USA NORTH TICKET SYSTEM TRANSITION: UPDATE

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April 10-11, 2023

OVERVIEW

- On December 16, 2022, Underground Service Alert of Northern California and Nevada (USA North) transitioned ticket system vendors.
- Following the transition, the Board heard complaints.
- During the January 2023 meeting, the Board requested that staff identify lessons learned from the transition.
- This is an update on staff's effort.

SCOPE

- Identify lessons learned from the transition.
- Use one-call center responsibilities as a basis for reviewing transition.
- Inquiry does not
    - Evaluate the differences between new and old systems
    - Catalogue and evaluate all concerns related to the transition
    - Categorize nature of transition issues—i.e. technical, human-interface, legal, policy-related
- The Board can choose to explore specific policy issues as a follow-up.

CURRENT ACTIVITIES

- On February 22, Staff sent a letter to USA North requesting response to 39 questions.
- USA North responded March 24.
    - Staff is in the process of reviewing these responses
- This presentation will discuss
    - One-call center responsibilities
    - Ticketing system components
    - Future needs that will impact one-call centers
    - Staff recommendation for proceeding.

Presentation Contents

Context Needed to Build Lessons Learned

- One-call center responsibilities
- Functions of ticketing systems
- Ticket system users
- Ticketing system limitations and future needs

Part 1

One-Call Center Responsibilities

Explicit Statutory (Gov't Code § 4216 *et al.*) Responsibilities

1. Issue tickets to excavators and provide excavation notifications to operators with facilities in the area (4216.2(e) and 4216.10(a))
2. Not charge excavators for issuing tickets (4216.1)
3. Make electronic positive response available to excavators (4216.3(c)(1)(B))
4. Annually report to the Underground Safety Board regarding the one-call centers' continual technological development (4216.3(c)(2))
5. Maintain records of notifications by excavators of an operator's failure to identify subsurface installations and maintain records of all notifications by an excavator to an operator for a period of not less than three years (4216.3(e), 4216.2 (f))
6. Provide an excavator with the telephone number of an operator whose facility the excavator is unable to find (4216.4(b))
7. Develop an annual report on incident event information provided by operators and excavators and post the report on their websites (4216.6(g))
8. Provide tickets and damage notifications to the Board (4216.2(f))

Explicit Regulatory (19 CCR Division 4) Responsibilities

1. Issue invoices and collect revenue for the Board's regulatory fee, and regularly provide fee-related information (19 CCR 4010 & 4011)
2. Provide damage notifications (19 CCR 4100) to the Board
3. Provide a reminder to holders of continual excavation tickets with information and tools to assist the excavator with renewing a ticket as well as reminder notifications prior to ticket expiration (19 CCR 4310)

Implicit Statutory (Gov't Code § 4216 *et al.*) Responsibilities

1. Identify working days (4216(v))
2. Maintain ticket records and providing tickets to excavators and operators (4216.2(f))
3. Accept and process remark requests (4216.2(b))
4. Accept operator electronic positive responses (4216.3(c)(1)(A))
5. Accept notifications by excavators of an operator's failure to identify subsurface installations (4216.3(e))
6. Accept notifications by excavators of intent to use vacuum excavation and transmit that to operators (4216.4(a)(2)(A))
7. Provide instructions on its website and telephone line recorded message for what an excavator can do if they damage a subsurface installation (4216.4(c)(1))
8. Accept damage notifications from excavators (4216.4(c)(3))

Implicit Regulatory (19 CCR Division 4) Responsibilities

1. Accept and maintain contact information provided by operators (19 CCR 4003)
2. Accept damage notifications from excavators (19 CCR 4100)
3. Accept updated ticket contact information from excavators (19 CCR 4401)

Common Ground Alliance Best Practices Implemented by California One-Call Centers

1. Process excavator notifications 24 hours a day, seven days a week (BP 3.6)
2. Maintain voice recordings of phone calls with excavators (BP 3.7)
3. Accept and process design requests (BP 3.15)
4. Capture important information from the excavator in the notification (BP 3.16)
5. Adopt appropriate operator notification buffers (BP 3.17)
6. Accept multiple types of location information from an excavator in a notification request (BP 3.20)
7. Maintain appropriate physical and information security (BP 3.21)
8. Establish performance standards and monitor performance (BP 3.23)
9. Handle excavator notifications of the presence of unknown lines (BP 3.25)
10. Maintain up-to-date and accurate land base and mapping information (BP 6.01-6.06)

