

2018 Plan

California Underground Facilities Safe Excavation Board

January 9, 2018

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Introduction

The California Underground Facilities Safe Excavation Board was created by the Legislature in 2016 to perform the following functions:

1. Coordinate the state's education and outreach activities that encourage safe excavation practices
2. Develop standards for safe excavation around subsurface installations where none exist
3. Investigate possible violations of the state's safe excavation laws
4. Enforce the state's safe excavation laws on the entities over which it has jurisdiction

The Board is not expected to operate in a vacuum, but will be joined by the Contractors State License Board, the Public Utilities Commission, and the Office of the State Fire Marshal in a shared responsibility for safety oversight. For the Board and its partner agencies to fulfill their responsibilities, the Legislature granted the Board resources but also gave it deadlines—both statutory and implicit. The Board has the following milestones to meet:

- Be prepared to begin investigations by the beginning of 2019 (2017 Budget)
- Establish a funding source by July 1, 2019 (2017 Budget)
- Develop regulations for minimum standards for onsite meetings in areas of continual excavation by January 1, 2020 (GOV 4216.11)
- Begin enforcement of Board-jurisdictional actors on July 1, 2020 (GOV 4216.6)

Additionally, the Board is scheduled to undergo legislative review any time after January 1, 2020 (GOV 4216.23), at which time the Legislature is expected to ask the Board to account for its progress and which is an opportunity for the Board to recommend statutory changes, should the Board be able to justify such recommendations.

This document proposes activities the Board should undertake during its first year of operation to meet these Legislative expectations, but it also attempts to set a foundation of self-evaluation to ensure that both these milestones and those the Board will set for itself are met using processes that promote quality and indicators that monitor performance. In doing so, this plan models the transparency and performance focus of the Government Performance and Results Act that federal agencies use and the continual improvement processes found in safety management systems.

Model A: Strategic Planning and the Government Performance and Results Act

To maintain the trust and confidence of the Legislature and the people of California, state governmental agencies like the Underground Facilities Safe Excavation Board must adhere to statutory and administrative law, but should also develop program-specific methods to track, report, and improve agency performance. One framework for doing so is the federal Government Performance and Results Act (GPRA), passed in 1993 and amended in 2010, which outlines the basic strategic planning requirements for federal agencies.¹ In preparing the law for adoption, a congressional conference report highlighted Congress's view on its need:

“At present, congressional policymaking, spending decisions, and oversight are all seriously handicapped by the lack both of sufficiently precise program goals and of adequate program performance information. Federal managers, too, are greatly disadvantaged in their own efforts to improve program efficiency and effectiveness by that same lack of clear goals and information on results.”²

In general, GPRA requires federal agencies to develop strategic plans every four years, coordinated with the presidential elections, and performance plans annually. The strategic plans outline high-level strategic objectives, while the annual performance plans describe the activities that agencies will undertake in advancing toward those objectives. Objectives may be mission-focused, contributing directly to an agency's strategic goals, or management focused, building the capabilities (human capital, information technology, financial stewardship, etc.) upon which the agency can meet strategic goals.

¹ Part 6 of the Office of Management and Budget's OMB Circular A-11 sets the specific requirement for agencies and offers guidance.

² Report 103-58, Government Performance and Results Act of 1993, to Accompany S. 20. Senate Committee on Governmental Affairs, June 16, 1993. <https://obamawhitehouse.archives.gov/omb/mgmt-gpra/gprptm>

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As the aim of GPRA was not only to account for performance but to encourage coordinated planning across governmental silos, “agencies” subject to GPRA are massive units of the federal government. For instance, the Federal Aviation Administration (FAA), with its more than 45,000 employees, is not directly subject to GPRA, but its parent, the Department of Transportation (DOT) is, and DOT’s administrative units are expected to work toward its overarching strategic goals of safety, infrastructure investment, innovation, and accountability. If the Board begins a strategic planning process, it may need to do so in coordination with other state agencies with civil public safety responsibility if it is to realize the benefits that Congress envisioned in passing GPRA.

Model B: Safety Management Systems

While the GPRA strategic planning framework creates transparency in goal-setting and performance, it is too broad a tool to specify the processes for continual improvement of safety. To fill this void, administrative units within the Department of Transportation—the FAA in particular—have adopted and continue to develop elements of a safety management system approach to regulatory oversight. The safety management system approach—as envisioned by the FAA and International Civil Aviation Organization (ICAO)—focuses on safety policy development, safety culture promotion, and a process for safety management and continual improvement.

