

**DEPARTMENT OF FORESTRY AND FIRE PROTECTION**

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To: Members of Congress
From: Kevin Conway, CAL FIRE Demonstration State Forest Program Manager
Date: April 27, 2022
Subject: Bipartisan Oversight Forum on “Save Our Sequoias: The Impact of Catastrophic Wildfires on the World’s Most Iconic Trees.”

CAL FIRE appreciates the opportunity to testify today on the importance of giant sequoia (*Sequoiadendron giganteum*) conservation.

CAL FIRE has been the manager of the Mountain Home Demonstration State Forest since 1946. The Mountain Home Grove is one of the largest by number of giant sequoia and spans across County, State, and Federal ownerships highlighting the importance of coordinating conservation efforts across all levels of government.

While most giant sequoia groves are set aside in public lands as reserves and parks, CAL FIRE’s Mountain Home Demonstration State Forest has a legislative mandate to conduct research, demonstration, and education on sustainable forestry practices. This active management played an important role in protecting much of the Mountain Home Grove from the Castle Fire (SQF Complex) in 2020.

The current risks to giant sequoia ecosystems come not from a single threat, but the convergence of multiple threats at the same point in time. Fire exclusion, drought, bark beetles, and hotter, drier climate conditions have significantly changed our forest over the last decade. These have set the stage for wildfires to move through giant sequoia groves uncontrolled and with unacceptable impacts.

The current drought, starting in 2012, and subsequent bark beetle outbreak caused the mortality of 95% of the ponderosa and sugar pine on Mountain Home and a dramatic shift towards true firs. In recognition of the emerging threats posed by dead and dying trees, the California Board of Forestry and Fire Protection adopted regulations streamlining the environmental permitting processes for their removal. This allowed for the salvage of approximately 2.5 million board feet per year, enough wood to build approximately 150 single family homes.

More importantly, this work removed the dead and dying vegetation that would have increased the fuel loading and provided ladder fuels in and among the giant sequoia stands. Further treatments included mastication; hand treatments; prescribed fire, including a cross-boundary burn with Tulare County; and managed wildland fire use

with the USFS during the Hidden Fire of 2014. CAL FIRE provided the Demonstration State Forest manager the tools, resources, and agency to select when and where each treatment was appropriate which allowed for an all-of-the-above approach to creating a forest resilient to the inevitable wildfire, which came in the form of the Castle Fire on September 13, 2020 (see Figure 1).

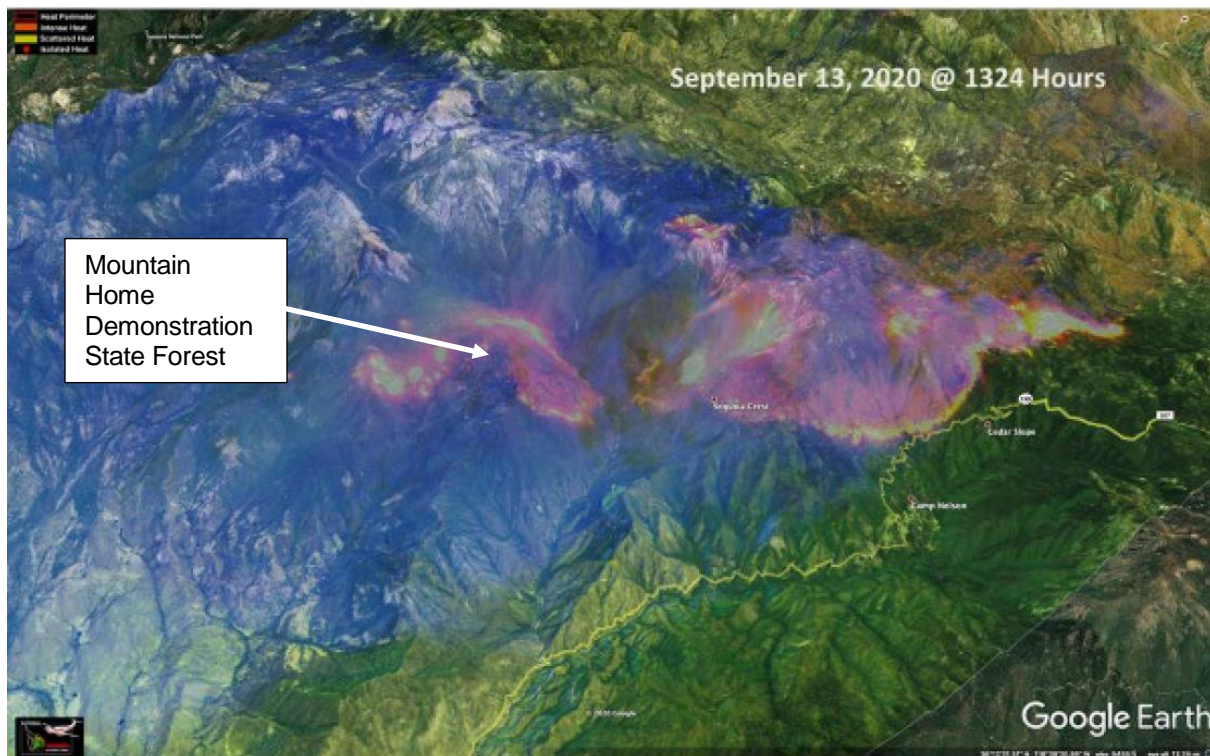


Figure 1. Mountain Home Demonstration State Forest with intense fire burning to west, north, and east approximately five hours after fire was first observed on forest. Photo courtesy of Rich Walker, CAL FIRE.

