California Underground Facilities Safe Excavation Board

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Agenda Item No. 11 (Information Item) – Staff Report

Locator Workload Threshold Update

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SUMMARY
This staff report provides an update on the development of locator workload threshold regulations that must be adopted by the Underground Safety Board (Board) by July 1, 2027, as required by Government Code section 4216.1(b)(2).[1]

This report presents:
- Key findings from a 50-state scan of comparable approaches
- Results from stakeholder survey outreach
- Initial observations from stakeholder engagement
- Direction staff is exploring for regulatory development

STRATEGIC PLAN
2020 Strategic Plan Objective: Improve Accessibility of Buried Infrastructure Location Knowledge and Understanding

BACKGROUND
Statutory direction and constraints
Government Code section 4216.1(b)(2) requires the Board to determine through regulation whether and under what circumstances an excavator must notify the regional notification center more than two working days before the legal excavation start date and time, if the excavator is submitting a volume of concurrent notifications that exceeds local operators' capacity to complete locate-and-mark responsibilities within the minimum legal start time. [2] This "more than two working days" concept builds on an already extended timing framework. California previously moved away from a strict 48-hour response model to the current structure, under which the legal start date and time is based on the remainder of the day the notice is submitted plus two working days; however, stakeholder input suggests that

[1] Gov. Code section 4216.1, as amended by Senate Bill 254 (2025).
[2] Gov. Code section 4216.1.

additional time alone has not fully resolved surge-related workload problems. Government Code section 4216.1(b) also places guardrails on implementation. In particular, the Board may not implement regulations that restrict the excavator's ability to submit standard notifications under Government Code section 4216.2(b) or emergency notifications.

Prior Board work on ticket volatility and locator workload

In November 2021, the Board received a staff report analyzing how notification (ticket) submission volatility affects locator workload. The report used ticket data from the Underground Service Alert of Southern California (DigAlert), Underground Service Alert of Northern California and Nevada (USA North 811), and a small operator case study. [3] The 2021 analysis concluded that even when only a portion of excavators requested a start date later than the legal minimum workload volatility decreased at a system-wide level.

At its February 2026 meeting, the Board returned to the issue in light of the new regulatory mandate. At that meeting, the issue was framed as follows: At a high level, the Board is working within a field-based locate-and-mark service system with variable and sometimes clustered demand, fixed response timelines, and work that varies significantly in effort and can expand once crews are on site. When large numbers of excavation notifications are scheduled to be due within a short time frame in the same area—whether due to major infrastructure programs, contractor scheduling patterns, or high-volume excavator behavior— demand clustering, large or complex projects, and limited upfront information can push locate-and-mark workload beyond what crews can reasonably complete within the minimum legal start time. Backlog can then grow, markings may be delayed or incomplete, and excavation safety risk increases. [4]

DISCUSSION

50-state Research

Board staff conducted a national scan to identify whether other states use statutory or system-level mechanisms to manage "ticket surge" conditions, large-project locating workloads, or other volatility patterns. The scan relied primarily on the Pipeline and Hazardous Materials Safety Administration (PHMSA) 50-state damage prevention law summary dataset and related state primary sources, supplemented by state 811 center policy documents where those documents directly address ticket scope, large projects, or automation. [5]

Board staff did not find a common practice of codifying a numeric "locator workload threshold" in statute (e.g., "X tickets per locator per day"). The research instead suggests that ticket volume alone is not a reliable proxy for workload because tickets vary in scope, complexity, site conditions, and time required to respond. States that address similar conditions generally rely on project classification, ticket-scope controls, coordination tools, or system-level practices that make locating workload more predictable. These system-wide conditions are not fully addressed through operator-level practices alone because they involve shared ticketing behavior, geographic clustering, and coordination across multiple operators.

[3] November 2021 Measuring Ticket Volatility and Estimating Locator Workload Staff Report.
[4] February 2026 Locator Workload Threshold Staff Report.
[5] PHMSA: Stakeholder Communications: Damage Prevention Summary

The themes below summarize those patterns, followed by preliminary issues and questions for Board consideration.

Research themes

Large/complex project processes are the most common regulations identified in the 50-state scan. These processes shift certain work into coordinated scheduling rather than treating it as routine tickets.