The processes found in safety management systems,³ like those found in environmental⁴ and quality⁵ management systems, derive from physicist, engineer, and statistician Walter Shewhart’s exploration of the use of statistics in quality control in the 1920’s and 1930’s. Shewhart took the hypothesis, experiment, and data analysis steps in the cyclic advancement of scientific knowledge and translated them to corresponding specification, production, and inspection steps for quality control (**Figure 1**):⁶

³ Such as ICAO’s Doc 9859 (“Safety Management Manual”), the American Petroleum Institute’s Recommended Practice 1173 (“Pipeline Safety Management System Requirements”), and the British Standards Institution’s OHSAS 18000 series (“Occupational health and safety management systems”).

⁴ Such as International Standards Organization’s 14000 series (“Environmental Management Systems”).

⁵ Such as International Standards Organization’s 9000 series (“Quality Management Systems”).

⁶ Walter A. Shewhart, “Statistical Method from the Viewpoint of Quality Control,” Graduate School of the Department of Agriculture, Washington, D.C., 1939. Page 45 of Dover Edition, 1986.

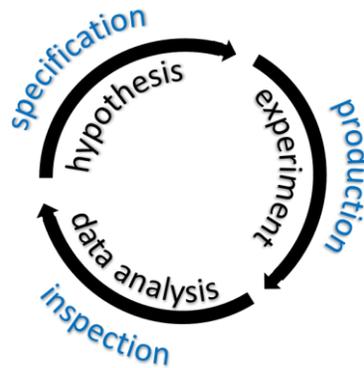


Figure 1: Shewhart's Cycle of knowledge production and quality control

These ideas were popularized W. Edwards Deming, who in the 1950s brought them to postwar Japan, which had had a “well-earned reputation for shoddy goods, cheap but worth the price.”⁷ Deming’s message to the country’s corporate leaders was that improving quality would reduce expenses, increasing productivity and market share, a message which would manifest thirty years later with the domination of the Japanese auto industry and, in part, the postwar Japanese economic miracle.

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This annual plan is not yet supported by a strategic plan, nor is it a part of an established process for continual improvement, but it has those ideas in mind, and is intended to be compatible with both should, as the Board advances in its mission, it choose to adopt such processes.

The plan’s timelines are as aggressive as the statutory goals are ambitious. It proposes activities based on strategic objectives, though the objectives thus far exist outside of a strategic plan. Instead, the objectives are based on statutory mandates under statutory deadlines. As the Board accomplishes legislatively mandated objectives, the Board may consider developing a true strategic plan in the years to come.

This annual plan recognizes the following strategic objectives:

Area of Continual Excavation: Develop procedures through regulation for an annual ticket process for agricultural and flood control operations that facilitates effective communication between subsurface installation owner and excavator and minimizes or eliminates the impact to operations on land where no subsurface installations exist.

⁷ W. Edwards Deming, “Out of the Crisis,” MIT Press, 1986, p. 5.

Develop Education and Enforcement Program: 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.

Continual Improvement: Develop a framework for continual improvement through the analysis of data, accidents, and other information, through standard development, and through the adoption of periodic review processes.

Stable funding: Develop through regulation a stable funding source by levying a fee on members of the one call centers and explore options for federal funding.

Below are the strategic activities proposed for the Board and Board staff to undertake in 2018. The activities are organized under the four strategic objectives.

Strategic Objective: Area of Continual Excavation

In passing the Dig Safe Act of 2016, the Legislature recognized that existing law had not been well-suited to agricultural activities and charged the Board with creating an annual notification ticket system. Such a system has been implemented in Connecticut but is otherwise novel. Managing safety in these situations is a challenge, as the frequency of excavation damage is low, but the consequences are high (only 0.5%, or 26, of damages to the state's natural gas facilities in 2015 came from agriculture,⁸ but one of them was fatal).

- 1) *Outreach and Piloting:* As this type of notification process is new, the Board should spend significant attention to creating a system where compliance is well-suited to the business of agriculture. Doing so will require learning from agricultural operators of different varieties and testing ideas with agriculture, utilities, and the one-call centers. This activity is expected to be Board member-led.

Strategic Objective: Develop Education and Enforcement Program

The Legislature's direction to the Board is to enforce the state's excavation safety laws progressively, treating ignorant non-conformances as opportunities to educate the excavation community, using citations where education is deemed an insufficient incentive.⁹ To achieve this objective, the Legislature authorized the Board to hire thirteen investigative staff, twelve of whom are authorized for hire beginning July 1,

⁸ CARCGA, "2015 Facility Event Report," p. 9.

⁹ GOV 4216.19 (d).

