



ANNUAL PLAN

California Underground Facilities

2021

Safe Excavation Board



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For a hard copy of this report, please contact the Underground Facilities Safe Excavation Board at (916) 568-3800 or digboard@fire.ca.gov. This report is also available on the Board's website: <http://dig.fire.ca.gov>

TABLE OF CONTENTS

About the Board	3
Introduction	4
Overview of the 2021 Plan	7
Objective I: Foster Compliance with New and Existing Laws	8
Objective II: Improve Excavation and Location Practice Safety	9
Objective III: Build Foundation for Accident Cause Identification	10
Objective IV: Continue Building a Foundation for Board Operations	11
2021 Board Meetings & Staff Roster	12

ABOUT THE BOARD

The Underground Facilities Safe Excavation Board was created by the Dig Safe Act of 2016 to oversee the safety of excavations around buried utilities by coordinating the state's education and outreach efforts, investigating accidents to determine their causes, setting standards for safe excavation and ensuring the state's safe excavation laws are followed. The Board is made up of nine members appointed by the Governor and Legislature.

Mission

The California Underground Facilities Safe Excavation 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, and by developing solutions to improve safety outcomes. The California Underground Facilities Safe Excavation Board strives to be a model regulatory and investigatory board for other states to emulate.

Board Members

Appointed by the Governor

Marjorie Del Toro, Chair

Ron Bianchini

William Johns

Marshall Johnson

Carl Voss

Vacant

Vacant

Appointed by the Assembly Speaker

Amparo Muñoz, Vice Chair

Appointed by the Senate Rules Committee

Randy Charland

INTRODUCTION

Guided by the framework put forth in the draft 2020 Strategic Plan, the Board's 2021 Annual Plan lays out the key objectives the Board hopes to achieve in the coming year and the associated activities that will be undertaken to meet those objectives. The plan is informed by Board direction and the Board's completed and outstanding work from its 2020 Annual Plan listed in the 2020 Results Report.

In 2020, the Board's work evolved from completing specific requirements it has been tasked by the Legislature to implementing its larger mandate of improving excavation safety. This work along with education and outreach efforts took place amid the COVID-19 pandemic which required adapting existing operations to remote work and physical distancing.

The Board's maturation will continue as it joins the Office of Energy Infrastructure Safety (OEIS) in January 2022.

Education & Enforcement

The Board's founding statute and mission statement set forth enforcement and education as complementary tools in the Board's approach to improving excavation safety. Adopted in 2019, the Board's Enforcement Philosophy (Policy B-5) recognizes the critical role education and corrective action play in conducting enforcement activity in a manner that prioritizes safety benefits:

- Given evidence of unintentional error and lack of evidence of reckless or willful non-compliance, the Board's enforcement should focus on assisting violators in correcting non-compliances.
- Given lack of evidence of unintentional error and evidence of reckless or willful non-compliance, the Board should use fines as an enforcement tool.
- Board investigative staff should develop procedures to actively limit the influence of liability in determining what accidents and complaints to investigate.

This interplay between provision of education and achievement of compliance within a context of open communication is reflected throughout this plan.

Review of Results from 2020

The 2021 Annual Plan continues with similar strategic objectives as those in 2020. An outline of the Board's accomplishments towards its 2020 objectives, as well as highlights of work that will continue into 2021 is provided below. More information about the Board's 2020 achievements may be found in the 2020 Results Report.

Objective I: Foster Compliance with New and Existing Laws

The Board completed the materials for the education course and readied the course for online delivery to the first group of violators as determined by the Board in the fall of 2020. The Board created and implemented emergency regulations for extending the deadline by which operators must comply with Electronic Positive Response (EPR). Due to safety precautions for in-person

gatherings, education and outreach efforts around EPR, the Area of Continual Excavation and Power Tool Use in the Tolerance Zone regulations continue into 2021.

Objective II: Improve Excavation and Location Practice Safety

The Board implemented requirements for operators to keep their contact information updated with call centers. The Board began to examine the issue of abandoned lines through the lens of safety standards required by Government Code § 4216.18. The Board chose to proceed with examining safe practices in different types of excavation, beginning with trenchless excavation techniques. The Board held two workshops and an online survey throughout the latter half of 2020 and will continue to develop these standards in 2021.