CAL FIRE completed a 100% inventory of the old growth giant sequoia in 2014 and will complete a post-fire re-inventory this summer (2022). Of 4519 total old growth giant sequoia, we estimate that 268 died from the Castle Fire. Loss of any of these monarchs is tragic. The loss of multiple hundreds in a single event is beyond anything we could have imagined or seen in modern times.

The false color image below (see Figure 2) shows the location of dead giant sequoia in relation to fire severity. The concentrations of mortality represent lessons to be learned about the topographic location or pre-fire vegetative conditions that were conducive of transitioning fire from the forest floor into the canopies of the giant sequoia. Fire was also present in the heart of the grove, but moved around at relatively low intensities. Additional lessons can be learned from the variety of treatments that allowed this fire behavior under the same intense weather conditions.

The landscape at Mountain Home has once again been significantly changed. Again using California regulations that streamline the environmental permitting for unplanned events such as wildfire, CAL FIRE has set to work at removing hazard trees around recreational facilities, salvaging burnt timber, and preparing to plant 200,000 seedlings this spring (2022) to re-establish the forest of our future. Mountain Home was even able to welcome campers back to the forest in a limited capacity in 2021.

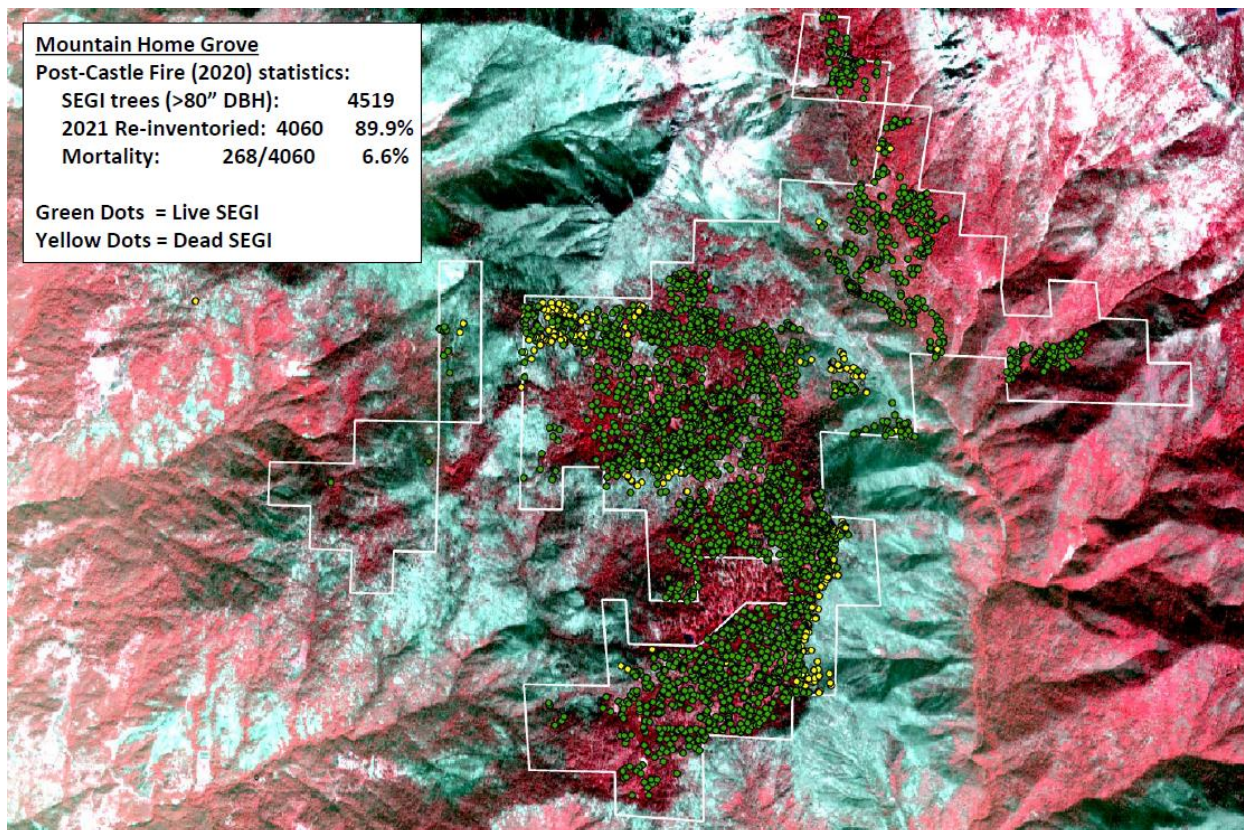


Figure 2. False color image of Castle Fire severity at Mountain Home Demonstration State Forest overlaid with position of re-inventoried giant sequoia. The blue-green color represents high fire intensity as measured by vegetation impacts and the yellow dots represent giant sequoia that died in the fire. Map courtesy of Rich Walker, CAL FIRE.

CAL FIRE is excited to participate in the Giant Sequoia Lands Coalition. Under the leadership of your federal agencies, this group has convened all the giant sequoia grove managers to coordinate actions, and share knowledge and resources across jurisdictional boundaries. As we gather and come to agreement on our core guiding principles, it has become immediately clear of the passion and deep knowledge each manager has of their giant sequoia groves.

The convergence of factors discussed earlier in my testimony provides the urgency to act in this moment. The impacts to our groves from recent wildfires should cause us to re-evaluate our risk tolerance for purposeful management activities, such as the weather and fuel conditions under which prescribed fire is acceptable, and to accept greater damage to non-sequoia species to more aggressively re-introduce fire to these groves.

You have knowledgeable and passionate management teams in place that understand the urgency of active conservation of giant sequoia in light of these threats. We look forward to seeing what additional support may come to our federal partners from your ongoing exploration of this topic and stand ready to collaborate as a partner in the Giant Sequoia Lands Coalition.

Thank you for the opportunity to provide this testimony. I welcome any questions the Committee might have.