

BACKGROUND

California's Natural Resources. Healthy, resilient forests provide critical ecosystem services that are essential to climate adaptation in California. Forested lands make up roughly one third of our state, covering nearly 32 million acres. Because of the broad variety of climate zones, soils, and elevations they encompass, healthy California hosts an exceptional diversity of plant and animal species. Their ecosystems are part of a global biodiversity hotspot that provides essential habitat for native wildlife, stores carbon, and filters drinking water. Forest products and forest-based recreation support rural communities and the state economy. Nearly two-thirds of California's developed water supply originates from the streams and rivers of the Southern Cascades and Sierra Nevada Mountain regions, tying healthy forests to the well-being of most the state's population, over 25 million residents. The urban tree canopy covers 15 percent of California's urban areas, providing public health benefits to 95 percent of Californians who live in cities. Improving forest healthy can help to:

- Ensure water supply and improved water quality for downstream users in both rural and urban communities;
- Protect wildlife habitat and support biodiversity;
- Store carbon and combat climate change;
- Sustain local economies by creating jobs, producing alternative energy, increasing recreation and producing food and fiber;
- Improve fire safety;
- Reduce risk of air pollution and greenhouse gas emissions; and,
- Enhance visual aesthetics.

The health of the state's forest has been severely debilitated by fire suppression efforts over the last century. Wildfire is a natural component of forest health and is an integral part of the ecosystem in which it occurs. California forests were historically shaped by low-intensity and frequent fires. However, fire suppression over the last century has led to unhealthy forests that are overly dense with brush and small trees. These conditions coupled with climate change have greatly increased the occurrence of devastating, high-intensity mega-fires like the ones experienced in Northern and California last year. Thirteen of the top twenty largest and most destructive wildfires in California's history happened in the last fifteen years.

CalFire's Mission. The California Department of Forestry and Fire Protection's (CalFIRE) mission is to serve and safeguard the people and protect the property and resources of California. The Department provides resources management and wild land fire protection services covering over 31 million acres of the state. It operates 228 fire stations and, on average, responds to over 5,600 wildfires annually. The Department also performs the functions of a local fire department through reimbursement agreements with local governments. Additionally, the state contracts with six counties that provide their own fire protection and prevention services.

A key part of CAL FIRE's resource protection mission is to prevent fires. The Department's Fire Prevention Program consists of multiple activities including vegetation management, fire planning, education and law enforcement. Common projects include fire break construction and other fire fuel reduction activities that lessen the risk of wildfire. This may include brush clearance on state responsibility areas, along roadways and evacuation routes. Other important activities include defensible space inspections, emergency evacuation planning, fire prevention education, fire hazard severity mapping, implementation of the State Fire Plan, fire-related law enforcement activities such as investigations to determine fire cause and origin as well as arson cases, and support for local government fire safe planning in the state responsibility area.

2017 Fire Season. The 2017 fire season was unprecedented, marked by multiple severe and devastating wildfires that have burned over a million acres, destroyed tens of thousands of infrastructures, evacuated hundreds from their homes and left muddy, flood-prone landscapes in their wake. Most notable were the October fires in Northern California, and the December fires in Southern California.

October 2017 Wildfires. In the 48 hours spanning Sunday, October 8th and Monday, October 9th, 172 wildfires broke out across Napa, Lake, Sonoma, Mendocino, Yuba, Nevada, Solano, and Butte Counties. The Sonoma-Lake-Napa Emergency command center, one of twelve CalFire emergency command centers in the northern region, received 3,662 calls for help. Of the initial 172 wildfires that were ignited, eighteen of them grew into large, fast moving conflagrations fanned by record-breaking strong winds. These fires burned almost 245,000 acres, destroyed 8,920 structures, damaged 736 structures, 44 people lost their lives, and \$262,437,625 in costs.

December 2017 Wildfires. In the two weeks subsequent to Monday, December 4th, 122 wildfires broke out under Red Flag Santa Ana wind conditions across Ventura, Los Angeles, San Diego, and Riverside Counties. Six of them grew into large, fast moving conflagrations fanned by strong winds and critically dry conditions. One of these fires, known as the Thomas fire, became the largest wildfire in California's recorded history. The Thomas fire, which started north of Santa Paula in Ventura County, took the lives of two people, including CalFire Engineer Cory Iverson, destroyed 1,063 structures, and burned over 280,000 acres. The December fires in total burned over 308,380 acres, destroyed over 1,375 structures, damaged over 440 structures, 2 people lost their lives, and \$188,450,301 in costs (Thomas fire only).

