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## California Underground Facilities Safe Excavation Board

July 13, 2021

Agenda Item No. 8 (Information Item) – Staff Report

*Locate & Mark Issues*

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### **PRESENTERS**

Tony Marino, Executive Officer

### **SUMMARY**

During the Board's May meeting, James Wingate of USA North 811 outlined concerns about the health of the "call before you dig" system—specifically that operators were having difficulty locating their facilities before the legal start date and time and that excavators, consequently, were losing faith in the system. Staff raises the question that, if not enough excavators are using the system, but locators are having trouble meeting their current workload, how can we expect the system to maintain integrity when it has more users? Staff recommends the Board explore more flexible ticketing options, work with operators to understand how they manage the volume and quality of locating work, and engage with excavator groups to understand how communication with operators may be improved.

### **STRATEGIC PLAN**

2020 Strategic Plan Objective: Improve excavation and location practice safety

### **BACKGROUND**

California's regional notification ("one-call") centers are required to provide tickets to people who contact them with a notification of excavation<sup>1</sup> and are required to maintain these notifications for a period of not less than three years.<sup>2</sup> Unless the excavator and operator mutually agree to a later start date and time, an operator must respond within two working days, not counting the date of notification, with a locate and field mark, information about facility locations, or notification that it has no facilities in the delineated area.<sup>3</sup> If an operator fails to respond, the person who requests the ticket must notify the one-call center<sup>4</sup> and

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<sup>1</sup> [Govt Code § 4216.2\(e\)](#)

<sup>2</sup> [Govt Code § 4216.2\(f\)](#)

<sup>3</sup> [Govt Code § 4216.3\(a\)\(1\)\(A\)](#)

<sup>4</sup> [Govt Code § 4216.3\(a\)\(3\)](#)

may not begin excavation until they receive a response from all operators.<sup>5</sup>

As of January 1, 2021, all operators must use electronic positive response<sup>6</sup> (EPR) unless the operator has provided good cause and has been granted a one-year extension by the Board.<sup>7</sup> Both USA North 811 (USAN) and DigAlert have adopted 29 electronic positive response codes that an operator may use in responding to a ticket (**Attachment A**). As of March 1, 2019, both USAN and DigAlert have adopted the same types and terminology of tickets, including New, Renewal, Remark, Amendment, No Response, Damage/Exposed, and Cancel.

During the Board meeting in May 2021, Executive Officer Tony Marino discussed correspondence that took place in March of this year with James Wingate, Executive Director of USA North, and employees from Preston Pipelines regarding locate and mark problems and communication of those problems. Mr. Wingate stated that USAN has received complaints from excavators alleging improper use of EPR codes by facility operators, as well as received complaints from operators alleging improper comments from excavators on tickets. He elaborated that these complaints are attributed to or based on delays in the locate and mark process and gave observations on causes for delays and made recommendations on how to address or facilitate on time locates.

Given the expansiveness of the topics identified by Mr. Wingate, the Board requested that staff return in July and organize the discussion.

## **DISCUSSION**

Common Ground Alliance's Next Practices Initiative Report (CGA)<sup>8</sup> reviews how stresses in the damage prevention system or 811 have caused inefficiencies in how the system is used. The report further notes that the strain is occurring during the locate and mark process and causing inefficiencies related to facilities not being accurately marked and not marked on time.

Complaints reported from both operators and excavators to USAN demonstrate this strain in the system might be occurring during the locate and mark process. Specifically, excavators are frustrated at operators for delays during locate and mark request.

Yet, even with the system strained with locate requests, CGA's analysis in their White Paper Report<sup>9</sup> demonstrates the importance of creating awareness around calling 811 prior to excavation and the connection between damages being higher when there is failure to notify a one call center.

