

CALIFORNIA LEGISLATURE

STATE CAPITOL
SACRAMENTO, CALIFORNIA
95814

Background

California is facing a tree mortality crisis. Experts predict that an estimated 29 million trees are dead and many more are likely to die by the end of the year due to wildfires, drought, disease, and climate change. The purpose of this hearing is to better understand the threats California's forests face and the actions the Administration is taking to respond to those threats.

Approximately one-third (or 33 million acres) of California's land is classified as forests. Federal agencies, including the Forest Service, the Bureau of Land Management, and National Park Service, own and manage 57% (or 19 million acres) of those forests. State and local agencies, including the Department of Forestry and Fire Protection (CAL FIRE), local open space, park and water districts, and land trusts own 3% (or 1 million acres) of California's forests. However, the state is responsible for fire protection, as well as forest practices, on more than just land it owns. The state is responsible for fire protection on 31 million acres of forests, watersheds, and rangeland. The other 40% (or 13 million acres) of California's forests are owned by individuals, corporations, and Native American tribes. Within the 40% mentioned above, industrial timber companies own 15% (or 5 million acres).

Forests provide many important functions for the state. Forests provide high quality habitat for thousands of plant and animal species, including many endangered species. Coastal forests play a vital role maintaining California's salmon population. Forests sequester carbon to mitigate climate change and provide clean air benefits. They also play an important function in California watersheds by improving water quality and controlling runoff. California forests provide a variety of outdoor recreation and educational opportunities. Many people in rural communities are employed in the forest products industry or tourism industry supported by forests. According to CAL FIRE, approximately two billion board feet of timber is harvested per year, with a value of over \$1 billion.

Yet California's forests face many threats, including, wildfires, drought, disease, climate change, and forest conversion. The past four years of drought have made many trees more susceptible to

disease and wildfire, which has caused an estimated 29 million trees in California to die. In 2015, there were 8,397 fires in California that burned 846,895 acres. The major fires of 2015 included the Rough (151, 623 acres), Valley (76,067 acres), and Butte (70,868 acres) fires. These three fires destroyed thousands of homes and caused the deaths of ten people. The Valley and Butte fire destruction alone caused an estimated \$1 billion in insurance claims. The cost of the state effort to fight these fires is over a half a billion dollars of general fund expenditures, which is on top of over \$1 billion of budgeted General Fund spending for CAL FIRE.

A century of fire suppression has increased the density of California's forests and reduced the size of trees. In 2013, a team of University of California, Berkeley researchers were surveying and conducting research in the Stanislaus National Forest when the Rim Fire broke out, and they were required to evacuate. Prior to their evacuation, they discovered as many as 400 trees per acre on the land. In 1911, the land had between 60 and 90 trees per acre. Researchers also found between 30 and 40 tons of woody debris per acre on the forest floor, compared with six to eight tons 102 years ago. In addition to the dramatic increase in tree density, the researchers found more undergrowth species, and while there were still old-growth trees, the average size of the trees was smaller than in 1911. California has also lost many of its old growth trees to logging. Larger trees are a more secure way to store carbon because they are more resilient to disturbances such as drought and fire. Climate change looms as a threat to California's forests because it will increase the likelihood of conditions that lead to tree mortality. The study titled, "Flammable Planet: Wildfires and the Social Cost of Carbon," claims that by 2085 California could experience a 36% to 74% increase in area burned by wildfires under a high greenhouse gas emissions path.

California's forests are not only susceptible to the effect of climate change but are also contributing to emissions. Wildfires are now the single largest source of black carbon emissions in California, representing 66% of black carbon emissions in 2013. Black carbon or soot is a major contributor to climate change. Dead, decaying, and dying trees have been shown to emit greenhouse gases reducing the carbon storage capacity of the wood. Recent studies have put into question whether California forests are net carbon sinks or emitters, which will impact California's greenhouse gas reduction goals.

In August of 2014, the Forest Climate Action Team was assembled with the primary purpose of developing a Forest Carbon Plan by the end of 2016 to address many of these issues. On October 30, 2015, Governor Brown issued a proclamation of a state of emergency and sent a letter to the Secretary of the United States Department of Agriculture urging federal support and partnership to address the tree mortality crisis. The Governor's 2016-17 budget includes a budget change proposal to spend \$140 million from the Greenhouse Gas Reduction Fund for a comprehensive forest health program to further secure forest carbon and reduce greenhouse gas emissions. These forest health programs will focus on landscape-scale projects in high risk fire areas.