California State Assembly

Informational Hearing Agenda

Assembly Budget Subcommittee No. 4
on Climate Crisis, Resources, Energy, and Transportation

Assemblymember Steve Bennett, Chair

Wednesday, April 23, 2025
9:30 A.M. – State Capitol, Room 447

Wildfire Prevention Oversight Hearing

I. Opening Remarks and Introductions

II. Panel 1: Understanding California's Diverse Landscapes and their Unique Wildfire Resilience Needs

- Rachel Ehlers, Deputy Legislative Analyst, Legislative Analyst's Office
- Ken Pimlott, former Director of CalFire
- Michael O'Connell, President & CEO, Irvine Ranch Conservancy

III. Panel 2: Community Preparedness, Home Hardening, and Defensible Space

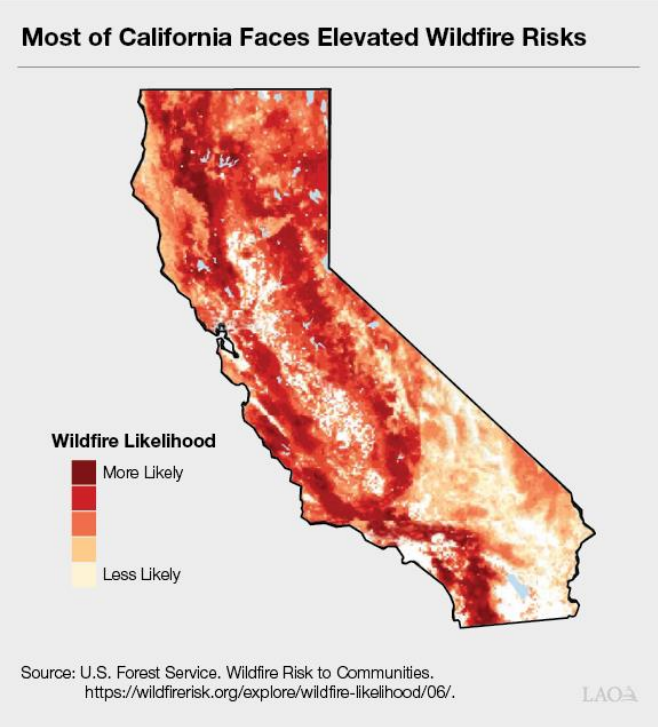
- Helen Kerstein, Principal Fiscal and Policy Analyst, Legislative Analyst's Office
- Daniel Berlant, State Fire Marshal, CalFire
- Robyn Fennig, Assistant Director of Hazard Mitigation, CalOES
- Dan Stapleton, Acting Executive Director, Board of Forestry and Fire Protection
- Yana Valachovic, Forest Advisor and County Director for Humboldt and Del Norte, UC ANR Fire Network- Community Resiliency and Built Environment
- Steve Hawks, Senior Director for Wildfire, Insurance Institute for Business and Home Safety

IV. Public Comment

Background

California's climate makes it naturally susceptible to wildfires. Some areas of the state face a particularly high risk of severe wildfires due to factors such as the type of vegetation present, the local weather patterns, and the topography. Many of the areas with the highest risk are where human development borders or intermingles with undeveloped wildlands (commonly referred to as the wildland-urban interface, or WUI). These spaces often contain smaller communities, but some more populated areas near wildlands also can be highly susceptible to wildfires, such as during high wind conditions.

The figure below displays wildfire likelihood across the state as estimated by the federal government. This reflects the estimated probability of a wildfire burning in any given year (based on fire behavior modeling across thousands of simulations of possible fire seasons). This research estimates that California has, on average, greater wildfire likelihood than any other state in the nation.[1]



Most of California's largest and most destructive wildfires have occurred in recent decades. Over the past 8 years, California has experienced 9 of the 10 largest, 5 of the 10 deadliest, and 8 of the 10 costliest wildfire years in its history.

While the state has experienced particularly large wildfires within the last several years as compared to over the past century, the number of acres burned in recent decades still is notably