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<sup>5</sup> [Govt Code § 4216.2\(g\)](#)

<sup>6</sup> [Govt Code § 4216.3\(e\)](#)

<sup>7</sup> [Section 4020, Title 19, California Code of Regulations](#)

<sup>8</sup> Common Ground Alliance Next Practices Initiative Report, February 2021

<sup>9</sup> Common Ground Alliance Data-Informed Insights and Recommendations for More Effective Excavator Outreach Report, April 2019

a. Stresses in Locate and Mark Practices:

- i Ticketing and Workload: According to CGA data, locator supervisors identified ticketing processes as primary challenges to managing ticket volume and locator workload.<sup>10</sup> Locators are required to respond to different types of workload scenarios with a fixed ticket process. The current ticket process does not consider or figure in different types of locates such as job size and/or complexity of infrastructure, i.e. large-scale commercial projects versus residential projects. Both CGA and USAN suggest a more flexible ticketing process could help locating companies to better manage locator workloads and assist locators in completing marks more quickly or on time. (see also: Over-notification section.)
- ii Problems Inherent in Locate Contracts: According to CGA, locate contracts focus on ticket volume rather than accuracy of marks, putting pressure on locators.<sup>11</sup> Heavy workloads are identified by locate technicians as being one of their biggest issues and timely markings directly impact damage rates, according to CGA. (see also: How Utilities Evaluate their Programs section.)
- iii Inaccurate Maps and Information: Both the CGA DIRT report and CGA field research among locate technicians found that 51% of locators believe their biggest challenge is that the areas they are marking are not clearly defined.<sup>12</sup>

Commencing January 1, 2023, all new subsurface installations are required to be mapped using a geographic information system (GIS), with exceptions to certain oil and gas lines.<sup>13</sup> USAN agrees that damages can be avoided if all subsurface installations are mapped but believes the mapping should be a centralized GIS system that all operators use.

b. Consequences of Locate and Mark Stresses:

- i Lack of Trust and "Over-Notification": CGA states that there are several reasons why locators are struggling to process requests on time or in a timely manner. One of those reasons is excavator's lack of confidence in the locating process.<sup>14</sup>

This lack of faith in the process to be timely is reflected in excavators who 'over-notify' or call in multiple requests per job site or who call in requests earlier than

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<sup>10</sup> CGA NEXT, p.3-4

<sup>11</sup> CGA NEXT, p.4

<sup>12</sup> CGA NEXT, p.3,7

<sup>13</sup> [Govt Code §4216.3\(5\)](#)

<sup>14</sup> CGA NEXT, p.4

necessary to ensure they can dig in time for projects and complete schedules on time.

USAN's reports experiencing over-notification in the Plan and Design phases of building, whereby engineers are calling in tickets for locate months in advance, adding more pressure on locators. Currently there is no separate ticket process for Plan and Design, although USAN has created their own policies to cope with over-notification. Both USAN and CGA recommend a new ticket process be created for different types of projects, such as Plan and Design. Board staff is currently reviewing Building Departments and their permitting process to review the Plan and Design process as it relates to the timing of locates and the ticketing process.

USAN also reports seeing evidence of calling in for locates too far in advance in its large volume of renewal tickets. USAN makes this assessment by using data from renewal and remark tickets processed. According to USAN, in 2020 37.8% of the tickets processed were renewals, in contrast to only 1.9% of remark tickets processed.<sup>15</sup> The supposed high ratio of renewal tickets to remark tickets causes two problems: 1) requesting tickets too far in advance puts undue pressure on locators, and 2) marks cannot be expected to last for months without remark, and work areas without sufficient marks can lead to accidents when excavating. A renewal would not require the excavator to stop work, while a remark would require work to stop until the markings can be refreshed.<sup>16</sup>

USAN will begin collecting information in hopes of obtaining data that demonstrates how often excavators are creating their tickets too early and burdening the locate & mark system.

- ii Excavator Frustration and Communication Issues: A call center ticket serves as a form of communication between excavator and operator via a one-call center. These tickets also serve as documentation that an excavator called prior to excavating and can be reviewed by the Board. Although tickets contain a "comment" section for excavators, neither one-call center makes this field available for new tickets. For ticket types in which the comment field is available, there is no guidance that dictates what type of information or what type of comment can be added to this comment section.
- c. Options for improving communication between excavators and operators:

**option I:** Leave tickets, and their comments section, unchanged

It is unclear how many situations USAN has had of excavators using the ticket to

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<sup>15</sup> See Attachment USAN Locate & Mark Issues Report May 2020, p.3-4

<sup>16</sup> [Govt Code 4216.3.\(6\)\(b\)](#)

make comments to operators. It is also unclear as to why excavators have chosen to use the ticket to communicate. It is possible they are using this option for lack of a better option to communicate. Limiting this communication pathway may have unforeseen safety consequences and thus may not be an appropriate solution without understanding what other pathways an excavator may have to voice grievances.

