**Why does the department need the positions requested in this application?**

Extended response times, increasing call volume, limited staffing on equipment, declining volunteer workforce, and declining volunteer responses mean less opportunity for responding resources to meet OSHA two in two out requirements during critical early stages of fires. The majority of our jurisdictional area was identified by the State Board of Forestry as a very high or high fire hazard severity zone. Significant potential for loss of life due to fire exists. 11.8% of the total population is living alone and 65 years of age or older, and many require assistance and are nonambulatory. Limited resources and staffing make supporting emergencies such as fires extremely difficult. Engine staffing is sub-par at 2-0. The proper response to emergencies relies heavily on a constantly dissipating volunteer workforce. When volunteers do respond, relying on automatic and mutual aid agreements with cooperating agencies is still required to fulfill a basic initial dispatch response. Additional resources beyond an initial response have a significant time delay, often responding from over 30 minutes to over 1 hour away. Critical infrastructure, including but not limited to agricultural production, power supply, and water supply for millions of people need to be protected with an unrealistic amount of understaffed equipment and overworked/fatigued firefighters to manage emergencies. The largest single threat to the County is the increasing risk of devastating wildfires. As we've seen over the last 6 years (with the exception of a very wet 2019) terrifying and deadly wildfires have increased exponentially, and wildfires continue to be more difficult to control. Add to that the increasing population shifting to the wildland-urban interface and building of new homes (even though compliant with strict state and local building and fire codes), and we've seen a significant increase in risk in the county with the County Board of Supervisors declaring a local State of Emergency due to wildfire threat. A large majority of TCFD's jurisdiction has been rated by California Dept. of Forestry and Fire Protection as Very High and High fire hazard severity zones which are the top two most hazardous ratings of a wildfire threat. We're also seeing several new commercial resort developments with millions of dollars of improvements and increasing the area population by several hundred in the far reaches of the TCFD jurisdiction near the northern entrance to Yosemite National Park. The closest volunteer fire station has no volunteers and the closest TCFD-paid engine is over 75 minutes away. Additionally, development plans for over 1,000 new homes in a subdivision will draw new residents to the county. Tourism has been a large source of stability in the county, but in 2020 tourism levels reduced by 45% compared to 2019.

**How will the positions requested in this application be used within the department? (e.g., 4th on engine, open a new station, eliminate browned out stations, reduce overtime)?**

Two additional fire engines will be staffed with 3-0 staffing every day. Both Engines will be staffed in strategic locations, both of which were identified as having staffing and response time deficiencies in previous studies, to maximize effectiveness and efficiency for providing the best benefit to the level of emergency management to the community and critical infrastructure. Each 3-0 staffed engine will provide desperately needed additional apparatus, emergency medical and rescue equipment, tank water, and firefighters to fires and other types of emergencies in less time than our current model. This will allow OSHA two in two out to be met earlier in an incident, personnel inside searching for victims, and water on the fire faster. Having additional personnel on the scene in less time will also allow more functions to be fulfilled earlier on in an emergency incident with more of a shared workload, reducing fatigue, and lowering threat levels to department personnel and the community.

**What specific services will the requested positions provide to the fire department and community?**

Two engines with 3-0 staffing all Company Officer qualifications will be available to respond to emergencies with a significantly shortened response time than currently available. The Department will be better suited to handle multiple incidents simultaneously. The community will have a higher chance of fires being extinguished while they are small and before they cause further damage and higher threats. Additional water, tools, rescue equipment, emergency medical equipment, and trained firefighters will be available for all emergencies, and during a significant event, they will be utilized, leaving additional resources available for protection from other emergencies. Currently, 7 Local Government fire departments and districts also operate within Tuolumne County. Each department or district staffs only one piece of emergency apparatus with limited staffing and minimal training and experience. These departments/districts rely on TCFD to respond to any emergency which overwhelms their single resource capabilities, through automatic aid and mutual aid agreements. Any time an engine is committed to an incident regardless of who's jurisdiction, the resource void leaves the community even more vulnerable, at risk, and understaffed. For example, in July of 2020, TCFD Engine 511 was on a public assist in a remote area when a significant commercial structure fire in Engine 511's primary response area started with one burn victim sustaining critical burns on roughly 80% of their body along with airway injuries. The burn victim's initial emergency medical care was delayed due to Engine 511 being 11 minutes away and committed to a call. What should have been the second arriving engine became the first arriving engine providing care to the burn victim. What should have been the third arriving engine became the second arriving engine, causing fire suppression to be delayed. The structure fire turned spread into nearby vegetation during critical fire weather during its early stages before turning into a 2-day long Hazardous Material incident. Staffing awarded by this SAFER grant would have provided a 3-0 staffed engine first on scene rendering medical care to the burn victim within 4 minutes, allowed next incoming resources to keep the fire and hazardous material involvement smaller, and reduced the wildland fire threat to the responding personnel, surrounding community and critical infrastructure as well as allowing NFPA 1720 to be met.