Objective III: Build Foundation for Accident Cause Identification

Throughout 2020 the Board conducted accident and violation investigations and implemented an investigative process for responding to damage reports and complaints received through the call centers and the Board's website. The Board continued to develop accident root cause modeling that will help to evaluate data captured in investigations. Development of the Case Management System continued throughout 2020 and will provide the foundation for accident data reporting and modeling.

Objective IV: Continue Building a Foundation for Board Operations

The Board implemented processes for accepting, tracking, and responding to complaints to improve the reporting process. The Investigation Case Management System has been implemented, and the development of administrative processes, documentation, and system training began in 2020 and continue. The Board completed review of its fee regulation and approved changes improve the process for the one-call center members who pay the fee. The development of policy and procedures for Board staff will continue with the move to the Office of Energy Infrastructure Safety. The Board completed implementation of the Enforcement and Hearing process and held its first enforcement hearings and votes in September 2020.

Activities under the above objectives in the 2020 Plan which were not complete by the end of the year will continue in 2021 and are outlined in the 2021 Plan that follows.

Association to 2020 Strategic Plan

In early 2020, the Board developed a draft Strategic Plan to serve as a guiding document to inform its approach over the next three years. The plan outlined the Board's four strategic directions:

- **Strategic Direction 1:** Improve Compliance by Reaching Parties in Effective Ways

- **Strategic Direction 2:** Improve Accessibility of Buried Infrastructure Location Knowledge and Understanding
- **Strategic Direction 3:** Identify proximate and contributing causes to safety accidents and non-compliances
- **Strategic Direction 4:** Build Board operations to achieve compliance, reporting, and operational excellence in a resource-efficient manner

These strategic directions were envisioned as serving as a guide to the Board's priorities for three years. The strategic directions guide the objectives and activities of this plan and do not align one-to-one in a subordinate structure; rather each set of objectives supports one or more of the strategic directions. The Strategic Plan is expected to be revisited in 2023.

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OVERVIEW OF THE 2021 PLAN

The 2021 Annual Plan continues the similar objectives from 2020 as well as continues those strategic activities from the 2020 Plan that were not completed. Also included are “Looking Ahead” sections, which represent activities the Board hopes to pursue in the future, but which are not scheduled in the calendar year due to dependencies on the completion of other activities or resource constraints. Ideas submitted through the Board’s Idea Register were considered by the Board in the development of this plan, and those submitted ideas which have not yet been incorporated may be integrated into future annual plans. New to the 2021 Annual Plan is the use of enforcement to improve compliance (Objective I); in previous years, the Board had focused on the development, rather than the implementation, of the investigation program. A brief summary of the 2021 objectives is provided below, each of which is elaborated in the following sections.

I: Foster Compliance with New and Existing Laws through Education, Outreach, and Enforcement

Inform excavators and operators of new laws and regulations to foster compliance, understand stakeholder groups to develop targeted messaging, and investigate accidents and potential violations.

II: Improve Excavation and Location Practice Safety

Develop standards for excavators to use in determining the location of buried infrastructure in specific circumstances, such as deep excavations and road building and grading activities.

III: Build Foundation for Accident Cause Identification

Develop an excavation system model and develop root cause determination procedures for investigations so that investigations analyzed along with other data sources in a systematic manner.

IV: Continue Building a Foundation for Board Operations

Develop internal and external policies to continue to establish a well-functioning government organization that promotes safe excavation throughout the state and is prepared to move to the Office of Energy Infrastructure Safety in 2022.

OBJECTIVE I: FOSTER COMPLIANCE WITH NEW AND EXISTING LAWS THROUGH EDUCATION, OUTREACH, AND ENFORCEMENT

While the Board's efforts at education and outreach have previously focused on seeking participation in its regulations processes, work in 2021 will pivot towards developing a better understanding of the various groups involved in the call before you dig process, identifying their individual needs, and creating value propositions. This understanding will help the Board to work with groups already conducting education and outreach on the call before you dig process including operators, regional notification centers, and other trade associations so that messages are targeted, relevant, and do not conflict. Coordinating the efforts of other groups already engaged in education and outreach activities allows the Board to have a greater impact than acting on its own.