These fires were uncharacteristic in that December is historically outside of California's fire season.

Mudslides in Southern California. Recovery efforts in parts of Southern California took a turn on January 9th, 2018. Over the course of two days, five inches of rain fell in the mountains of Ventura County, and three inches of rain fell in the mountains of Santa Barbara County. The rate of rainfall exceeded one inch per hour at times, which sent deadly walls of mud and debris down the recently scorched hillside. The scorched soil,

due to intense heat from the fires, was unable to absorb the more than 5.5 inches of rain that had fallen over the course of two days. Additionally, the lack of vegetation allowed for increased rates of erosion. This combination led to catastrophic flooding and devastating mud slides that consumed the same areas impacted by the December 2017 fires and claimed at least 17 lives and destroyed over a hundred homes.

Recovery efforts are still underway in 2018. The Governor declared a state of emergency for both the October fires and the December fires that devastated several counties in Northern and Southern California and was successful in securing federal aid for residents and workers in those areas.

The estimated costs of recovery efforts are in the billions. As of December 20, 2017, the Department of Finance accessed \$43.4 million in resources available in the State Fund for Economic Uncertainties for various departments related to unexpected equipment, personnel, and other disaster assistance costs incurred in response to the wildfires. The majority of these resources were used for hazardous waste and debris removal, purchase and distribution of food to individuals affected by the fires, and rental/mortgage vouchers and utility assistance for those affected but ineligible for federal assistance.

Increased frequency of mega-wildfires are detrimental not only to our communities but also the state's natural resources. Mega-fires can cause serious harm to wildlife, destroy wildlife habitat, cause sediment accumulation that impedes stream flows, and impact watershed health causing downstream degradation of streams, lakes and reservoirs. Depending on the intensity and duration of the fires, they can negatively alter soil characteristics such as decreasing its water infiltration ability thereby compromising its ability to absorb water and ultimately impacting the state's water resources.

Current efforts to restore the health of the state's forest and possibilities for future actions:

- **Vegetation Management Program and Prescribed Fire.** CalFire operates the Vegetation Management Program (VMP), a cost-sharing program that allows public and private landowners to participate in vegetation treatment projects on State Responsibility Area (SRA) lands. The primary tool used in the VMP program is prescribed fire. The Budget Act of 2018 provided CalFire \$10 million to increase their work on fuel reduction, specifically the use of prescribed fire. Currently, CAL FIRE has 65 approved VMP projects covering a total of 74,526 acres.

CalFire's 2016-17 goal was to complete 20,000 acres of prescribed fire. As of June 30, 2017, the Department completed 13,941 acres, 70 percent of the prescribed fire goal. Although just short of the goal, the Department increased the number of acres burned from 2015-16 (3,194 acres) by 372 percent. CalFire continues to prioritize the VMP program and the development of prescribed fire projects as a primary tool to combat tree mortality and improve landscape level

forest health. To further promote the use of prescribed fire, CalFire has made prescribed fire a preferred activity in both its Forest Health and SRA Grant Programs. Both grant programs encourage and support projects that prioritize the use of prescribed fire.

CalFire continues to have a goal of 20,000 acres treated by prescribed fire in this fiscal year and next. To further this goal, CalFire established an established internal working group to increase the pace and scale of prescribed fire. CalFire is currently developing training and qualifications for personnel, parameters for carrying out prescribed fire when CalFire is a cooperator but not the lead agency, responses to liability and environmental review, strategies to gain efficiencies in use of prescribed fire and how to best use resources to increase acres burned.

CalFire is collaborating with numerous other agencies and partner organizations around policy and projects related to prescribed fire. At the center of this is the Prescribed Fire MOU. CalFire is making use of the Good Neighbor Authority (GNA) and the Wyden Authority to carry out projects across ownership boundaries with federal cooperators.

CalFire continues to prioritize completing the Vegetation Treatment Program Environmental Impact Report. This will make carrying out prescribed fire projects and other fuels reduction projects much more efficient by reducing the time it takes for environmental review, as a base level of review will be complete in the EIR.

