

Technical Memorandum

February 22, 2023

Project# 25492

To: Darin Grossi, Executive Director
Tuolumne County Transportation Council
2 South Green Street
Sonora, CA 95370

From: Matt Braughton

RE: Evacuation Needs Assessment and Communication Strategies

RESPONSE TO COMMENTS

This technical memorandum documents the response to comments to feedback received at and following the February 1, 2023 Tuolumne County Transportation Council (TCTC) Technical Advisory/Citizen's Advisory Committee (TAC/CAC) and February 8, 2023 TCTC Board Meeting. As part of these two meetings, several comments and questions were raised with a request they be addressed for the approval of the Evacuation Needs Assessment and Communication Strategies report. The comments received and the project team's response are documented below.

1. The fire history map does not show the Moc and Washington fires.

The fires were shown in the map but were not labeled given the smaller acreage of those fires relative to the other fires documented. Labels for the two noted fires have been added to the report. Additional language has also been added to the introductory text for the figure to note the significance of the Moc and Washington fires given their proximity to populated areas and evacuation impacts.

2. Water tanks in Groveland are not included nor are other facilities including the Groveland Community Service District reservoir and Priest Reservoir, and other facilities.

The mapping and analysis is based on the critical infrastructure dataset maintained by Tuolumne County GIS. We acknowledge that the dataset does not capture every element of critical infrastructure across the County including those noted in the comments received from the TAC and TCTC Board. We have added language to the report in the section of the report discussing critical infrastructure to capture the limitations of the dataset and noted a recommendation for the County to expand its dataset to include the missing facilities and others that may be identified going forward.

3. Pine Mountain Lake is not labeled on the CA-120 West of Groveland improvement cutsheet in the Network Capacity Improvements section of the report.

We have added a label for the Pine Mountain Lake community area.

4. Ferretti Road is noted in Figure 11 in the Evacuation Results but is not shown over capacity in the report.

The road was not identified as overcapacity based on the travel demand model analysis conducted as part of the assessment. However, we did receive feedback that noted Ferretti Road was very likely to experience high congestion during an evacuation based on feedback received from project

stakeholders during the development of the analysis. As a result, Ferretti Road (as well as Pinecrest Lake Road) was identified as an Indicative Local Road where congestion may occur along with a description of the limitations of the modeling analysis on the first page of the Evacuation Results section of the assessment.

5. Noel's Dirt Road identified in the Pine Mountain Lake Access Management project cutsheet is not an appropriate evacuation route.

We have removed this route recommendation from the cutsheet and emphasized the route using Mountain Springs Road to access White Gulch Road/CA-120.

6. Addition of potential forest service route as an option for Pine Mountain Lake egress improvements.

The route is identified in the Pine Mountain Lake Access Management project cutsheet as a potential egress route (referred to as the "unpaved route traveling east"). We also documented this feedback from the community in the community feedback summary (page 249 of the appendices). We have edited the text to better capture this route on the cutsheet.

7. Why is Groveland/Pine Mountain Lake not listed as a vulnerable community?

The vulnerable communities included in the Vulnerable Communities subsection of the assessment are communities that are defined by CAL FIRE and Tuolumne County based on the communities having a single access or egress route for evacuation. These communities are defined and established by the state. We have updated the text to begin with a clearer definition of these communities as well as more discussion that the official vulnerable communities discussed in the report are not the only community areas within the County that face high wildfire (or other emergency incident) risk. We also want to highlight that we recognized the importance of addressing egress from the Groveland and Pine Mountain Lake community area which is why two of the nine countywide representative project cutsheets were focused on CA-120 and the Pine Mountain Lake community, including the identification of the potential additional egress routes from Pine Mountain Lake based on a meeting and correspondence with the Pine Mountain Lake Association.

8. There is no discussion of IPAWS or ham radio as communication strategies.

We have added additional language in the communication strategies and community engagement sections of the report to better capture the feedback received related to exploring IPAWS, ham radio, and other communication technologies to enhance the resiliency of the communication system during an evacuation/emergency incident. The Tuolumne County Office of Emergency Services is exploring new communication technologies and the feedback received has been shared with their team as options to consider for future enhancements to the County's emergency communications and operations.

9. The text supporting Figure 26 in the Wildfire Risk Analysis and Design Fire Scenarios indicates multiple vulnerable communities that are not in the Groveland area as impacted but not the community areas in the Groveland area.

