KATHARINE F. MOORE
CHIEF CONSULTANT

GENEVIEVE M. WONG
PRINCIPAL CONSULTANT

CATHERINE BAXTER
CONSULTANT

SANDRA J. SANDERS
COMMITTEE ASSISTANT

1021 O STREET
SUITE 3220
SACRAMENTO, CA 95814
TEL (916) 651-4116

Oversight hearing

Implementation of the 2021 Wildfire and Forest Resilience Action Plan

March 14, 2023, 9:00 am
1021 O Street, Room 2100

Background

Overview

Due to a number of factors, including climate change and historic fire suppression, increasingly large and catastrophic wildfires have devastated areas of the state in recent years. In response the state and its federal partners announced a shared stewardship strategy to increase the pace and scale of fuel reduction treatments to improve forest and wildland resilience to wildfire to one million acres annually by 2025, among other goals. This strategy and the steps to achieve it are detailed in the 2021 California Wildfire and Forest Resilience Action Plan (Action Plan) developed by the California Wildfire and Forest Resilience Task Force (Task Force). The Task Force, led by state, federal, local, and tribal partners, and supported by numerous additional public and private stakeholders, has coordinated the collaborative multi-entity effort to complete the key actions identified in the Action Plan and achieve the state's goals to increase forest and wildland resiliency and reduce the risk of wildland fire. The goal of this hearing is to provide legislative oversight of the state's progress in implementing the Action Plan, and to receive input from stakeholders on that progress.

This background paper includes an overview of wildfire in the state, followed by a description of the shared stewardship strategy, the Action Plan, and the Task Force. State progress towards achieving its half of the one million acre annual treatment goal and additional Action Plan goals is described, as are recent efforts to address the wildland fire risk in Southern California.

The increasing risk of catastrophic wildfire in California

While wildland fires have always been present in the state, the number of days with extreme fire risk has more than doubled in the last 40 years. This is likely to continue to increase. One of the impacts of climate change in the state is an increase in the frequency and intensity of wildfires. In forested regions, decades of fire suppression, historic logging practices and drought have produced unhealthy forests -- in some forests, the current tree density is up to an order of magnitude greater than the density a century ago. These conditions exacerbate the risk of an extreme wildfire developing when a fire occurs.

Catastrophic and devastating wildfires have occurred repeatedly in the state in recent years. Nine of the twenty largest and seven of the twenty most destructive wildland fires in state history occurred in 2020 and 2021 when almost 7 million total acres burned. The 2020 August Complex Fire in northern California – the largest fire in California's modern history – burned over 1 million acres by itself, and the 2021 Dixie Fire was almost 1 million acres. Two wildland fires in recent years burned over the crest of the Sierras, which had not been previously observed. In the last several years from wildland fire, tens of thousands of structures – almost entirely homes – have been destroyed, insured losses incurred are in the billions of dollars, prime habitat has been destroyed or damaged, and, tragically, hundreds of lives have been lost. In addition, millions of Californians have been exposed to unhealthy air quality due to the wildfires. Improving the health and resiliency of the state's wildlands and forests to wildland fire are important to protecting public and environmental health and safety.

However, wildland fires are not always high intensity. Native American tribes used to use low intensity fires to preserve certain useful plants and to prevent larger fires. Low intensity fires have ecological benefits – such as creating habitat and germinating the seeds of certain species of plants. Low intensity fires can also remove surface fuels, and, therefore, decrease the likelihood of high-intensity fire later. Prescribed low-intensity fires can be a useful vegetation management treatment in forests.

Wildland fires in the state can be broadly separated into two different types – fuel-driven and wind-driven. In a fuel-driven fire, fire prevention efforts, fuel breaks and fuels management, including prescribed fire, may be the most effective methods to reduce the risk and promote healthier and more resilient forests. In a wind-driven fire, however, home and community-hardening, including maintaining a defensible space buffer around a home are critical factors. Some of the most catastrophic fires, such as the 2018 Camp Fire, can exhibit characteristics of both fire types. Of note, there are multiple methods available to help reduce the risk wildland fire poses to communities across the state, and optimal resilience is obtained by coordinated implementation of those most suited for the particular location.

Communities have continued to expand into forested and other areas at high risk of wildland fire. Although relatively small in area, millions of homes are located in and approximately 25% of the state's population lives in the wildland-urban interface (WUI) – loosely defined as a zone where development intermingles with undeveloped vegetative fuels. Expansion in these areas has increased the number of people and homes more likely to be affected by wildfire. Home hardening and vegetation management are key to a structure's ability to survive a wildfire. Creating and maintaining defensible space is an important component of reducing a home's risk of destruction from wildfire. In order to minimize wildfire risk, structures built in the WUI should be hardened against wildfire.