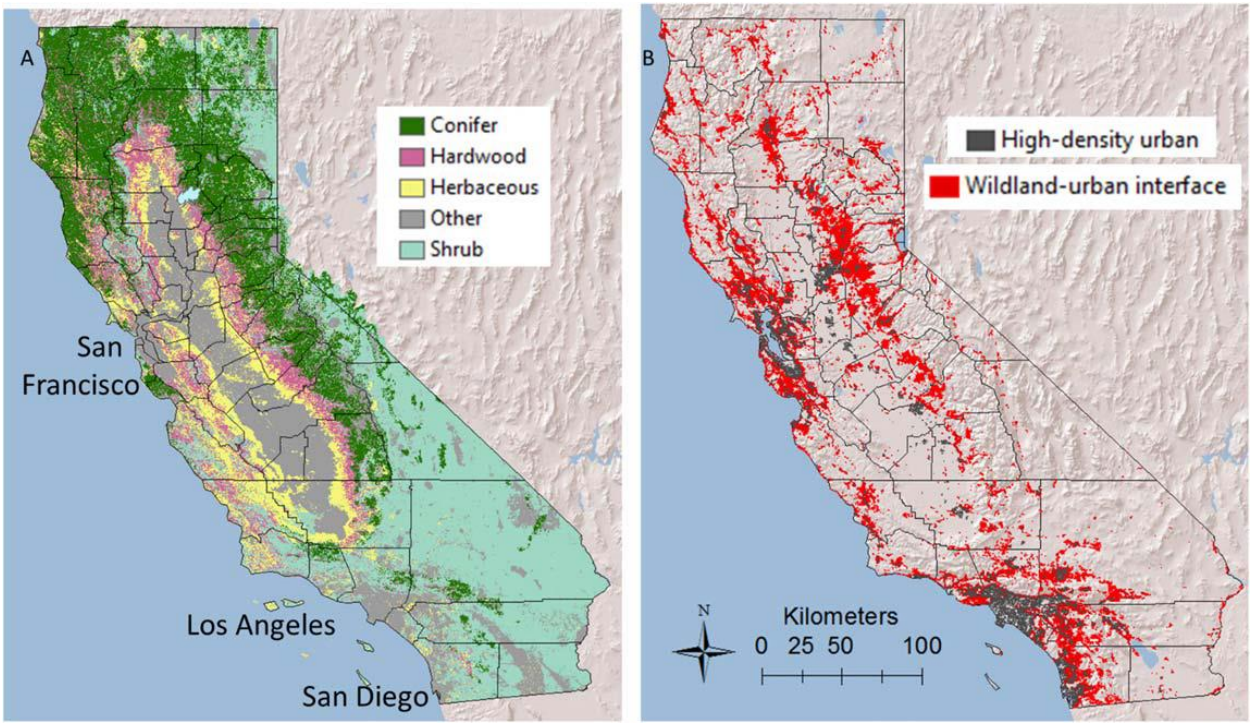
[1] Legislative Analyst's Office. (2025, January 28). *Frequently asked questions about wildfires in California.* https://www.lao.ca.gov/Publications/Report/4952

less than the historical average. Historically, significant parts of the state would burn annually, especially during the warm, dry months of the year. In the 1700s, for example, an estimated 4.5 million acres burned each year, on average. This is more than four times the average annual amount of acreage that has burned in recent decades, due in large part to the state's focus on suppressing wildfires.

Recent policy changes have embraced the fact that California cannot suppress its way out of wildfire. As a result, the state has adopted a range of policies and made significant investments in stewarding the land to make it more resilient to fire, and preparing communities to better adapt and respond to more severe fire conditions.

California's Diverse Landscapes

California contains a great variety of fire-influenced ecosystems including mixed conifer forests, oak woodlands, and shrublands. Fire regimes (how often fire occurs, at what time of year, and their size and intensity) differ enormously amongst these landscapes and understanding their differences is key to mitigating risk to communities and maintaining ecological integrity.[2]



The figure above shows maps of California depicting (a) the distribution of dominant vegetation types and (b) the wildland—urban interface in 2010. The 5 vegetation types listed combined the

[2] Fitch, R., D'Antonio, C., Williams, P., Moritz, M., Dewees, S., & Hall, A. (2025, February 4). *Expert perspective: Wildland fuels management would not have saved us from the January 2025 LA fires.* Sustainable LA Grand Challenge. https://sustainablela.ucla.edu/fuels-management-jan-2025

13 major land cover types developed by CalFire's Fire and Resource Assessment Program.[3] Below are brief descriptions of land cover types included in the graphic:

- **Conifer Forest**: Dominated by coniferous trees such as pines, firs, and spruces.
- **Hardwood Forest**: Composed primarily of broadleaf deciduous trees like oaks and maples.
- **Shrubland**: Areas dominated by woody shrubs, including chaparral and coastal scrub communities.
- **Herbaceous/ Grassland**: Open areas primarily covered with grasses and herbaceous plants.

Understanding how to best manage wildfires requires understanding where different management tools and prevention activities are most effective, given the unique characteristics of the landscape. This requires consideration of a host of factors such as vegetation type, and the prevalence of human populations and the built environment, among other considerations.