- **Developing wood product markets as a means to deal with the dead trees.** Overgrown forests are less resilient to stresses such as drought and disease. Five consecutive years of severe drought and warmer temperatures led to a dramatic rise in bark beetle infestation causing a tree mortality crisis that devastated 129 million trees since 2010. The dead trees further exacerbate the risk of wildfires. Senate Bill 859 (Committee on Budget and Fiscal Review) of 2016 directed the Natural Resources Agency to establish a working group on expanding wood product markets to utilize wood materials removed from high hazard zones and submit recommendations to the Legislature. The Agency released the report in October 2017.

The report outlines actions, policies and pilot programs to increase demand for California forest products and expand knowledge and skills needed to develop and manufacture them. The report also notes that expanding markets for higher-value wood products, such as mass lumber and other products that do not require large diameter trees and promoting localized manufacturing would help serve parts of the Sierra hardest hit by tree mortality and other forested regions where limited wood processing infrastructure exists. The report includes the following recommendations, organized around three key strategies:

- Remove state barriers and create pathways to permitting both new manufacturing operations and the use of new wood materials with a

- focus on challenges inherent in redeveloping sites, and gap financing to incentivize broader investment.
- Promote wood product innovation, with a focus on building the institutional infrastructure necessary to bring new products to market.
 - Invest in human capital, with a focus on assuring that the necessary workforce is available and trained appropriately to staff new wood products operations, and that the building blocks of innovation in this sector exist in the California's public technical and higher education systems.
- **Little Hoover Commission Report.** The Little Hoover Commission (LHC) is an independent state oversight agency created to improve efficiency, economy, and improved service in California's government operations. Due to the drought-induced tree mortality epidemic, LHC spent over a year reviewing the state's forest management activities, the impact of unhealthy forests on water supply and quality.

On February 5, 2018, the Little Hoover Commission released a report titled "Fire on the Mountain: Rethinking Forest Management in the Sierra Nevada," which calls for a dramatic change in the way forests are managed to curb a disastrous cycle of wildfire and tree deaths. The report makes nine recommendations that could help restore resilience to California's forest ecosystems and prevent future mortality crises. Recommendations include increasing the use of certain forest management techniques such as prescribed fire, developing a long term plan for forest materials, and formalizing a multi-jurisdictional planning process to undertake the long-term work of restoring California's forests.

STAFF COMMENTS

The negative impacts of wildfires are widespread, ranging from watershed health, air quality, soil, to the economy. The changing climate coupled with decades of fire suppression has caused forest lands to get too dense, making them more susceptible to large and devastating wildfires. How we manage this phenomenon of increased wildfires is not as simple as putting more money toward fighting fires. Referring to the response efforts to the Tubbs fire that burned portions of Napa and Sonoma counties, Scott McLean, deputy chief at the California Department of Forestry and Fire Protection said "we could've put every piece of equipment in its path and that fire would've gone over it, under it, through it. It wouldn't have mattered." With eight of the State's most destructive wildfires occurring in the last five years, we are overdue for a plan to better manage our forest lands in order to mitigate our fire risks.

In the Governor's State of the State address, he indicated the creation of a new task force of scientists and forestry experts who will review the current forestry management practices and propose ways to reduce the threat of devastating fires. The governor said the task force also will examine how the state can increase resiliency and carbon storage capacity in forests.

The recently released Little Hoover Commission report recommends a number of proactive forest management practices to rebuild healthy forests that store more water, resist insect infestations and reduce the intensity of wildfires. The report states: *"Investing upfront to create healthier forests will pay dividends in the long run by curbing the spiraling costs of state firefighting and tree removal while building stronger recreation and sporting economies in the Sierra Nevada. Forests largely restored to the less crowded natural conditions of centuries ago – through greater use of prescribed burning... will improve wildlife habitat, enhance environmental quality and add to the resilience of mountain landscapes amidst the uncertainties of climate change."*

Given the increasing frequency and intensity of wildfires, finding the resources to do the needed fuels reduction work, such as prescribed burning, is likely to be increasingly challenging. Recognizing that, the Subcommittee may wish to ask CAL FIRE about the need for additional staff to conduct fuels reduction work and comment on the Commission's recommendation to create dedicated prescribed fire crews.

The Subcommittee may also wish to: (1) review how our current investments in fire prevention and forest health are coordinated, (2) explore options for additional investment to lessen the impacts of wildfires, and (3) review how these options will harmonize with the Governor's proposal to build climate resiliency and adaptation moving forward.