In addition, managing wildfire will be important to the state meeting its climate goals. In 2020, the Air Resources Board estimated that approximately 112 million metric tons of carbon dioxide were emitted from trees and other vegetation burned in that year's wildfires. A well-managed forest is not only more resilient to wildfire, but is an effective natural sink of carbon and provides enhanced ecosystem services to promote biodiversity. The Forest Carbon Plan, released in May 2018, called for an increase in the scope and speed of forest and watershed improvements to improve forest resiliency. Among other actions, SB 901 (Dodd, Chapter 626, Statutes of 2018) significantly sought to augment funding across multiple programs to implement the goals of the 2018 Forest Carbon Plan, including related to forest health, fire prevention, and fuel reduction. AB 1279 (Muratsuchi, Chapter 337, Statutes of 2022) and AB 1757 (C. Garcia/R. Rivas, Chapter 341, Statutes of 2022) incorporate natural and working lands and wildfires into the state's greenhouse gas emissions reduction and carbon neutrality goals.

Improving forest and wildlands stewardship, however, is complicated by the fact that the state itself only owns about 3% of the approximately 33 million acres of these lands in the state. The federal government owns 57% (primarily managed by the US Forest Service). Private landowners own the remaining 40%. About 6 million acres are owned by "non-industrial" private forest landowners in parcel sizes of 50 acres or smaller.

The shared stewardship agreement

In August 2020, the Newsom Administration, building on Executive Orders issued by both Governor Brown and Governor Newsom, signed a Memorandum of Understanding (MOU) with the Pacific Southwest Region office of the US Forest Service in order to establish a "joint framework to enhance science-based forest and rangeland stewardship in California." In the MOU, the US Forest Service and the state "commit to maintain and restore healthy forests and rangelands that reduce public safety risks, protect natural and built infrastructure and enhance ecological habitat and biological diversity." The strategy underpinning the MOU contains three core elements – joint forest stewardship, the identification and prioritization of projects, and using every available tool. Actions agreed to in the MOU include sustainably treating one million

acres annually (half each); developing a 20-year joint plan to reduce wildland fire risk with regular five year updates; developing new markets for wood products; promoting ecological co-benefits; expanding forest management and associated infrastructure to do so; the use of sustainable vegetation management treatments; improving access to sustainable recreation; identifying and protecting the communities most vulnerable to fire impacts; and advancing a science-based data collection, monitoring and analytics approach.

The annual state goal of 500,000 acres of mechanical, hand thinning, prescribed fire, and cultural burning is to be completed by the state, private, non-profit, and tribal partners.

The Action Plan

In January 2021, the Task Force released California's Wildfire and Forest Resilience Action Plan. The Action Plan builds upon ongoing or new efforts to build fire breaks, hire additional seasonal firefighters and other recent actions to reduce wildland fire risk and promote resiliency. The Action Plan incorporates elements of the MOU and is designed to "strategically accelerate" efforts to restore the health and resilience of the state's forests, grasslands and natural places; improve the fire safety of communities in the state; and sustain the economic vitality of rural forested areas. The Action Plan includes four principal goals. These are to:

1. Increase the pace and scale of forest health projects,
2. Strengthen protection of communities,
3. Manage forests to achieve the state's economic and environmental goals, and
4. Drive innovation and measure progress.

There are 18 additional goals organized under the principal goals, and 99 key actions to implement the goals. The table below includes a selection of the key actions under each goal (the full list of key actions may be found in the Action Plan) and represent both new and long-standing efforts to improve forest health. Of note is the wide scope of the effort – far beyond the jurisdiction of any one state or federal agency or stakeholder. The Action Plan is informed by the MOU.

SB 456 (Laird, Chapter 387, Statutes of 2021) directed the Task Force in collaboration and coordination with other state entities and others to implement the Action Plan. In addition, SB 456 formally aligned the Action Plan with the state's climate adaptation and resiliency framework, established annual reporting requirements, and required the Task Force to update the Action Plan every five years, as provided. Information in the annual is required to include acres treated, funds spent, and any recommended policy changes, among others.

