California Underground Facilities Safe Excavation Board
("Dig Safe Board")

February 10, 2020

Agenda Item No. 4 (Information Item) – Staff Report

Presentation on the Idea Submission Form and Implementation of the Idea Register

PRESENTER

Jenni Reed, Policy & Data Analyst

SUMMARY

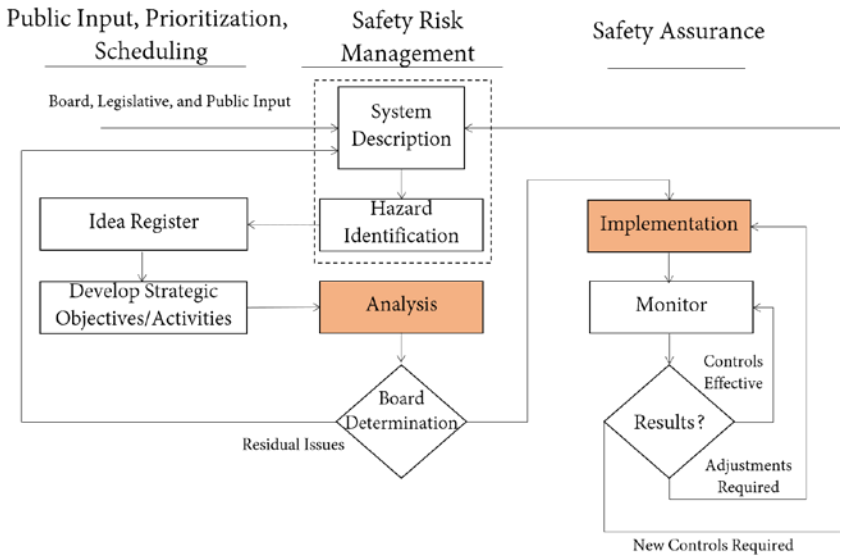
The Idea Register ("Register") and related Idea Submission Form ("Form") were proposed in the draft Strategic Plan as tools to document ideas and catalog them by the relevant strategic direction. In this report, staff presents draft versions of the Idea Submission Form and the Idea Register to further the Board's consideration of these proposed tools.

BACKGROUND

At the Board's January 2020 meeting, staff proposed a draft Strategic Plan for discussion and consideration by the Board. One element of the Plan put forth an organizational tool, the Idea Register, by which the Board could keep track of ideas for potential Board action. In this way, the Register would offer the Board a view of proposed ideas in the context of all the work it is already pursuing. As the Board approaches each annual planning cycle, it could refer to the Register in the development of its strategic objectives and planned activities. This function is visualized in *Figure 7* on page 15 of the draft Strategic Plan and is included on page 2 of this report for reference.

To maximize the Register's usefulness in the larger central endeavor of safety risk management, the draft Strategic Plan recognized the need for insight into the safety and resource issues surrounding any given idea and suggested creation of a form to address this need. By drawing out stakeholders' insights, experience, and industry knowledge up front, the Board would be in a better position to evaluate proposed solutions to industry problems and prioritize the solutions for Board action.

Following the January discussion of the draft Strategic Plan, the Board directed staff to produce a draft Idea Form for presentation at the February 10, 2020 meeting.



From the Dig Safe Board Draft Strategic Plan - Figure 7: Board's Safety Risk Management/Safety Assurance workflow with public input, the idea register, and the annual planning process explicitly shown.

DISCUSSION

Part 1: The Form

Due to the limited nature of the Board's resources, the analysis step in the workflow depicted in draft Strategic Plan *Figure 7*, pictured above, is applied only to the strategic objectives and activities already prioritized by the Board in its Annual Plan. Given these conditions, the proposed Idea Submission Form is designed to elicit information on the safety and resource implications of submitted ideas—factors key to informing the Board's evaluation of ideas for potential action. With this goal in mind, a useful Form will:

- Tease out potential safety impacts of both the identified problem and any proposed solution, including the potential for unintended negative safety impacts;
- Provide opportunity for communication of relevant quantitative and qualitative information known to the idea contributor;
- Encourage assessment of the idea in the context of limited resources, as multiple safety problems necessarily compete for attention; and
- Facilitate the ability of the Board and its staff to follow up with the idea contributor.

The Form also needs to be considered from the perspective of stakeholders who are being asked to use it. To accommodate participation by a wide range of contributors, the Form should pose clear questions and provide prompts that help people provide the type of information the Board needs. Mechanisms should be put in place to close the communication loop with contributors, providing them with information on what is being done with their submission.

