The impact of the Bark Beetle on California's forests

Tree Mortality in Mariposa County, June 25, 2015

Bark Beetle

Tree mortality rates in the Sierra and Stanislaus National Forests have surpassed 40–50 percent in many areas creating a significantly increased wildfire risk. Early indications suggest this issue is expanding throughout other parts of California as far north as Shasta County.

13 million dead trees in southern half of California (includes areas within PG&E's service territory)
(2014 USFS Report)

Landscape level mortality in Tuolumne, Mariposa, Madera, Fresno and Tulare counties

5 million dead trees on approximately **500,000 acres** (10/acre) in central/south Sierra (survey of subset of forest)
(2015 USFS Report)

2015 fire season has eclipsed 2014 by almost **1,900 fires** and more than **115,000 acres** burned
(January 1–October 25)

In the past two years, wildfires spread at an unprecedented rate.

Kings Fire spread **16 linear miles** in 24 hours

Valley Fire spread from 200 acres to **62.5 square miles** in 12 hours

View of Rough Fire with tree mortality

Logs that remain following tree removal

Warm winter temperatures, preventing the die-off of the bark beetle, contributed to the increased tree mortality. The bark beetle population grew exponentially resulting in the increased tree mortality rate that we see today.

On March 7, 2003, the Governor declared a State of Emergency to prevent catastrophic forest fires due to bark beetle infestation and requested the California Public Utilities Commission (CPUC) to direct utilities to ensure all dead and dying trees were removed in accordance with regulatory rules.

In that instance, there were hundreds of thousands of trees on more than 150,000 acres that were dead or dying after being weakened by drought and bark beetle infestation. Based on this declaration, a CPUC resolution that followed and a subsequent declaration from the Governor, Southern California Edison filed for Catastrophic Event Memorandum Account recovery for over $200 million for tree removals in the affected areas.

By comparison, the current bark beetle infestation is impacting Tuolumne, Mariposa, Madera, and Fresno counties on more than approximately 5,000,000 acres and the impact is expected to grow to the north. The increasing infestation throughout this region will create additional challenges in coming years given the stress on the trees with the possibility of ongoing prolonged drought conditions and elevated temperatures.

Removing an unprecedented number of dead trees near electric infrastructure will also require addressing the remaining debris in a sustainable manner. Given the volume of dead trees, a multi-year program is required to effectively remedy the situation and mitigate this public safety threat.