff underwent in 2018, both within the state and within the industry:

January 18, 2018	Phishing: How to Recognize & Prevent	State Training
January 18, 2018	Information Security Awareness	State Training
January 18, 2018	101 Privacy Awareness	State Training
February 13, 2018	USA North 811 Tour	Industry Training
February 14-15, 2018	Completed Staff Work	State Training
February 27,28-March 1, 2018	Purchasing Training	State Training
March 12-23, 2018	Supervisor 5	State Training
April 24, 2018	Communicating with Data	State Training
April 25-26, 2018	Competent Person Excavation Training	Industry Training
May 1-2, 2018	Applying Analytical Skills Part 1	State Training
May 11, 2018	West Valley Construction Site Visit	Industry Training
May 18, 2018	UtiliQuest Locator Training	Industry Training
May 25, 2018	West Valley Construction Site Visit	Industry Training
May 30, 2018	Applying Analytical Skills Part 2	State Training
June 5-7, 2018	OAL: Rulemaking	State Training
June 6, 2018	Critical Thinking Tools	State Training
June 21, 2018	Excel Level 2	State Training
July 13, 2018	Equal Opportunity in Employment	State Training
July 18, 2018	CAL FIRE Annual Focus on Safety	State Training
August 13-14, 2018	Completed Staff Work	State Training
August 14, 2018	New/Current Manager Hiring	State Training
August 28-30, 2018	Smartsheets Training	Dig Safe Board Training
September 5, 2018	DOF 399	State Training
September 14, 2018	FAA Compliance Philosophy	Dig Safe Board Training
September 26,2018	GoToMeeting Training	Dig Safe Board Training
October 3, 2018	Paradigm CoRE-Ex Training	Industry Training
October 12, 2019	FI\$Cal: Navigation, Cash Management & Procurement	State Training
October 15-16, 2018	OSHA 10-Hour Construction Training	Industry Training
October 18, 2018	FI\$Cal: Requisitions & Receiving	State Training
October 18, 2018	Paradigm CoRE-Ex Training	Industry Training
November 6-8, 2018	Purchasing Training	State Training
November 6-8, 2018	OAL: Rulemaking	State Training
December 12, 2018	FI\$Cal: Introduction	State Training

## Board Operations

The Dig Safe Board is a government start-up, and that requires a substantial amount of work just to establish a well-functioning government organization. Much of 2018 was spent on administrative startup tasks like creating a revenue source and determining how to collect it, budgeting, Board member orientation, finding office space, vehicle purchasing, and more.

### STARTUP SUPPORT

In order to set up a well-functioning government agency, staff needed to ensure it had the necessary administrative support from the California Department of Forestry and Fire Protection (CAL FIRE). To do this, staff met with CAL FIRE's budget and administrative departments in early January to discuss the Board's future rulemakings and how they would impact workflow for those departments as the new regulations could add more work to CAL FIRE's administrative staff. Staff followed up with CAL FIRE's budget and administrative departments in March ahead of its first rulemaking package on fees.

### PROGRAM ACCOUNTABILITY

To ensure the Board meets its Legislative mandates and operates in the best interest of the people of California, staff met with CAL FIRE's Program Accountability Office in late April and again in early May to discuss setting up checks and balances within the department.

### CASE MANAGEMENT SYSTEM

To conduct successful investigations, the Dig Safe Board needed to acquire a case management system to keep track of information collected during investigations in order to identify industry trends. The search for a case management system began in early March. The Board is expected to choose a provider, and build its case management system in mid-2019.

### OFFICE SPACE

Data shows two-thirds of the dig-in accidents in California are south of Tehachapi, so Board staff is split into two offices, one in Northern California—made up of investigators and administrative staff—the other in Southern California made up of investigators.

Northern California staff resides in the Office of the State Fire Marshal's (OSFM) Sacramento offices. At the beginning of 2018, Board staff resided in offices on S Street. The Board moved into OSFM's new building on Harvard Street at the beginning of June, which gave the Board an opportunity to expand with its growing staff. The move took four days to complete.