States with explicit frameworks typically define a project class that is "too large" or "too complex" for routine processes and then require (or facilitate) pre-coordination, longer notice, and/or a negotiated marking schedule. Examples include:

- Washington: the dig law includes a defined "large project" threshold (exceeding 700 linear feet) and requires excavators working at multiple sites or on a large project to take reasonable steps to confer with facility operators so they can locate facilities in advance for each phase. [6]
- Kentucky: the dig law provides for a "large project request" and an extended response timeline (five working days) once the operator notifies the excavator that the area is determined to be a large project.[7]
- Louisiana and Mississippi: recent statutory changes and 811 process documentation describe "large project excavation" as work that cannot reasonably be completed within routine timeframes, coupled with preconstruction coordination and written agreements to manage marking schedules over longer durations.[8] [9]
- Pennsylvania: the One Call Law defines "complex project" to include work requiring scheduling locates over an extended time frame, and Pennsylvania's implementation channels complex projects into an organized portal workflow with increased notice and coordination.[10]

Some states explicitly manage a major driver of workload volatility by limiting ticket scope or requiring separation, which reduces the chance that one request covers everything. While not universal, one of the clearest statutory examples is Oklahoma, which limits the "extent" of proposed work in the excavation notice to no more than 500 linear feet in incorporated areas or one linear mile in unincorporated areas, and provides for a pre-excavation meeting request for large projects. Oklahoma law also creates potential liability for "excessive and unreasonable requests for marking" when no excavation is taking place prior to notice expiration. [11]

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[6] Washington large-project excavation provisions, Chapter 19.122 RCW.

[7] 367.4901 Kentucky Dig Law.

[8] Louisiana damage prevention law.

[9] Mississippi 811, Inc. (MS811), *Large Project Excavation & Preconstruction Meeting Guide* (rev. June 30, 2025), available through MS811's "Large Project Excavation Process" resources, Large Project Excavation Process

[10] Pennsylvania One Call Law.

[11] Oklahoma Underground Facilities Damage Prevention Act, as reflected in OKIE811, "The Law," and OKIE811, "Excavator Guide" (2025 digital edition).

Several systems address volatility by managing ticket lifecycle and ticketing behavior, including updates, renewals, no-work ticketing, and automation, which directly affects locator workload even when laws do not mention capacity. A prominent example is Georgia. Georgia's statutory and regulatory structure includes a "large project" concept (e.g., projects exceeding one linear mile or requiring more than 90 days) and the associated Public Service Commission procedure allows waivers of standard notice/expiration rules for qualifying large projects. Georgia also implements volatility controls at the system level, including the *Ticket Automation (BOT) Policy* that caps the maximum processing rate (example: one ticket every ten seconds) and allows blackout periods for automated submission. Georgia's system also limits normal ticket updates (e.g., no more than two updates or a cumulative normal-ticket period exceeding 90 days after creation) as a mechanism to prevent "rolling" ticket volume on work that should migrate into a large-project process. [12] In Georgia, work that reasonably requires more than 90 days to complete falls within the large-project concept.

Some states and 811 systems reduce volatility by enabling earlier scheduling and proactive forecasting rather than by restricting submissions. Virginia 811 reports that its ticketing system allows users to schedule excavations up to 12 working days in advance, describing this as aiding locators in managing workload by supporting proactive planning. Separately, Iowa adopted a statutory requirement that the utilities board convene stakeholders to discuss underground facility excavations, including forecasting and future projects and operational challenges. [13]

Locator Workload Threshold Survey

Survey purpose and design

The February 2026 staff report identified a survey as an early means of gathering input on how stakeholders experience ticket surges and marking delays, what conditions most clearly indicate that local workload has exceeded available locate capacity, and how workable potential regulatory response options may be in practice. Staff distributed the survey to operators, excavators, locators, and related stakeholders and received nearly 100 responses.[14]

Participation snapshot

Thirty-two respondents identified as both an operator and excavator, 32 as an in-house locator, 12 as operator only, and 4 as third-party locator; 19 selected other or provided another role description. Respondents reported primary service areas in Southern California (36 percent), Northern California (32 percent), Central California (17 percent), statewide (6 percent), and other areas (9 percent). Water, sewer, telecommunications, gas, and electric facilities were all represented, with water and sewer respondents making up the largest shares. Response counts vary slightly by question because a small number of respondents skipped individual items.

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[12] Georgia 811, Large Projects; Georgia Public Service Commission Rule 515-9-4-.13, Procedures for Large Projects; Georgia 811, Ticket Automation (BOT) Policy; and Georgia 811, Update.

[13] Virginia 811, Scheduling of Tickets; Virginia 811, 2023 Law Changes FAQ; and 2024 Iowa Acts ch. 1120, sec. 11, Underground Facility Excavation Meeting.

[14] Survey on Managing 811 Ticket Surges and Marking Timeliness March 2026.