Shrublands and Chaparral:

Shrublands and grasslands, including chaparral, cover 32.8 million acres of California, while grasslands constitute 9.9 million acres. These native ecosystems provide a unique mosaic of habitats for locally adapted species, filtering water supply, limiting erosion and landslide potential, mitigating wildfire behavior, and sequestering carbon. While shrublands are dominated by woody plants like forests, grasslands are dominated by grasses and soft-stemmed broad-leafed plants such as forbs with less than 10% of the vegetative cover consisting of shrubs and trees.[4]

California's shrublands and grasslands have changed dramatically throughout history, from stewardship by Native Americans for medicine, food, and building resources to the colonial introduction of widespread livestock grazing and invasive grassland species that compete with and often entirely displace native fire resilient plants.

Evidence demonstrates that shrubland and grassland types in California are generally burning more frequently than they have historically due to non-native species encroachment consisting of flammable "flashy" fuels. These include Southern California and coastal chaparral.

Coupled with conversion of shrublands and grasslands due to urban sprawl and croplands, these ecosystems are becoming increasingly degraded, impairing their ability to prevent erosion and provide clean water, and resulting in increased emissions and reduced carbon storage. On top of historic and ongoing degradation of these ecosystems, the state's shrubland and grassland

[3] For this map, researchers used the 13 classification of vegetation types, including: coniferous forest, hardwood forest, woodland (created by combining hardwood and coniferous woodland), shrub, and herbaceous vegetation. For lower-flammability and only partially vegetated classes, including barren, urban, wetland, water, agriculture, and desert woodland and shrub, researchers grouped them into a separate 'other' class.

[4] California Natural Resources Agency. (n.d.). *Restoring and maintaining forest ecosystem health and wildfire resilience.* https://resources.ca.gov/Initiatives/Forest-Stewardship:contentReference[oaicite:0]{index=0}

systems are experiencing the stress of climate change, particularly climate-driven woody plant encroachment and shifts in annual precipitation.

Finally, many of California's dense, urban population centers border shrublands and chaparral in Southern California.

Forests:

Forests cover about one-third of the state's land area, containing over 4 billion live trees. (Land is considered forested if at least 10 percent of it is covered by tree canopy, or if it formerly had such tree cover and has not yet been formally developed for other uses.) While only a small percentage of the state's population lives in forested areas, forests affect the lives of residents across the state.

Most of State's Key Watersheds Are Located in Forestlands. In a typical year, the majority of California's total annual precipitation—in the form of rain and snow—falls in the mostly forested Sierra Nevada and southern Cascade mountain ranges.

The rivers and streams flowing from these key "source watersheds" provide the crucial surface water that a majority of Californians use for drinking and most of the state's agricultural sector uses for growing crops. Some estimates suggest that rain and snow that start in Sierra Nevada forests *contribute around 60 percent of the state's developed water supply* (water that is captured in reservoirs and distributed to users across the state).

Forested watersheds in other areas of the state are also key for local water supplies. For example, the San Bernardino and Cleveland National Forests receive 90 percent of the annual precipitation for the Santa Ana River watershed, from which runoff contributes to the water supplies for 6 million people in Orange, San Bernardino, and Riverside Counties.

By storing snow through the winter wet season then releasing it as melted runoff into streams and rivers through the spring and early summer, these forests provide a natural water infrastructure upon which the state has long depended. In a typical winter, mountain snowpack is a "natural reservoir" that ultimately provides one-third of the water supplies the state's cities and farms will use throughout the rest of the year. Forests—including the mountain meadows located within forestlands—also protect water quality by reducing erosion of sediments into streams and by filtering out pollutants from runoff.[5]

Forests as Carbon Sinks. California's nearly 33 million acres of forests represent the state's largest land-based carbon pool, drawing carbon from the atmosphere and storing it in wood and in forest soils. By storing carbon, the state's forests are an important asset in helping the state combat climate change. According to the state's Forest Carbon Plan, "forested lands in the state are the largest land-based carbon sink, but recent trends and long-term evidence suggest that

[5] Legislative Analyst's Office. (2018, April 4). *Improving California's forest and watershed management.* https://lao.ca.gov/Publications/Report/3798:contentReference[oaicite:0]{index=0}

these lands will become a source of overall net greenhouse gas (GHG) emissions if actions are not taken to protect these lands and enhance their potential to sequester carbon."[6]

Unfortunately, California forests have become a source of carbon emissions due to increasing climate change-induced disturbances, including rising temperatures, extended droughts, and extensive and severe wildfire. Since 2020, over 7 million acres of California's lands have burned, with more of these fires being extremely destructive to communities and ecosystems than California has seen historically.