2018, to begin work in earnest in 2019.¹⁰ To prepare for these investigators, the Board will need to complete a number of activities:

- 1) *Identification of Relevant Education*: In order to recommend or offer education in lieu of financial penalties, the Board must identify relevant, affordable educational curricula and providers. Additionally, the Board must determine who must take such education in a landscape where companies may be sole owner operators or have hundreds to thousands of employees. This activity is expected to be Board member-led.
- 2) *Standards for Demonstrating Compliance*: The Board will need a process for determining the facts surrounding accidents if it is to complete investigations in an efficient and timely manner. The Legislature anticipated this need in requiring the Board to develop a standard for subsurface installation operators and excavators to demonstrate compliance with one call notification, delineation, and locate and mark requirements.¹¹ This element is non-regulatory, and needs to be developed prior to 2019. This activity is expected to be Board member-led.
- 3) *Board Notification of Incidents*: Roughly five thousand incidents involving excavation damage to natural gas pipelines occur annually in California.¹² Thousands more are known to impact the state's other subsurface installations.¹³ Of these, however, only about 100 are reported in a timely manner to the state's Public Utilities Commission,¹⁴ with a handful of others reported to the Office of the State Fire Marshall. State authorities who depend on voluntary reporting receive only a handful of reports and thus investigate dramatically fewer incidents than state authorities who require it, so some form of reporting process will need to be adopted through regulation in advance of investigators beginning work at the beginning of 2019. This activity is expected to be Board member-led.
- 4) *Inter-Agency Enforcement Coordination*: The Board is expected to enforce the state's safe excavation law on a small segment of the excavation community. Instead, the bulk of violations that the Board finds will be forwarded to the Contractors State License Board, the Public Utilities Commission, and the Office of the State Fire Marshal to act on,¹⁵ as those entities regulate actors performing a majority of the non-exempt excavation and locate-and-mark work performed in the state. The Board must coordinate with these state agencies, likely entering into memoranda of understanding, so that the Board provides investigations and

¹⁰ 3540-240-BCP-2017-GB,

http://web1a.esd.dof.ca.gov/Documents/bcp/1718/FY1718_ORG3540_BCP1248.pdf

¹¹ GOV 4216.18.

¹² California Regional Common Ground Alliance, "2015 Facility Event Report."

¹³ Common Ground Alliance, 2017 Damage Incident Reporting Tool Interactive Tool.

<http://commongroundalliance.com/dirt-2016-interactive-report>

¹⁴ Crowe Horwath, *Gas Safety and Reliability Branch Management and Operations Review: Report and Recommendations*, February 23, 2015, p. 1-6.

¹⁵ GOV 4216.6 (c).

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recommendations that these agencies can act on and the agencies can process the cases in an efficient manner. These activities will influence the development of enforcement regulations. This activity is expected to be staff-led.

Strategic Objective: Continual Learning

A healthy safety culture is one that has processes for continual learning and promotes communication between stakeholders. The Legislature gave the Board the responsibility not solely for developing regulations to carry out the prescriptive elements of law but also charged the Board with developing standards and making recommendations to the Legislature for improvement.

- 1) *Baseline Safety Assessment*: Neither the Legislature nor stakeholders will be able to gauge the Board's success in making California excavation safer without a baseline assessment of how safe California is without the Board. The process of creating a baseline assessment will allow the Board to develop analytical approaches to program evaluation that may prove useful during legislative review in 2020. This activity is non-regulatory and is expected to be Board member-led.
- 2) *Reasonable Care Standards*: The Legislature charged the Board with the development of two specific standards of care: 1) the safe application of potholes in determining the depth of subsurface installations in advance of road grading activities, and 2) the amount of hand tool excavation around a subsurface installation one should perform to be confident in finding all the marked installations. The Board may also find other types of activities that could benefit from standardization. The Board may wish to create these as broad standards, which may not be suitable for regulation (hence not enforceable), or it may find them to be simple in application, which might make them suitable for regulation. This activity is expected to be Board member-led.

Strategic Objective: Stable Funding

The Legislature provided the Board a two-year start-up loan to sustain it until it was able to develop a funding source, or July 1, 2019. There are two likely sources of funds.

- 1) *Fee levied upon the member of the one-call centers*: The Legislature authorized the Board to levy a fee on the members of the one-call centers using the same methodology as the one-call centers use to fund their operations. Both charge member subsurface installation owners a fee per locate request the members receive. This activity is regulatory and is expected to be staff-led,
- 2) *Federal Reimbursement through the State Base Grant*: The federal Department of Transportation reimburses the Public Utilities Commission and Office of the State Fire Marshal for a significant, but variable percentage of their pipeline

safety expenses. Reimbursement for pipeline safety expenses for Board activities might also be possible, but reimbursement is a complicated process and the nature of the Board’s activities—mixing gas and petroleum pipeline safety with safety around other types of installations—might not be possible. Reimbursement, were it granted would not be available until at least 2020. This activity is non-regulatory and is expected to be staff-led.