Taking these factors into consideration, staff created a draft Idea Submission Form for the Board's consideration, which is included in this report as Attachment A, with a populated

example included as Attachment B.

In the reality of the Board's operating environment, the Form would not be the only way ideas are entered into the Register. Ideas could be put forth by Board members directly, identified by the Board in public comments, and recognized by staff in the contents of bills, investigation and enforcement products, and other inputs. However, the Form should improve the quality of information provided to the Board around proposed safety solutions.

Part 2: The Register

The Idea Register is intended to be a practical tool. To keep the Register readable, it is proposed that included fields be kept to a minimum, with ideas summarized by staff and additional fields limited to key reference information. The details behind any given idea, such as the related Form, would be kept on file for the Board's reference as needed.

An example Register is included in this report as Attachment C. This draft is put forth as a starting reference to orient Board discussion of the Register, and its appearance is likely to change as implementation proceeds.

Some entries have been populated to demonstrate how ideas might be represented in the Register. As was suggested in the January presentation of the draft Strategic Plan, ideas have been grouped according to associated strategic direction.

Conclusion

The Idea Register would give practical structure to the near constant influx of ideas surrounding the Board's work to improve excavation safety. Organizing these ideas by the Board's strategic directions would assist the Board's planning process. The Idea Submission Form would draw out the safety and resource implications of ideas as they are added to the Register, further improving the quality of information available to the Board as it sets its annual priorities. Ultimately, the availability of this information will facilitate informed application of Board resources for the improvement of safety across California.

RECOMMENDATION

Staff recommend that the Board direct staff to proceed with development and implementation of the Idea Register and Idea Submission Form as set forth in this report.

ATTACHMENTS

Attachment A: Draft Idea Submission Form
Attachment B: Example of Completed Idea Submission Form (Near-Miss Events)
Attachment C: Example Idea Register

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
Office of the State Fire Marshal
California Underground Facilities Safe Excavation Board
2251 Harvard Street
Sacramento, CA 95815
(916) 568-3800
https://digsafe.fire.ca.gov/

1. BACKGROUND

What is the problem?

Under what circumstances does it arise?

Who sees it? When? Where?

How does this problem impact safety?

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2. AFFECTED PARTIES

Who does the problem affect? (check all that apply)

☐ Excavators ☐ Locators ☐ Facility Operators ☐ Project Owners

☐ Engineers ☐ One-Call Centers ☐ Other: _____

How are these parties affected by the problem?

3. CURRENT SITUATION

How do you currently manage this problem?

How do others in the industry manage this problem?

4. IDEA

What is your idea to solve this problem?

Who needs to change the way they do things for your solution to work?

What do you think is the most appropriate Board action to implement your idea? (check one)

☐ More education/outreach/guidance on existing requirements and resources

☐ New Standards ☐ New Regulations ☐ Recommend Statutory Changes

☐ Other: _____

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What organizations might be willing to help develop or implement your solution?

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5. BENEFITS & COSTS

What do you see as the potential benefits of your identified solution? (Examples of potential benefits: Improves knowledge of facility locations; Less burdensome way of achieving existing safety benefit; Removes compliance barrier; Improves communication between parties…)

What do you see as the potential downsides of your identified solution? (Examples of potential costs: Creates a communication barrier; Inconsistency with statute; Imposes a new or outsized burden on a specific stakeholder group; Would be difficult to enforce…)

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6. HAZARDS

What new hazards could be created in pursuing your idea, or what existing hazards could be worsened by your idea? (Discuss potential unintended consequences of your idea. For example: Does the idea add complexity to the safe digging process? … Does the idea impact parties in ways they are not trained to handle? … Does the idea involved altering or replacing a process, where all factors depending on the existing process may not be understood?)

7. ATTACHMENTS & DATA

What data or other information is necessary to make an informed decision on this issue?

Does the required data exist today? If so, please identify potential public data sources.

Please include any relevant data sources you'd like to share.