**option II: EPR Options for Excavators.**

EPR is a form of communication where an operator contacts a one call center to document how they responded to a ticket, and excavators can see the responses documented online; however, the current options on EPR to communicate issues are only available for operators. Adding new drop-down options for excavators to respond to operators will create another avenue for excavators to communicate.

**option III: Enhanced Electronic Positive Response.**

Currently, the call centers do not have a means for bilateral communication between an excavator and only one operator on a ticket. USAN suggests that “enhanced electronic positive response” can be a form of 2-way communication for excavators and operators that can provide a way for both to document locate and mark responses as well as other comments and pertinent documents. Enhanced electronic positive response is differentiated from electronic positive response in that it allows more information to be communicated between excavator and operator.<sup>17</sup> Some states already use this format and is an option the Board can review. USAN has applied to the Pipeline and Hazardous Materials Safety Administration (PHMSA) for a Technical Assistance Grant to build such a system.

Additional options and opportunities for excavators to communicate—whether via Enhanced Electronic Response or Electronic Positive Response—may allow for improvement in communication in general.

d. Additional Things to Consider:

- i Innovative Solutions: CGA warns against creating temporary solution or band-aids and instead recommends that the damage prevention industry develop innovative solutions and not just rely on or follow Best practices in order to remove inefficiencies. The Board will have to carefully consider whether the options currently on the table would create a sustainable positive change, or whether they are band-aids.
- ii Possible Industry Changes: CGA data identified timely marking as a factor that impacts damage rates.<sup>18</sup> The Board may develop

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<sup>17</sup> [CGA Best Practices Enhanced Electronic Positive Response](#)

<sup>18</sup> CGA NEXT, p. 3

different solutions such as new ticket system for plan & design to help alleviate locate workloads causing delays. But how will operators review inherent problems in their contracts that put pressure on their locators to complete ticket requests? Workload pressure on locators impacts safety,<sup>19</sup> so what can the industry do to alleviate workload pressures for locators, if any? (See also Problems Inherent in Contracts section.)

- iii Evaluation of Locate & Mark Programs: It may be that problems articulated above are symptomatic of a simpler problem. CGA data identified accurate and timely marking of subsurface installations as the strain in the 811 system affecting damage rates.<sup>20</sup> Board staff needs more information about how utilities evaluate their locate and mark programs to assess the cause of time delays and how these relate to damages. Board staff will need to collect data from operators regarding their locate and mark programs. Having this information will enable Board to determine where the inefficiencies are in the locate and mark system and inform its efforts to maintain safety in excavation. Below are some questions for consideration, based on a safety management system approach.

#### Accidents:

- What is the process for determining the causes of damage?
- What is the process of correcting issues identified following damages?
- How do you ensure the independence of the investigation (i.e. locators not investigating accidents involving their own locates)?
- When and how are damage claims processed?

#### Program Measures:

- What are the organization's safety goals for locate and mark?
- What are the Key Performance Indicators (KPI's) used to determine program success?
- At what frequency are each of the metrics reviewed?

### **RECOMMENDATION**

To determine the causes and inefficiencies of late locates reported by USAN in May, staff recommends that the Board review the locate and mark process. Specifically, staff recommends that the Board start gathering

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<sup>19</sup> CGA NEXT, p.3-4.

<sup>20</sup> CGA NEXT, p.4

information on planning and design ticket processes and engage with utilities to understand how they manage success in their locate and mark processes. Staff also recommends the Board reach out to excavators to review options for improving communication during the locate process.

**ATTACHMENTS**

- A. [California Electronic Positive Response Codes](#)
- B. [USAN's Presentation on Outstanding Issues in the Locate and Mark Process](#)