**Describe how funds awarded through this grant would enhance the department's ability to protect critical infrastructure within the primary response area.**

If awarded, this SAFER grant would increase the operational staffing of TCFD from 2 full-time staffed Engines to 4 full-time staffed engines responding to emergencies daily. Firefighters on staffed Engines would increase from 4 firefighters to 10 firefighters responding to emergencies each day. Operational positions would increase from 17 to 36. This increased daily staffing would provide tremendous benefits to the Department's ability to protect critical infrastructure as follows: Less fatigue and higher safety for Department personnel. Currently, 4 career Department personnel share the workload of Engine response to all TCFD and mutual/automatic aid calls. Fatigue takes its toll on all 4 firefighters working a minimum regular shift of 3 continuous 24- hour shifts per week running 4,253 calls in 2021 between both engines. Tuolumne County Fire Department responded to over 6,000 calls in 2021, with an additional 2000 calls not responded to by either staffed Engine. Additional staffing would share the workload, reducing fatigue and allowing personnel to work harder, achieve more progress in emergencies, and be less likely to become injured or prone to poor judgment. Additional personnel available to respond to emergencies means more bodies to mitigate emergencies safely, meeting NFPA 1720 standards for the number of personnel and response times much more frequently. Two more engines would be staffed and responding to emergencies allowing more water, tools, hose, equipment, and firefighters for fire suppression. Stopping wildland fires earlier, and preventing structure fires, vehicle fires, escaped debris burns, etc. from extending into the vegetation also significantly reduces threats to critical infrastructure. Wildland fires pose the most significant threat to the community and critical infrastructure. Two additional staffed Engines would reduce initial response times, and significantly reduce the chance of a wildland fire expanding out of control. One Engine's primary response area currently relies on volunteer response yet had 210 wildland fires within the last 3 years. The other Engine's primary response area currently relies on volunteer response as well, despite not having volunteers for several years, and currently, the closest staffed TCFD Engine responds from over 75 minutes away. Critical Infrastructure is currently at significant risk for catastrophic damage due to the threats posed vs current full-time staffing and unreliable or non-existent volunteer responses. This grant would increase current daily staffing by 250% and daily staffed engines by 200%, reducing the need to depend on a dwindling volunteer presence for a basic emergency response to protect critical infrastructure.

**Explain how the community and the current firefighters employed by the department are at risk without the positions requested in this application.**

Even an average residential structure fire will commit all resources within a large geographical area, leaving the community and critical infrastructure vulnerable by unacceptable response times from the remaining closest available emergency resources. A wintertime dispatch for a residential structure fire only includes 4 engines, which are typically staffed 2-0. Fulfilling OSHA two in two out requirements while carrying out necessary operations to be effective on a structure fire is difficult and dangerous with only 8 firefighters. Firefighters are frequently responsible for carrying out multiple tasks simultaneously in order to be remotely effective. Compounding matters, water supply is scarce in a majority of Tuolumne County with an estimated 90% of County jurisdiction absent a water supply. Water tenders are crucial and heavily relied upon, but only arrive by volunteer response. Larger scale emergencies such as multi-story/multi-family dwellings, multi-story assisted living facilities, or large department store commercial structure fires often require engine responses from outside of Tuolumne County, as utilizing all staffed equipment from each fire department still falls short of operational needs and leaves the community and critical infrastructure unprotected. Knowing operational challenges will be compounded by staffing deficiencies throughout each shift creates constant stress and fatigue for on-duty firefighters while working a 72-hour shift each week. Routine lack of sleep from running calls with extended response times because no closer engine exists exacerbates stress and fatigue, all of which have been proven to have significant negative long-term health impacts. Large primary response areas mean extended response times; causing larger and more complex/dangerous incidents requiring more effort, risk, personnel, and resources to mitigate, more fire damage to buildings, the higher threat of structural collapse, the higher chance of extension into vegetation, and lower likelihood of arriving in time for rescue of viable trapped victims.