8. CONTACT INFORMATION

NAME: _____

EMAIL ADDRESS: _____

PHONE NUMBER: _____

ORGANIZATION/S: _____

**Providing your email address enables the Board to notify you if your idea is incorporated into the Board's planned activities.*

9. INDUSTRY ROLE *(circle one) [Drop-down in webform]*

Excavator • Locator • Facility Operator • Engineer • One-Call Center • Regulator

N/A – Member of the Public

If you selected Excavator, please select the excavator group you most closely identify with:
(circle one)

Contractor—Utility Specialist • Contractor—Potholing Specialist •

Contractor—Roadwork Specialist • Contractor—Boring Specialist •

Contractor—Fencing • Contractor—General • Agriculture • Homeowner •

Landscaper • Handyperson • Railroad Operator • Flood Control Operator •

Other: _____

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Guide for Form DIG SAFE-2

The Board uses the information you provide in this form to better understand the context of the issue, whether there are tools at the Board's disposal to address the idea, and whether the idea warrants Board action. Submission of an idea does not assure Board action; all ideas are weighed against the Board's strategic directions and planned objectives and activities which are generally considered on a yearly basis. While you are not required to fill the form out in its entirety, missing information may not provide the Board with the details it needs to fully understand the issue.

Use of this form is not required to provide comment to the Board. Members of the public may provide comment to the Board at public meetings or in writing at any time.

You may provide your completed form to the Board in the following ways:

BY MAIL:

The Dig Safe Board
Office of the State Fire Marshal
2251 Harvard Street, Suite 400
Sacramento, California 95815

PUBLIC MEETING: If you attend the Board's meetings, you may provide your form to staff at that time.

BY EMAIL: You may send a scan of your completed form to: Kerstin.Lock@fire.ca.gov

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DRAFT - EXAMPLE

1. BACKGROUND

What is the problem?

There is no current mechanism to make near-misses known to Board/public. Excavators end up taking on a disproportionate share of responsibility to make sure the errors of other parties don't result in damage or injury, and because damage is avoided, no one ever knows the degree to which excavators may be compensating for the errors of other parties.

Under what circumstances does it arise?

Who sees it? When? Where?

A typical example would be that an experienced excavator recognizes clues of a mismark and then goes back and forth with the locator trying to correct the mismark. Excavators that typically work around buried facilities might see this scenario happen several times a week.

How does this problem impact safety?

For this scenario, the mistake may never be elevated to trigger training or correction from a supervisor, so the locator may go on to repeat the error over and over. In the bigger picture, the lack of insight into where the safety system is at its thinnest and how that information relates to actual damages is a blind spot that hampers development of preventive safety solutions.

2. AFFECTED PARTIES

Who does the problem affect? (check all that apply)

☒ Excavators ☒ Locators ☐ Facility Operators ☐ Project Owners

☐ Engineers ☐ One-Call Centers ☐ Other: _____

How are these parties affected by the problem?

Excavators are put in position of catching locator/operator errors with no standard feedback mechanism to involved parties or the Board. Locators may make same mistakes repeatedly without realizing. Other types of near-misses could affect operators more—such as an operator realizing an excavator doesn't have a ticket and intervening before they dig or before they hit something. However, this type of near-miss already receives clear attention under efforts to reduce no-ticket occurrences.

3. CURRENT SITUATION

How do you currently manage this problem?

Current management of the problem relies on knowledge and experienced excavators to recognize clues of a mismark, usually surface indicators, and then reach out to the utility that they believe owns the error/unmarked facility. Effective management typically relies heavily on relationships built between the excavator and the operator's local personnel. If there are no surface indicators or an excavator is less experienced, they are particularly vulnerable.

How do others in the industry manage this problem?

Seems pretty similar overall, at least for excavators who encounter utilities regularly. When an excavator doesn't know who owns the unmarked/mismarked facility, that makes managing the problem harder. They'd potentially be reaching out to all operators on the ticket, trying to figure out who the facility belongs to. It could also belong to an operator that the excavator doesn't have any direct working relationships with, which could make the process less efficient/less effective.

4. IDEA

What is your idea to solve this problem?

One solution would be to provide a mechanism for reporting near-misses to the Board, which would also make them visible to the various stakeholder groups and the public.

Who needs to change the way they do things for your solution to work?

Excavators would need to take the time to report the type of near miss being discussed here. Operators would need to be open to receiving the information with an open and constructive mindset. The Board would need to gather, store, and analyze the near-miss information.

What do you think is the most appropriate Board action to implement your idea? (check one)

☐ More education/outreach/guidance on existing requirements and resources

☒ New Standards ☐ New Regulations ☐ Recommend Statutory Changes

☐ Other: _____

The proposed solution would basically be a new voluntary reporting standard, implemented by the Board.

What organizations might be willing to help develop or implement your solution?

Unknown.