Key findings and themes
The survey results provide useful directional information for the Board's regulatory design work under Government Code section 4216.1(b)(2). Findings include:

1) Workload is experienced as a system condition, not a single trigger

Stakeholders reported that higher workload conditions most often present as operational strain rather than as one identifiable event. The most common reported effects were:

- Reprioritization of work (56 responses)
- Staff reassignment (50)
- Increased backlog (43)
- Increased overtime (36)
- Adding contractors (5)

In terms of duration, the most common answer was 3 to 5 days (26 responses), followed by 1 to 2 days (21). Twenty respondents said conditions vary widely, and 16 identified seasonal patterns. Taken together, these responses suggest that surge conditions are often short-term but operationally disruptive, and that organizations usually respond first by redistributing existing staff and deferring lower-priority work.

2) No single metric defines workload

Responses varied significantly regarding “tickets due per locator per day.” Answers were split across fewer than 8 (14 responses), 8 to 12 (18), 13 to 16 (17), and 17 or more (25), with 24 respondents not sure. By contrast, stakeholders more consistently identified:

- Backlog duration, with 47 respondents identifying 2 to 3 working days of backlog as the point at which workload becomes difficult to manage, compared with 11 identifying 0 to 1 day and 15 identifying 4 to 5 days
- Near-term due workload, with respondents most often selecting “tickets due per locator per day exceed manageable levels” (30 responses) or “backlog increases beyond normal levels” (22) as the clearest indicators that capacity has been exceeded

These responses suggest that a workable threshold may need to rely on multiple measures, with backlog and near-term due workload serving as more usable indicators than a single statewide per-locator production assumption.

3) Workload drivers are multifaceted

Nearly half of respondents (48) selected a combination of factors as the most common cause of higher workload conditions. The next most common responses were:

- Seasonal construction patterns (14)
- Large single-project submissions (13)
- Overall increases in ticket volume (13)

- Staffing constraints alone (6)
- Geographic clustering alone (5)

These responses suggest that the problem is not limited to one type of surge. A threshold framework may need to account for both broad seasonal demand and localized project-driven spikes.

4) Stakeholders support a hybrid framework and flexible response tools

When asked which metric would be most practical if a measurable workload threshold were defined for a specific geographic area, respondents most often selected:

- A combination of metrics (43)
- Tickets received per day (24)
- Not sure (20)

Far fewer selected:

- Tickets due per locator per day (6)
- Geographic concentration of tickets (5)
- Backlog in working days (1)

On potential response tools, respondents also showed more support for flexible, workload-responsive options than for a rigid single-threshold rule:

- Adding working days beyond the standard notice period: very workable or workable with minor adjustments (52), workable but difficult (15), not workable (6), not sure (26)
- Phasing or coordinating high-volume or clustered submissions: very workable or workable with minor adjustments (49), workable but difficult (24), not workable (2), not sure (24)

When asked what minimum added time would meaningfully improve performance, the most common answer was +2 working days (42), followed by +1 working day (20) and +3 to 5 working days (18). These responses suggest that stakeholders are generally more comfortable with flexible, workload-responsive tools than with a rigid single-threshold rule.

5) Limited forecasting and predictability

Monthly workload varied considerably, with the largest share of respondents reporting 50 to 200 locate requests per month (28 responses), while 16 respondents reported more than 2,500. Sixty-eight respondents reported no formal workload forecasting, which aligns with what staff have heard through meetings with stakeholders: some companies do not forecast workload as a way to predict and manage ticket response times.

When asked how far in advance locate workload is reasonably predictable, respondents most often said:

- Not predictable (40)
- 1 to 3 days (29)
- Same day (12)
- Beyond 3 days (19)

Additional responses showed:

- Locate-and-mark work is staffed with in-house locators only (81)
- The work received is mostly tied to external excavators (65)
- Field productivity varies widely (36), with the remaining responses spread across every fixed range offered

These results indicate that any threshold method should be capable of working with near-term operating data and should not assume uniform staffing models, forecasting practices, or per-locator productivity across all regions.

Survey limitations and next steps

The survey provides a useful directional input, but is not a statistically weighted sample, and reflects self-reported operational experience. Staff will consider these results alongside continued stakeholder engagement and further evaluation as development progresses.

Survey responses generally indicate support for approaches that account for multiple workload conditions and allow flexibility in how those conditions are managed.

Additional Stakeholder Input

Staff also received input from a third-party locator, which reinforced several themes identified in survey responses. The input emphasized that ticket count alone is not a reliable measure of locator workload, as individual tickets can vary significantly in scope, number of locates required, and time to complete based on geography, facility type, and site conditions.

The input suggests that a more workable framework may need to account for factors such as ticket type, geographic conditions, and historical completion patterns rather than rely on a single statewide ticket-count threshold.