1. Target Education and Outreach for Recent Regulatory Changes

Education and outreach messaging in 2021 will likely be limited to educating segments of the public about new regulatory changes such as Areas of Continual Excavation, Electronic Positive Response, and power tool use in the tolerance zone. The Board will need to create targeted educational materials and build partnerships with county Farm Bureaus, trade organizations, and other agencies relevant to the farming community to maximize the effectiveness of its outreach efforts. This will be Board member led.

2. Understand Relevant Wants and Needs of Excavators and Operators to Tailor Safety Messages to Them

While outreach is needed to inform the public about new regulatory changes, Board surveys, workshops, and enforcement actions have demonstrated significant knowledge gaps in many groups about existing requirements.

The Board's purpose in outreach is to lead the public to solutions to their own problems, not the Board's. Excavators and operators will adopt the Board's messages if they find value in them—if the messages present solutions to their problems. The value must go beyond price—the 811 service is free, after all, but adoption is limited. To change this, the Board needs to understand the people wants to communicate with—their industry, their challenges, their missions, and what their customers need.

Through research and outreach, the Board will learn about the wants and needs of the industry groups it wants to reach. Rather than developing its own marketing channels, in 2021 the Board will focus its outreach efforts on established associations who have their own channels to their members.

3. Investigate Incidents and Potential Violations

In 2020, the Board created its enforcement program by developing investigations protocol, case intake and distribution processes, reporting format and guidelines, form letters, a penalty schedule, an advisory letter and Notice of Probable Violation

("NOPV") process, an enforcement hearing process, a tracking NOPV responses process, and a case management system.

The Board's new case management system receives damage notifications and complaints of violations Gov't Code § 4216 *et al* directly from the one call centers and the public via phone calls and emails. Receiving these damage notifications and complaints in real time allows them to be prioritized, assigned and investigated in a timely manner. Staff prioritizes the incidents and complaints to be investigated by consequence, public interest, and Board policy (in consideration of workload). In 2019, the Board identified as investigation priorities "no-call" damages and failure of operators to respond to tickets. Staff will continue to use these as its policy priorities until the Board identifies new priorities.

OBJECTIVE II: IMPROVE EXCAVATION AND LOCATION PRACTICE SAFETY

The Legislature, in passing the Dig Safe Act of 2016, recognized the lack of clear direction the law provides in certain circumstances and authorized the Board to develop regulations and standards. The Board, in its early activities, has noted additional places where practice improvements may lead to improved safety. The Board will continue its efforts in 2021 to develop safety standards and may begin to explore best locator practices if the opportunity arises. Following Strategic Direction #2, the Board intends to pursue the following activities:

1. Develop Safety Standards

In 2021, the Board will continue its work on developing safety standards (previously referred to as "reasonable care standards"). Work began in 2018 and restarted in 2020 with a plan to understand what constitutes safe practice in different types of excavation. These efforts will inform the Board's creation of standards that may be generally applicable as well as those that may be specific to excavation types.

In 2020 the Board held workshops and conducted a survey to understand more about trenchless excavation, including horizontal directional drilling. Work for 2021 is expected to include road building, point excavation (such as pole installation), and trench excavation.

2. Looking Ahead: Locator Requirements and Best Practices

With the implementation of electronic positive response, the Board has a new opportunity to examine locator best practices, safety, and communication between parties prior to the legal start date of the excavation. A white paper published by the Common Ground Alliance (CGA) in October 2020¹ discussed opportunities for improving the delivery of timely and accurate locate requests. Research into this topic may trigger areas for future Board policy development. This work is not anticipated to begin in earnest in 2021 but may be addressed on an ad hoc basis if time and resources allow.

¹ Common Ground Alliance: *Insights into Improving the Delivery of Accurate, On-Time Locates*. October 2020.