Action Plan goals and select key actions
1. Increase the pace and scale of forest health projects *1.7 Increase incentives for timber harvests that improve forest resilience* *1.13 Support forest health and maintenance treatments* *1.18 Develop prescribed fire action plan* *1.29 Develop network of regional forest and community fire resilience plans* *1.35 Complete permit synchronization work plan*
2. Strengthen protection of communities *2.2 Develop performance measures* *2.12 Extend defensible space programs* *2.18 Develop home hardening guidance* *2.22 Develop utility-related wildfire mitigation initiatives* *2.27 Expand highway treatments*
3. Manage forests to achieve the state's economic and environmental goals *3.1 Develop natural and working lands Climate Smart Strategy* *3.7 Develop X-Prize for wood product innovation* *3.14 Develop joint strategy to improve access to sustainable recreation* *3.15 Increase urban canopy*
4. Drive innovation and measure progress *4.3 Establish forest data hub* *4.4 Establish ecological planning tool* *4.8 Develop consistent reporting tools*

Recent budgets

Recent budgets have demonstrated the Legislature's and the Administration's commitment to addressing the health of the state's forest and wildlands and improving landscape resiliency in an effort to reach the combined million acre treated target in 2025. Approximately $2.8 billion has been allocated from FY 20/21 through FY 23/24, of which about three-quarters was from the General Fund and the rest from the Greenhouse Gas Reduction Fund. These monies support programs to promote healthy forests and landscapes by removing hazardous fuels, the installation and maintenance of wildfire fuel breaks, projects to increase regional capacity for conducting forest health projects, projects to encourage forest-sector economic stimulus, science-based forest management, and community hardening. The California Department of Forestry and Fire Protection (CAL FIRE) received about 60% of these monies. CAL FIRE is responsible for, among other things, fire protection and prevention, as provided.

The Task Force

The Task Force was originally created in 2018 and revamped for the implementation of the Action Plan. Its executive committee is composed of federal, state, tribal, and local government representatives and is co-chaired by the Secretary of the California Natural Resources Agency and the regional leader of the US Forest Service. Additional state

members of the Executive Committee include CAL FIRE, the Governor's Office of Planning and Research, and the California Environmental Protection Agency. The Task Force has numerous additional state and federal partners, and much of the work of the Task Force is delegated to Workgroups – some already existing such as the AB 1492 Leadership Team – and others created specifically to assist the Task Force on, for example, fire-adapted communities, and fire-safe roadways. In addition, there is a Science Advisory Panel to provide advice to the Task Force and their work has been clearly integrated into the Task Force's efforts.

The Task Force's Roadmap to a Million Acres recognizes the importance of the goal of one million acres treated annually. Coordination of state and federal plans and efforts is key to achieving this goal, as is the development of regional capacity to identify and invest in high priority projects, and the collection of data and development of relevant tools to ensure that the highest priority projects are identified and the treatment benefits tracked.

The Task Force meets regularly and releases regular updates on progress, including the availability of new planning tools and grant programs, and related scientific research, upcoming workshops and other news. Online Airtables show progress on each of the four main goals and the 99 key actions identified in the Action Plan.

Progress towards implementing the Action Plan

As of March 1, 2023, the Task Force reports that 12 of the 99 key actions have been completed. An additional 16 key actions are in their "final stages", 49 are in progress and 22 are ongoing. For example, the Task Force recently released the joint strategy to improve access to sustainable recreation (key action 3.14), and efforts to increase urban canopy (key action 3.15) or develop new planning tools – such as the recent announcement that the California Natural Resources Agency, the US Forest Service and Google are collaborating to develop the science-based "Planscape" tool to provide support for regional project prioritization – are ongoing.

With respect particularly to treatment goals, CAL FIRE has reported treating 103,506, 116,668, and 97,175 acres (by effort) in FY 19/20 – 21/22 and increasing its prescribed fire treatments towards its 50,000 acre annual goal.

The Department of Conservation's Regional Forest and Fire Capacity (RFFC) program was established in 2019 to help support regional leadership to build local and regional capacity and develop, prioritize, and implement strategies and projects that create fire adapted communities and landscapes by improving ecosystem health, community wildfire preparedness, and fire resilience. The RFFC program provides block grants to regional entities and to eligible coordinating organizations to support the statewide implementation of landscape health and resilience programs. The RFFC program is

critical to the development of regional fire resilience plans and the identification of priority projects (key actions 1.28 – 1.30) among its other contributions. Meeting the state's treatment goals depends upon the development of regional capacity to invest in high priority projects.

The Task Force has identified four regions – Sierra Nevada, Central Coast, North Coast, and Southern California. For each of the regions, a regional profile and regional resource kit will be developed to assist in treatment planning efforts. The Sierra Nevada and Southern California regional profiles and resource kits have been released and the other two regions should be released in 2023.