The fire scenario was designed to specifically impact the Groveland community area but over the course of the 72-hour simulated burn, it continues to burn to the north and northeast. This includes major impacts to the communities in the vicinity of Groveland but also extends to impact multiple vulnerable communities to the north and northeast that are located off the CA-108 corridor. As noted in our response to comment #7, the vulnerable communities referenced are an official designation by CAL FIRE and Tuolumne County and those official vulnerable communities off the CA-108 corridor are

the communities listed. This should not be interpreted that the communities in the vicinity of Groveland are not communities with very high fire risk.

10. It is difficult to understand how Groveland is the third highest risk with the greatest frequency of fires in Tuolumne County and yet had minor treatments for the report.

The projects proposed in the report are intended to be representative improvements that could be implemented at similar locations throughout the county, not a comprehensive list of all possible improvements across the County. The Groveland area was identified as a high priority for consideration of improvements which is why two of the nine representative projects developed were for the Groveland community area (CA-120 and Pine Mountain Lake). Additional language was added to the Network Capacity Improvements section to better highlight and discuss the representative nature of the improvements identified as well as identify how they might be applied to other community areas using the Phoenix Lake Road project as an example that is applicable to Ferretti and CA-120 in the Groveland community area.

11. There is no mention of either Moc Fire nor Washington Fire and lessons learned.

We did integrate transportation-related feedback we received related to prior fires (most notably the Moc and Washington fires) from meetings with the Project Development Team and Fire Safety Advisory Committee, as well as documenting feedback from the community that led to additions and changes into the report based on their direct experiences of evacuations. Our stakeholder feedback led to many adjustments to our methodology to account for different vehicle populations in the analysis as well as more aggressive evacuation modeling to capture impacts of traffic flowing the opposite direction of evacuations. Many of these changes and updates were a result of feedback related to the Moc and Washington fire evacuation experiences and wildfire behavior. We have added some additional language into the fire history section to recognize the two fires as significant events given their proximity to more densely populated areas in the County and their evacuation impacts. A broader assessment of the overall lessons learned from the Moc and Washington wildfires was not included in the scope for this assessment which focused on evaluating roadway capacity and potential improvements based on transportation modeling.

12. Why is Pine Mountain Lake not at the top of the CA-120 risk discussion list related to Ignition Hot Spots?

We have updated the text to better capture the broader Groveland community area risk in this section of the report.

13. There is little value in extending the Groveland Regional Trail Project southwest to Vassar Road and terminating the route at the Divide is a better terminus.

We have added language to clarify the potential project end points to the cutsheet. The alignment of the trail was obtained from the Groveland Community Services District project map which shows a proposed trail end point at Vassar Road (see <https://www.gcsd.org/hetch-hetchy-railroad-trail>).

14. There is no mention of Pine Bark Beetle damage and increased risk therefrom in the Vegetation discussion of the report.

The wildfire modeling used very aggressive assumptions to best capture recent wildfire behavior and fuel loads. While Pine Park Beetle damage was not explicitly discussed in the memorandum, it was discussed with project stakeholders and the FSAC which resulted in changes to the wildfire scenario modeling to better capture current expectations related to wildfire behavior and impacts.

15. Questions of why prevailing winds do not result in burn area entering Pine Mountain Lake and why the ignition point was not selected within Pine Mountain Lake community. The area evacuated shown in Figure 20 is also less than what was evacuated for the Moc Fire.

The ignition point for the Groveland fire scenario was determined in collaboration with the PDT, project stakeholders, and the Tuolumne County FSAC. Initial ignition points were chosen based on wildfire risk, prior ignition history, wildfire hazard, and potential to impact the various populated areas of the County with an emphasis on locations that would result in large scale evacuations. These initial ignition points were discussed with the project stakeholders and the project team and confirmed with the FSAC as reasonable ignition points based on the risk and the project goals. The fire perimeter shown for Groveland does enter the Pine Mountain Lake community but is slowed over the 72-hour burn period by the lake and roadways within the community which slow the fires simulated spread. However, given the fire scenario is a simulation and there is potential for greater impacts than what is shown (or lesser impacts given fire fighting operations are not represented in the fire scenario) a larger area was evacuated or put on standby than might be justified based on fire spread alone. The map reference in the comments is the evacuation area based on the first 12 hours of fire spread. Figure 21 shows the much larger area evacuated for the 24-36 hour burn scenario.