Part 2

Ticketing System Functions

Trends Have Expanded Reliance on Ticketing Systems

- Web-based ticketing
- Web-based member shapefile uploads
- GPS mapping
- Electronic positive response

Ticketing Systems: Taking Excavation Notifications

1. Allowing excavators to make notifications online
2. Allowing one-call center staff to enter notifications into the system
3. Allowing users to map excavation areas and turning mapping information into GPS coordinates
4. Storing notifications

Ticketing Systems: Taking Operator Information

1. Allowing operators to provide service territory GPS coordinates for areas where they want to receive
2. Allowing operators to update contact information for different types of contact, including emergencies, vacuum/power tool, and design.
3. Allowing operators to determine their preferred locate request transmission (ticket) delivery method

Ticketing Systems: Providing Notification Information to Operators

1. Matching excavation GPS coordinates to all operator GPS service territories to identify matches
2. Sending notification to utility operators with GPS coordinate matches via email or other electronic means

Ticketing Systems: Managing electronic positive responses from operators

1. Accepting electronic positive responses from operators
2. Providing online access to excavators to receive electronic positive response
3. Pushing notifications (such as via email) to excavators to alert them of operator electronic positive responses
4. Tracking ticket legal start dates and times and autogenerating electronic positive responses for operators who have not completed a ticket on time.

Ticketing Systems: Auxiliary Functions

1. Dashboard and reporting capabilities for situational information and system management
2. Link to billing/accounting systems
3. Link to customer relationship management (CRM) software
4. Link to phone systems
5. Link to 3rd-party operator ticket management systems

Part 3

Business Rules Add Complication

Requirement-Driven Business Rules

1. Some fields, such as contact information, are mandatory
2. System must allow for renewals 28 days from issuance but reject renewal 29 days and later
3. System must change legal start date and time when a excavator chooses a “remark” type ticket
4. Some ticket types record a “Code 999” electronic response if the operator has not responded by the legal start date and time.
5. Ticket expiration depends on whether an ACE ticket field is “Yes” or “No,” as does automatic renewal reminders
6. Ticket size policies adopted by one-call centers are complicated

Part 4

Users are Many and Varied

Users: Operators

Ticket Delivery

1. DigAlert offers operators
    1. Six different ticket delivery formats
    2. Two different delivery methods (email or webhook)
2. USA North offers operators
    1. PDF, GIF (picture of excavation polygon), XML, and GML (geospatial data) attachments, two different plain text formats
    2. Four email delivery options and a webhook

Electronic Positive Response

1. DigAlert allows operators to provide responses through DigAlert Direct (web portal) or via a REST API and TCP connection for operators' ticket management systems to interact with DigAlert's system.
2. USA North allows operators to provide responses through its Damage Prevention Portal (web portal) as well as offering an API for operators' ticket management systems to interact with USA North's system.

Users: Excavators

- Both DigAlert and USA North allow excavators to make notifications by phone or web.
- Both one-call centers allow excavators to create accounts and pre-enter information so that the excavator need not repeat entering contact and other generic information for each new notification made (USA North makes accounts mandatory)

- Neither system currently offers an API or webhook to allow excavator ticket management systems to make and receive ticket information.

Users: Underground Safety Board

Providing ticket information and damage notifications (4216.2 (f))

- DigAlert sends damage tickets to the Board as a “hidden” operator and electronic positive response in batches
- USA North is still developing an API to send the Board information

Relaying damage notifications (19 CCR 4100)

- DigAlert hosts a portal to send notification and information to DigCase
- USA North has a pop-up for persons submitting damage tickets to enter damages through the portal.

Part 5

Current System Limitations

Project Phasing and Negotiated Start Times

Systems do not update legal start date and time

While “Legal Start” is listed on the ticket, that start date can be modified by bilateral agreements.

No other operators are made aware of updated excavation start times.

Mutual agreement not recorded

Excavators & operators have no way of documenting bilateral agreements, making these agreements difficult to enforce.

Future Will Require Greater Functionality

Planning and Design

While the shape of a planning and design ticket is still to be determined, it will need additional functionality.

Integration with Permitting

Many local governments require tickets to grant permits, requiring excavators to put in excess tickets.

Excavator Useability

Several excavator groups have challenges using existing ticket entry:

- Reflective address sign projects
- Large volume power pole testing
- Spanish language

Next Steps

Issues for Review

- Review USA North communications to excavators and operators
- Review factors affecting transition timing
- Review issues arising from transition

Process going forward

- Consult with USA North and DigAlert on Lessons Learned development