Together, these activities can be seen in a chart demonstrating how they support the strategic objectives and Legislative expectations (**Chart 1**).

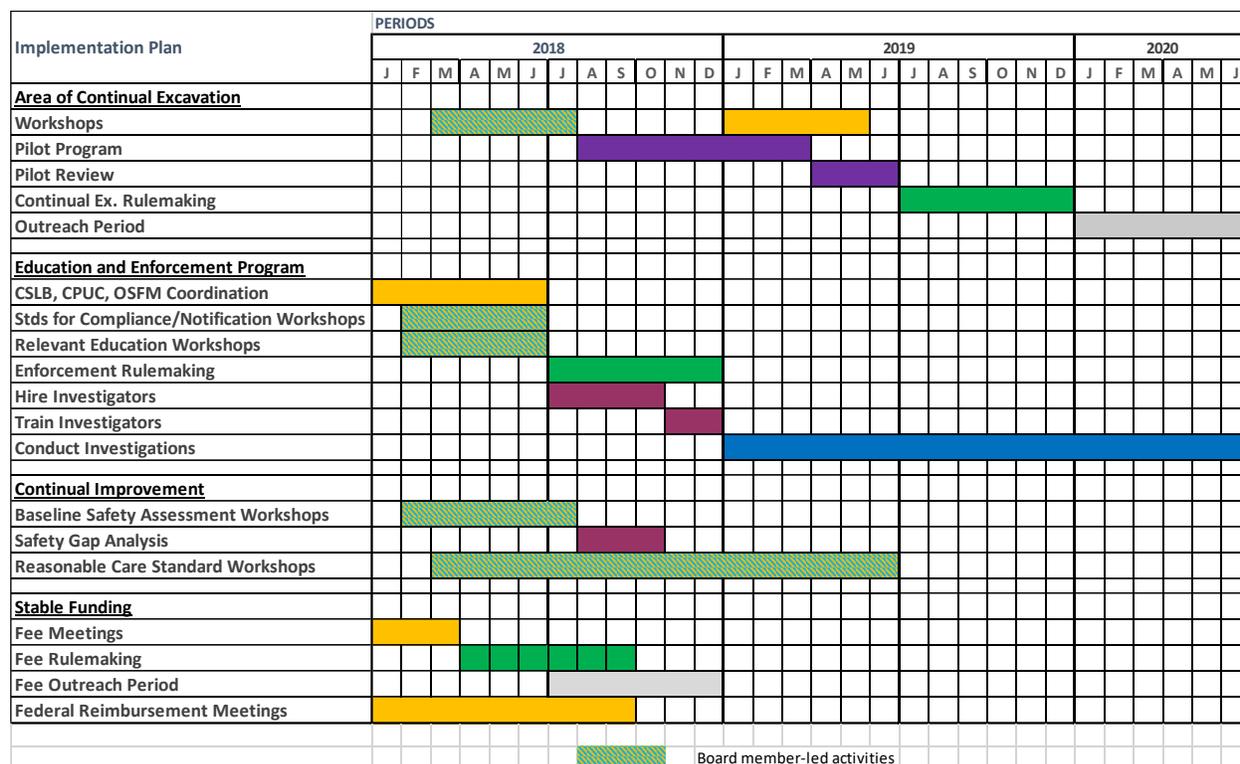


Chart 1: 2018 schedule of activities supporting strategic objectives

Board member-led activities might be best accomplished by organizing members into pairs who would present their recommendations to the full Board for discussion and, where appropriate, approval.

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The preliminary meeting schedule for the first half of 2018 is as follows:

January	<i>Sacramento</i>	Business meeting
February	<i>Los Angeles</i>	Workshops <ul style="list-style-type: none">• Stds for compliance/notification• Relevant education• Baseline safety assessment
March	<i>Salinas</i>	Workshops <ul style="list-style-type: none">• Area of continual excavation
April	<i>Long Beach</i>	<i>In conjunction with State Fire Marshal Pipeline Safety Conference</i> Business meeting Education and outreach meeting (joint Relevant education/Baseline safety assessment)
May	<i>Sacramento</i>	Workshops <ul style="list-style-type: none">• Stds for compliance/notification• Reasonable care standards
June	<i>Sacramento</i>	Workshops <ul style="list-style-type: none">• Relevant education• Area of continual excavation