The input also indicated that even one additional working day could materially improve performance during surge conditions, and that project phasing or coordination would be helpful when larger volumes are submitted, although excavators often do not provide work in phased form. In addition, feedback noted that incomplete or poor-quality facility information can add time in the field, including where operators do not have clear information about the location of their facilities or whether facilities in the area are underground and relevant (as opposed to above the ground and irrelevant) to the excavation, which can reduce efficiency and create delay.

Locator Workload Threshold Definitions

Government Code section 4216.1(b)(2) requires the Board to assess excavator "volume of concurrent notifications" relative to "capacity of the operators in the area." For the Board's consideration, staff has identified the following preliminary definitions:

- **"Concurrent notifications"** as a count of active notifications attributable to a defined excavator (or project) that are scheduled to start (or are due for operator response) within a defined time window (e.g., a rolling two-day window, or another period informed by analysis).

- **"Area"** as a defined geographic unit that can be operationalized by regional notification centers (e.g., a grid, a service territory cluster, a county/city boundary set, or another unit used for ticket routing). The goal is to avoid a trigger that is impossible to administer consistently across two regional notification centers.

- **"Capacity"** as a practical indicator of whether operators in the defined area can complete required locate-and-mark responsibilities within the minimum legal start time under typical conditions, as reflected in observable operating conditions such as timely completion within required timeframes, backlog volume or duration, and trends in completion times or delays. Capacity is also influenced by regional staffing, ticket mix complexity, and time of year. Staff notes that national analogs often avoid direct "staffing disclosure" by instead using workflow-based triggers (large/complex project processes, negotiated marking schedules, or ticket scope requirements).

Preliminary Issues for Board Discussion Regarding Threshold Structure

Based on the 50-state scan and stakeholder feedback, staff have identified several preliminary threshold-structure issues for the Board's consideration. These issues are not mutually exclusive and could be combined.

Excavator-based threshold

- Should a locator workload threshold framework account for high-volume or concentrated activity generated by a single excavator, project sponsor, or related set of accounts within a defined area and time window?
- If so, how should regulations define when activity is attributable to the same excavator, project sponsor, affiliate, subcontractor, or project for aggregation purposes?
- If an excavator-based trigger is used, should the response be limited to earlier notice, or should it also include coordination or scheduling requirements for defined high-volume conditions?

Project-based coordination pathway

- Should regulations treat large or complex work that cannot reasonably be completed within standard timelines differently from routine ticket activity?

- If so, should that framework rely on earlier notice and project-level coordination, such as phasing, segmentation, or a negotiated schedule, rather than allowing large one-time bursts of routine tickets?
- Should regulations include expectations for how high-volume excavators phase, batch, or segment work without restricting standard or emergency notification submission?

Area-based threshold

- Should a locator workload threshold framework account for geographic clustering and area-wide surge conditions, regardless of excavator identity?
- If so, what type of indicator should be used in a defined geographic area, such as due-soon workload, backlog, or another measure of concentrated demand?
- If an area-based trigger is used, should it operate as an earlier-notice and coordination requirement, rather than as a restriction on standard notification submission?

Preliminary Issues for Board Discussion Regarding Coordination and Workflow

In addition to threshold structure, staff has identified several implementation issues regarding how a workload-responsive framework could operate in practice. The following questions are presented for the Board's consideration.

Lead time and coordination

- If threshold conditions are met, should the framework require more than two working days' notice and additional information needed to coordinate locating, such as planned sequence, segment dates, or project duration?
- Should the consequence of triggering earlier notice be limited to added time, or should it also include project coordination requirements?

Phasing, segmentation, and scheduling

- Should regulations require phasing, batching, or segmentation when high-volume or sustained work would otherwise generate concentrated locate demand?
- Should a workload threshold framework include practical scheduling fields, coordination cues, or forecasting tools that help reduce surprise peaks?

Intake-side improvements

- Should there be further evaluation on intake-side improvements that may reduce workload variability before work reaches the field, such as allowing later requested marking dates when appropriate, enabling phasing or sequencing at the time of submission, or improving ticket information quality through site visuals or clearer project details?
- Should regulations address the clarity of operator-provided information about whether facilities are underground and relevant to the excavation area (as opposed to above ground and irrelevant)?

Ticketing behavior and system operation

- Should there be further evaluation on controls for ticketing behaviors that can amplify surge workload, such as large bursts of automated tickets, repeated re-ticketing for inactive work, or redundant tickets covering the same geography?
- If a workload threshold is triggered, what role should regional notification centers play in transmitting the trigger condition and relevant project or phasing information to operators in support of a coordinated marking plan?

RECOMMENDATION

Staff recommend that the Board:

- Provide feedback on the conditions, metrics, and response tools that warrant further evaluation as locator workload threshold regulations are developed.
- Continue stakeholder outreach and additional evaluation of ticket data, workload patterns, and implementation considerations.