DRAFT - EXAMPLE

5. BENEFITS & COSTS

What do you see as the potential benefits of your identified solution? (Examples of potential benefits: Improves knowledge of facility locations; Less burdensome way of achieving existing safety benefit; Removes compliance barrier; Improves communication between parties…)

Improve capacity for preventive safety improvements; Provide added context to damage causes; Bring more safety information into light of day, which ultimately improves communication and understanding between parties.

What do you see as the potential downsides of your identified solution? (Examples of potential costs: Creates a communication barrier; Inconsistency with statute; Imposes a new or outsized burden on a specific stakeholder group; Would be difficult to enforce…)

Board resources needed to create and implement a new process, plus teach people about it; Potential low buy-in from excavators; The potential for investigative/enforcement attention could chill operators'/locators' willingness to view near-miss information as a helpful, so it could have unintentionally divisive effect which could interfere with other existing Board efforts.

6. HAZARDS

What new hazards could be created in pursuing your idea, or what existing hazards could be worsened by your idea? (Discuss potential unintended consequences of your idea. For example: Does the idea add complexity to the safe digging process? … Does the idea impact parties in ways they are not trained to handle? … Does the idea involved altering or replacing a process, where all factors depending on the existing process may not be understood?)

If not designed in a way that emphasizes learning over punishment, near-miss reporting could have a chilling effect on information sharing among parties and incentivize both excavators and operators to default to a defensive posture.

7. ATTACHMENTS & DATA

What data or other information is necessary to make an informed decision on this issue?

Better data and risk modeling on what contributes to damages and consequence severity would shed light on how much this and other types of near-misses increase safety risks. Any existing near-miss data would be of interest.

Does the required data exist today? If so, please identify potential public data sources.

Not really. The Board's safety risk management model is still being developed. 4216.3(e) could apply, but unclear how currently being used or how that would need to be developed.

Please include any relevant data sources you'd like to share.

DRAFT - EXAMPLE

8. CONTACT INFORMATION

NAME: Dig Safe Board Staff

EMAIL ADDRESS: _____

PHONE NUMBER: (916) 568-3800

ORGANIZATION/S: _____

**Providing your email address enables the Board to notify you if your idea is incorporated into the Board's planned activities.*

9. INDUSTRY ROLE *(circle one)* *[Drop-down in webform]*

Excavator • Locator • Facility Operator • Engineer • One-Call Center • (Regulator)

N/A – Member of the Public

If you selected Excavator, please select the excavator group you most closely identify with: *(circle one)*

Contractor—Utility Specialist • Contractor—Potholing Specialist •

Contractor—Roadwork Specialist • Contractor—Boring Specialist •

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Landscaper • Handyperson • Railroad Operator • Flood Control Operator •

Other: _____

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DRAFT - EXAMPLE

The Dig Safe Board's four strategic directions, effective 2020-2024:

1) Improve Compliance by Reaching Parties in Effective Ways
2) Improve Accessibility of Buried Infrastructure Location Knowledge and Understanding
3) Identify Proximate and Contributing causes to Safety Accidents and Non-Compliances
4) Build Board Operations to Achieve Compliance, Reporting, and Operational Excellence in a Resource-Efficient Manner

Dig Safe Board Idea Register (EXAMPLE)

Updated: 1/28/2020

Date Submitted	Idea Summary	Contributor Name	Source	Strategic Direction	Annual Plan
1/28/2020	Need more outreach to excavators and operators who are not already engaging with or aware of the Board	Stake Holder	Public	SD 1	2020
9/23/2018	Implement use of power tools in tolerance zone prior to determining exact location of a subsurface installation	AB 1914	Legislature	SD 2	2019
1/14/2020	Locators/operators need more effective ways of knowing when there's been a mismark, such as through enhanced positive response (Exp. excavator could send a specific mismark code, which potentially could route to a supervisor)	Randy Charland	Board	SD 2	
1/14/2020	Raising the profile of locating as a career path could improve retention of knowledge/expertise in locator workforce, improving overall quality of locates.	Bret Barrow	Public	SD 2	
1/14/2020	Providing a mechanism by which others excavating in the same area can have knowledge of mapping corrections prior to official update at city/county can improve communication of identified hazards (mapping inaccuracies).	Jessica Arden	Board	SD 2	
1/14/2020	Maps often provide a false sense of security, especially old or lower quality maps. This may be improved through education and training on standards like the Subsurface Utility Engineering (SUE) Quality Levels in project development.	Bill Johns	Board	SD 2	
1/14/2020	The Board and public need visibility into near-miss occurrences in order to more effectively identify preventive safety improvements.	Ron Bianchini	Board	SD 3	