Board staff began the process of securing a permanent Southern California office in late 2017 to house two-thirds of its investigations unit. Staff partnered with the Department of General Services (DGS) in mid-June to conduct the first of two site searches for a Southern California office space. The second site search occurred in mid-November. DGS is currently in lease negotiations, and estimates that staff will be able to move into a facility in 2019. Currently investigators are working out of a temporary space at the Contractors State License Board offices in Norwalk.

### VEHICLES

To prepare for the hiring of investigators, staff focused on acquiring a fleet of vehicles that would allow the investigations division to travel to scenes and interviews easily. In mid-January, staff met with the

CAL FIRE Mobile Equipment Department to discuss vehicle purchasing. Throughout the year, staff worked with the department to purchase, register, and mark its fleet of vehicles. The Board expects to have the fleet up and running by mid-2019.

## Board Branding

As a new government agency, building name recognition is a daunting task requiring substantial staff attention on the Board’s vision, and how to share that vision with other government agencies, stakeholders, and the public in order to build awareness of the Board, and its role in regulating safety around California’s underground facilities.

### NAME

In an effort to ensure name recognition, and maintain that recognition the Board chose to create an informal title to use in its branding opportunities. The Board’s official title is the California Underground Facilities Safe Excavation Board. In the first quarter of the year, Board Members and staff recognized that the Board’s name was hard for people to remember, and created confusion among other government agencies, stakeholders and the public. For this reason, the Board has chosen to describe itself as “The Dig Safe Board.”

### SEAL

Once the Board had decided on a new name, it needed an official seal. The Board created several mock-ups of a seal, before deciding on the final product, which includes the board’s official name and informal title.



*Dig Safe Board Draft Seal Designs, including the Board’s official seal on the bottom, far right*

In an effort to increase the Board’s name recognition, staff made the decision to include the official seal on all official Board documents, handouts, and materials like business cards, email signatures, banners, educational and promotional items, and the Board’s website.

## WEBSITE



Dig Safe Board’s Website: <http://digsafe.fire.ca.gov>

A crucial element of name recognition is the Board’s website. Staff worked throughout the year to create an online presence that promoted the Board, its role in regulating safety around underground infrastructure, and its mission to improve communication among industry stakeholders and educate the public about safe excavation practices throughout California. Staff started by creating a basic website where it could promote the first year of Board meetings, policies, reports, rulemakings, and activities. In mid-August, staff began work to create a more accessible website that was easy to navigate, and expand the website’s reach to include space for a newsroom and resources for members, stakeholders and the public.

Work will continue to build the Board’s online presence in 2019, including the expansion of the website and the addition of social media platforms.



## COMMON TERMS & ACRONYMS

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**811 Ticket**— more commonly known as a “ticket”, this is a locate request submitted by an excavator through the regional notification centers prior to any excavation. Each locate request is issued a number.

**Annual Ticket**— an alternative to the 811 Ticket. Allows farmers and flood control operations to call the appropriate regional notification center, once a year, and request a year-long ticket for normal farming or flood control practices.

**CGA or Common Ground Alliance**— a national non-profit formed in 2000, dedicated to preventing damage to underground infrastructure by promoting effective damage prevention practices and shared responsibility among all stakeholders

**CGA Best Practices**— an annual guide released by the Common Ground Alliance used as a resource in the industry for underground damage prevention.

**CARCGA**— or California Regional Common Ground Alliance. This non-profit organization is a Regional Partner of the Common Ground Alliance.

**SSIP Committee**— or Subsurface Safety & Incident Prevention Committee is a committee under CARCGA responsible for discussing safety and incident prevention issues around subsurface installations, and making recommendations to CARCGA and the Dig Safe Board.

**CSLB**— or Contractor’s State Licensing Board. This State agency works to protect California consumers by licensing and regulating the California’s construction industry, and partners with the Dig Safe Board to oversee safety around underground facilities.