OBJECTIVE III: BUILD FOUNDATION FOR ACCIDENT CAUSE IDENTIFICATION

Many causes exist for excavation accidents, and few accidents have only one. Apart from identifying failure to call 811, existing excavation damage datasets do little to assist in identifying underlying causes, hence do not offer the Board direction on what activities to undertake to improve safety. This objective follows from Strategic Direction #3 and Strategic Direction #4. To build a data-informed approach to prioritizing its work, the Board must complete the following activities:

1. Develop Tools for Safety Assessment

As identified in its Strategic Plan, the Board is undertaking a safety management system approach to regulation, which would have the Board identify the safety problems that currently exist, determine the possible causes of the problems, analyze those causes and how they contribute to the problem, determine the possible solutions for dealing with the identified problems, and then act to resolve those problems. The first step in the safety risk management process is to describe the system. In 2021, Board staff will develop and program an excavation system model to form the basis of its data capture, risk modeling, and data analysis. This activity will be staff led.

2. Build Systematic Root Cause Analysis into Investigations

In 2020, Investigations staff collaborated with MERP Systems in the development of a data collection module in the Board's case management system. There are 44 data fields related to facility information, excavator information, consequence, and cause and an additional 25 data fields that identify primary and contributory causes as well as mitigating factors. Using the system model described above, staff will develop root cause analysis procedures to allow investigators to enter investigation data into the case management system, which may then be analyzed along with other data sources in a systematic manner.

3. Looking Ahead: Accident Data Reporting

The Board had previously expressed interest in collecting information on all damages in the state, regardless of infrastructure type, from both the excavator and the operator. At the time, the Board did not have the infrastructure to solicit and accept the expected tens of thousands of reports, and, without data modeling, staff feared that the data would be of limited value to Board decision making.

The Board's new case management system is now online and includes a data collection module. As policies and procedures are developed to identify and capture the desired data, staff can begin building useful datasets and tools which can be used to evaluate the safety impacts of the Board's activities in 2021 and beyond.

4. Looking Ahead: Integrate Stakeholder Input into Data Modeling

Analysis of quantitative data is often considered the only means of coming to objective conclusions. More sophisticated statistical approaches (such as Bayesian Hypothesis Testing) may, however, be used for the testing of stakeholder beliefs,

which could open the way for more productive communication between stakeholder groups. Such approaches, however, require careful preparation of hypotheses and mature management of existing “hard” quantitative data.

OBJECTIVE IV: CONTINUE BUILDING A FOUNDATION FOR BOARD OPERATIONS

In 2021 the Board will continue to focus on organizing and developing its policies and procedures, as well as modifying those policies and procedures as it prepares to join the new Office of Energy Infrastructure Safety in January 2022. This objective follows primarily from Strategic Direction #4. The following activities are planned to meet this objective:

1. Implementing of the Board’s Fee Regulation Update

In 2020 the Board voted to revise its fee regulation to improve the process for the Board, USA North 811, and DigAlert to jointly administer it. In 2021 staff will focus on completing the regulatory process, with the goal of having the revised fee regulation in place by January 2022. Additionally, the Board will continue to monitor improvements and other changes made to streamline the process to determine if any other changes need to be made.

2. Policy and Procedure Development

Continuing from 2020, the Board will work to develop policies and procedures for internal and external operations. These efforts will develop and document task processes to codify institutional knowledge and ease in staff onboarding and training. The policies and procedures will be aligned with applicable laws, rules, and regulations. This activity will be staff led.

3. Transition to the Office of Energy Infrastructure Safety

Senate Bill 865 (Hill, 2020) relocates the Underground Facilities Safe Excavation Board from the Office of the State Fire Marshal to the Office of Energy Infrastructure Safety (OEIS) in January 2022. OEIS was created by the California Energy Infrastructure Safety Act of 2019 (AB 111, 2019), which established the Public Utilities Commission’s Wildfire Safety Division and moves it to the Natural Resources Agency (under the OEIS name) July 1, 2021. The work to transition from the existing entities operations within CPUC and OSFM CAL FIRE will take significant effort in 2021. Work continues with CAL FIRE and OEIS leadership to manage the transition with minimal impact to Board operations. The transition will involve moving all aspects of the Board’s operations in both tangible ways, such physically moving to a new building, and intangible ways, such as moving finance, human resources, and information technology functions.

2021 BOARD MEETINGS

Due to COVID-19, Board Meetings will be held via webinar teleconference until the expiration of applicable Governor's Executive Orders.

FEBRUARY 9

MAY 11

JULY 13

AUGUST 10

SEPTEMBER 13-14

OCTOBER 11-12

NOVEMBER 8-9

BOARD STAFF

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