The regional approach to forest/wildland health and Southern California

Wildland fire is not synonymous with conifer forest fire in California. The different ecosystems of the state, among the most biodiverse places on earth, require varied approaches to be effectively managed for wildfire. The state's wildlands vary in species composition across the length and breadth of the state from conifer forest to chaparral and coastal sage scrub. While prescribed fire treatments may be appropriate in the conifer forest every decade, chaparral ecosystems evolved to burn every 20 – 40 years. More frequent wildfire in chaparral can result in type conversion and the spread of flammable invasive grasses. In view of this, a regional approach to reduce wildfire hazard that recognizes the state's diversity and is tailored for local conditions is appropriate.

In Southern California, climate change is expected to lead to more intense Santa Ana (offshore) wind events. These offshore winds can rapidly cause a fire ignition to grow into a large out-of-control wildland fire. The ecological diversity of Southern California means that land management and treatment strategies will vary, but the priority of reducing human-caused fire ignitions is paramount. Given the wind-driven fires, home hardening is an important tool, and the large population means that evacuation route coordination is a considerable challenge. In Southern California, ignition reduction, the development of fuel breaks and forest conservation, workforce development, and structure and infrastructure resilience are all key issues and priorities.

At the February 2023 Task Force meeting in Southern California, a multi-agency $70 million investment in Southern California to support regional landscape and community protection programs was announced. The US Forest Service announced a new Southern California Fireshed Risk Reduction Strategy covering four million acres given the need to help minimize the social, ecological and economic costs of wildfire in Southern California. One of the goals of this regional investment strategy is to ensure that those most familiar with the areas determine where the priority projects are and the treatments necessary to promote landscape health and wildfire resilience. According to

the Task Force, this funding supplements state and federal investments of more than $500 million in the last three years in Southern California.

Assessing progress

In assessing the state's progress towards meeting its wildfire and forest resilience goals, including the treatment of one million acres annually in partnership with the federal government by 2025, Committee members may wish to consider the following:

- **Process vs. outcome**. The Task Force has made considerable progress in organizing, facilitating collaboration, communication, incorporating research, and planning while seeking to help ensure that the one million acre annual treatment target is met in two years. Some key actions are completed, most are in-progress or ongoing. What is the appropriate measure of success? How is a more wildfire resilient state described or quantified?

- **Two years to 2025 and thereafter.** Substantial funding in the last few years has resulted in significant increases in fuels reduction treatments by CAL FIRE. While successful, CAL FIRE's treatments achieve only about 20% of the state's 500,000 acre annual treatment goal. If the budget outlook continues to worsen – what are sustainable sources of funding going forward to maintain or expand this effort if private landowners cannot effectively treat 400,000 acres annually without assistance? Are there appropriate tools being developed to assess where resources should be deployed among the state's regions as treatments progress over time?

- **Quality vs quantity.** Acres treated is an imperfect metric. The tools in development and the regional kits include various additional metrics, but it is unclear how these will be incorporated into the prioritization of treatments, or evaluated. How can Action Plan implementation ensure that the critically important, but difficult to treat, acres are prioritized? When will science-based metrics with appropriate supporting data be available for all of the state's regions to address this?

- **Data standardization and reporting.** CAL FIRE reports acres treated by effort, which apparently includes, in some instances, the same acre treated multiple times in a given year (i.e. if flammable grasses need to be mowed twice). CAL FIRE also includes in its acres treated, treatments that it has funded. How will data reported be standardized to ensure that multiple partners on a project do not each report all of the treated acres individually and to represent actual physical acres treated? Are all fuels reduction treatment efforts reported and tracked? Will this standardization be incorporated into the development of the Forest Data Hub?

- **Monitoring and evaluation.** Meeting the one million acre annual target means treating one percent of the state's lands annually, and is an ambitious – and necessary – goal to reduce the risk to the state from catastrophic high-intensity wildfire. Recognizing the state's diversity of ecosystems, it is imperative that ongoing assessments of these treatments be conducted to ensure their effectiveness and appropriateness. AB 203 (Budget Committee, Chapter 60, Statutes of 2022) builds upon earlier legislative efforts to ensure monitoring and evaluation of treatment projects are conducted and requires a systematic evaluation of the state's fuel reduction efforts. It is unclear how effectively this statutory requirement has been implemented.

- **Ember-resistant zones**. What is the status of the implementation of ember-resistant zones (0 – 5 feet of a building)? How will the state ensure residents are educated about the new zone?