**Delineate**— term used to describe when an excavator must identify the proposed work zone with white paint, flags, stakes, whiskers, or a combination of these methods prior to an operator locating and marking any underground facilities within the work zone.

**Dig-In**— a term coined by the industry to describe when an underground facility is struck by a machine or tool during excavation.

**Excavator**— an individual, crew, and/or company who digs into the earth.

**Locate & Field Mark**— to indicate the existence of any owned or maintained subsurface installations in a proposed excavation zone, and mark that location using the proper methods outlined in Appendix B of the CGA Best Practices “Guidelines for Operator Facility Field Delineation.”

**PHMSA**— or Pipeline and Hazardous Materials Safety Administration is a Federal Agency under the Department of Transportation responsible for enforcing regulations on the operation of pipeline transportation.

**GIS**— or geographic information system. This system is used to gather, manage and analyze data and can organize layers of information into visualizations using maps and 3D scenes.

**GOV 4216**—or “The Dig Safe Act of 2016.” This is California’s safe digging and damage prevention law regarding underground facilities.

**GPR**— or Ground-penetrating radar. It’s a method that uses electromagnetic radiation to detect and create images of subsurface installations, and can measure the length, width and depth of these installations.

**Hand Tool**— refers to a piece of excavation equipment that uses human power, and is not powered by any motor, engine, hydraulic, or pneumatic device.

**High-Priority**— refers to petroleum pipelines, natural gas transmission pipelines, pressurized sewer pipelines, high-voltage ( $\geq 60$  kV) electric lines, and hazmat lines.

**Locator**— a representative from a utility or third-party contractor who locates and marks underground infrastructure in a proposed excavation zone, using colored paint.

**Minimum Standards**— the lowest acceptable criteria that an excavator, locator and/or operator must meet to be in compliance with the requirements of a law and/or regulation.

**OAL**— or the Office of Administrative Law. This government organization ensures State agency regulations are clear, necessary, legally valid, and available to the public.

**OSFM**— or the Office of the State Fire Marshal. This State agency supports CAL FIRE’s mission to serve and safeguard the people and protect the property and resources of California by focusing on fire prevention. OSFM also partners with the Dig Safe Board to oversee safety around underground facilities.

**Operator**— also referred to as a subsurface installation owner or utility owner, is any person, corporation, public agency, or other entity that owns, operates, or maintains a subsurface installation.

**Power-Operated Equipment**— a tool that is activated by an additional power source and mechanism other than the solely manual labor used with hand tools.

**Pothole**— the act of digging a test hole to expose a subsurface installation in order to determine the horizontal and vertical location of the facility.

**PUC**— or Public Utilities Commission. This state agency regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies and partners with the Dig Safe Board to oversee safety around underground facilities.

**Regional Notification Center**— also referred to as a “one-call center,” is a non-profit association of operators that provides warning of excavations or other work close to existing facilities in order to protect them from damage, removal, relocation, or repair. California has two regional notification centers: USA North 811, Located in Concord, CA and covers Northern California from the Oregon border to Bakersfield. Underground Service Alert of Southern California (DigAlert) covers Southern California from Bakersfield to the Mexican border.

**Regulations**— a rule or directive made and maintained by the Dig Safe Board.

**Subsurface Installation**— also referred to as an “underground facility, or underground infrastructure” is any underground pipeline, conduit, duct, wire, or other structure, except non-pressurized sewer lines, non-pressurized storm drains, or other non-pressurized drain lines.

**Tolerance Zone**— refers to a set distance from a subsurface installation that an excavator may dig without having to use hand tools. This is usually 24-inches, or two feet on either side of the subsurface installation, and is marked by the operator.



## **THE CALIFORNIA DIG SAFE BOARD**

*The Dig Safe Board improves public and worker safety by facilitating communication and learning among excavators and the operators of subsurface installations by investigating accidents to determine their causes.*

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2251 Harvard Street, 4<sup>th</sup> Floor Sacramento, CA 95815 | (916) 568-3800 | <http://digsafe.fire.ca.gov>