**How will that risk be reduced if awarded?**

If awarded, TCFD engines staffed daily will improve from 2 per day to 4 per day. Firefighters available on TCFD staffed engines will improve from 4 firefighters per day to 10 firefighters per day. Emergency incidents will not require such a significant drawdown of resources. Automatic and mutual aid agreements as well as Volunteer responses will not be relied on as heavily. Emergency incidents will have a larger pool of additional engines and firefighters when needed. Shorter response times will be created by new primary response areas and emergency incidents will be more appropriately staffed sooner for safe working conditions and a more realistic shared workload. Faster arrival times leave less fire damage to buildings, lower threat of structural collapse, and a higher likelihood of arriving in time for viable victim rescue. Call volumes may be reduced from the current staffing model affording more sleep. Less potential and responsibility on each engine and crew for life safety and critical infrastructure protection. All of these factors will also reduce levels of chronic fatigue and stress placed on the workforce and provide better protection to the firefighters, the communities, surrounding agencies, and critical infrastructure.

**Describe the benefits (e.g., quantifying the anticipated savings and/or efficiencies) the department and community will realize if awarded the positions requested in this application.**

Engines will travel less distance, allowing them to last longer and require less frequent replacement due to geographically smaller primary response areas. Currently, TCFD responds to over 2,200 square miles with two full-time staffed engines. Recruitment and retention benefits are gained by having a lower turnover of employees who are less prone to being overworked, over-stressed, and over-fatigued. Reduced workload, stress, and fatigue also have the potential to reduce the risk of job-related injuries, industrial accidents, and vehicle accidents related to firefighter fatigue. Tuolumne County is self-insured and liability/damage caused by vehicle accidents costs the County directly. There is monumental value to the Department and the community in keeping local area working knowledge and experience within TCFD. Initial cost savings to the community with SAFER grant funds will allow the community to better recognize the current deficiencies by seeing the levels of service improve with the increased staffing. This will increase the likelihood of future tax measures and community-funded opportunities being better accepted. Additionally, increased staffing and decreased responsibility/workload could allow firefighters to reallocate time and energy to take on community outreach programs such as CERT, community-based CPR, and fire prevention in local schools. Some expenditures can also be saved by having additional staff to handle currently outsourced services such as small engine repair, annual ladder testing, annual auto extrication service and repair, annual fire extinguisher testing and repair, SCBA flow testing and repair, etc. further becoming more efficient and saving the community money.

**If you have any additional information you would like to include about the department and/or this application in general, please provide below.**

The volunteer firefighters of today are not the same firefighters that have historically been recruited. We believe it is rare that we will recruit career volunteers who will continue volunteering for 10, 20, or 30 years. There will be some, but the vast majority will not volunteer for more than 5 years. TCFD had 58 volunteers last year, although many were not responding to calls. We currently have 41 volunteers. Relying on today's volunteer workforce often provides little to no response to emergency incidents. Full-time staffing has slowly become the only reliable workforce responding to incidents. This grant would afford immeasurable value to the health and safety of our firefighters, the community, and the protection of critical infrastructure by adding desperately needed firefighters to staff engines. TCFD Engine 761 was originally funded by a SAFER grant in 2012 and remains staffed today, proudly responding to over 2,000 calls annually as one of the two staffed engines in the Tuolumne County Fire Department. The lasting and tremendous beneficial impact the 2012 SAFER grant had on the community remains appreciated by countless victims, patients, and families and will continue. Protected critical Infrastructure at risk includes: 10 Educational institutions, 4 Post offices, 2 county airports including a CAL FIRE Air Attack Base, San Francisco Public Utilities Commission Hetch Hetchy Water and Power system which provides municipal water and power supply to the greater San Francisco Bay Area; US Army Corps of Engineers New Melones Reservoir and Don Pedro Reservoirs which provide crucial water storage and hydroelectric power to the San Joaquin Valley in Central California, one of the top agricultural production areas in the world; Numerous smaller Pacific Gas and Electric hydroelectric generation plants along the Stanislaus River, Tuolumne Utilities District infrastructure providing local water within the County, multiple water districts and their potable water storage and distribution systems; Adventist Health Sonora Acute Care Hospital, Sierra Conservation Center (a state prison), State Highways 108, 120, and 49; Yosemite National Park northern entrance route, Moccasin State Fish Hatchery, Sierra Pacific Industry Lumber Mill, local agricultural production, Ultra Power - Biomass/co-generation power generation facility; state, local and federal Fire Stations; Government Center, a new California Superior Court; and a new County adult detention center as well as a new juvenile detention center. If there are any questions or topics for further discussion anyone wishes to explore, I would be happy to be contacted. I am not a grant writer but working on an engine in the community I live in has fed me a healthy understanding of the shortfalls, deficiencies, and risks the community and the firefighters continue to struggle with daily. Everyone deserves better. Chris Fritz Fire Apparatus Engineer TCFD Engine Co. 511 (209)532-5983