Wildfire Prevention Activities Across Landscape Types

Extreme environmental variability induced by a changing climate and the associated wildfire crises have been compounding for centuries. Starting with the elimination of tribal forest management including cultural fire and exacerbated by the onset of gold-rush era clear cutting and a legacy of fire exclusion policies across the Western United States, large portions of California's forested ecosystems have been structurally and functionally altered.

Notably, the removal of the natural role wildfire historically played in managing ecosystems has contributed to the problems the state faces today with dense fuel loads in certain parts of the state. Towns, cities, and infrastructure now located alongside or within overly dense forest stands are now more vulnerable to catastrophic wildfire events. Further, these communities and infrastructure can present a danger to wildlands caused by human-ignited wildfire.

Across forest, shrubland, and grassland ecosystems, a blend of management approaches are needed, including:

- Across broad landscapes, restoring watersheds through forest health and resilience treatments such as prescribed fire and reducing forest stand densities in strategic locations.
- Within communities such as defensible space; and
- Around communities such as strategic fuel breaks;

As the state responds to historical reliance on suppression as the primary tool for wildfire risk reduction, the state has embraced in recent decades the importance of 'beneficial fire', including a mixture of severity levels, in the maintenance and restoration of many California ecosystems. This practice, commonly referred to as 'managed fire for resource benefit' (alternative names include 'prescribed natural fire' or 'wildland fire use'), has proven effective in reducing fuels, increasing forest resilience, and minimizing the severity of subsequent wildfires.[7]

However, during extreme wildfire conditions (e.g., dry fuels, high wind events), it is critical to pair vegetation management with home and infrastructure hardening to help ensure the built environment and the public have a fighting chance. When utilized in conjunction with wildfire

[6] Forest Climate Action Team. (2018, May). *California Forest Carbon Plan: Managing our forest landscapes in a changing climate. California Natural Resources Agency.* https://resources.ca.gov/wp-content/uploads/2018/05/Forest-Carbon-Plan-One-Pager-May-2018.pdf:contentReference[oaicite:0]{index=0}

[7] Meyer, M. D. (2015). *Forest fire severity patterns of resource objective wildfires in the southern Sierra Nevada.* Journal of Forestry, 113(1), 49–56. https://doi.org/10.5849/jof.14-084

suppression activities, home hardening and strategically placed fuel breaks, such as those maintained through prescribed herbivory, can help defend threatened communities and natural and cultural resources.

It is important to note that while techniques adopted for the management of forests, such as thinning or fuel breaks in strategic locations help mitigate aspects of a wildfire, intensive and extensive vegetation management in shrublands and grasslands may not confer the same degree of ecosystem benefits or wildfire risk reduction.

As shrublands (including chaparral) and grasslands are experiencing high levels of human-caused ignitions and vegetation loss from urban and suburban development, frequent fire and gradual native vegetation loss are on the rise. This is leading to more catastrophic wildfire outcomes and impairing the ecosystems from rebounding and continuing to provide critical water quality, erosion control, wildfire habitat, carbon sequestration, and similar services.

For example, in the Angeles National Forest (where the Eaton Fire started), 69% of all ignitions occur within 500 feet from a roadway. In these roadside environments, ignitions are most common in non-native annual grass vegetation. Since 2000, 88% of the wildland area burned where structures were destroyed was in non-coniferous vegetation types.[8]

Therefore, in addition to landscape stewardship, the state must also promote community preparedness as a key component of wildfire prevention activities. The next section will discuss two components of community preparedness– defensible space and home hardening.

Defensible Space and Home Hardening

This information is primarily excerpted for the LAO's publication Promoting Defensible Space in California.

Defensible Space Plays Important Role in Reducing Home Ignitability. Researchers generally agree that it is important for homeowners to maintain an area free of excess or dead vegetation around their homes, known as defensible space. When defensible space is maintained, there is less flammable material near homes that can ignite and spread to the homes themselves. Existing research not only indicates that defensible space can play an important role in reducing home ignition and loss, it also suggests that the area closest to the home is likely the most important to preventing home ignitability.

State and Local Requirements for Maintenance of Defensible Space. Given the broader public interest in defensible space, state and local governments impose various requirements on homeowners to create and maintain defensible space. Current state law requires the Board of Forestry and Fire Protection (Board) to establish defensible space requirements for structures in the State Responsibility Area (SRA) and Very High Fire Hazard Severity Zones in the Local Responsibility Areas (LRAs) in California. (There are estimated to be about 768,000 structures

[8] Fitch, R., D'Antonio, C., Williams, P., Moritz, M., Dewees, S., & Hall, A. (2025, February 4). *Expert perspective: Wildland fuels management would not have saved us from the January 2025 LA fires.* Sustainable LA Grand Challenge. https://sustainablela.ucla.edu/fuels-management-jan-2025

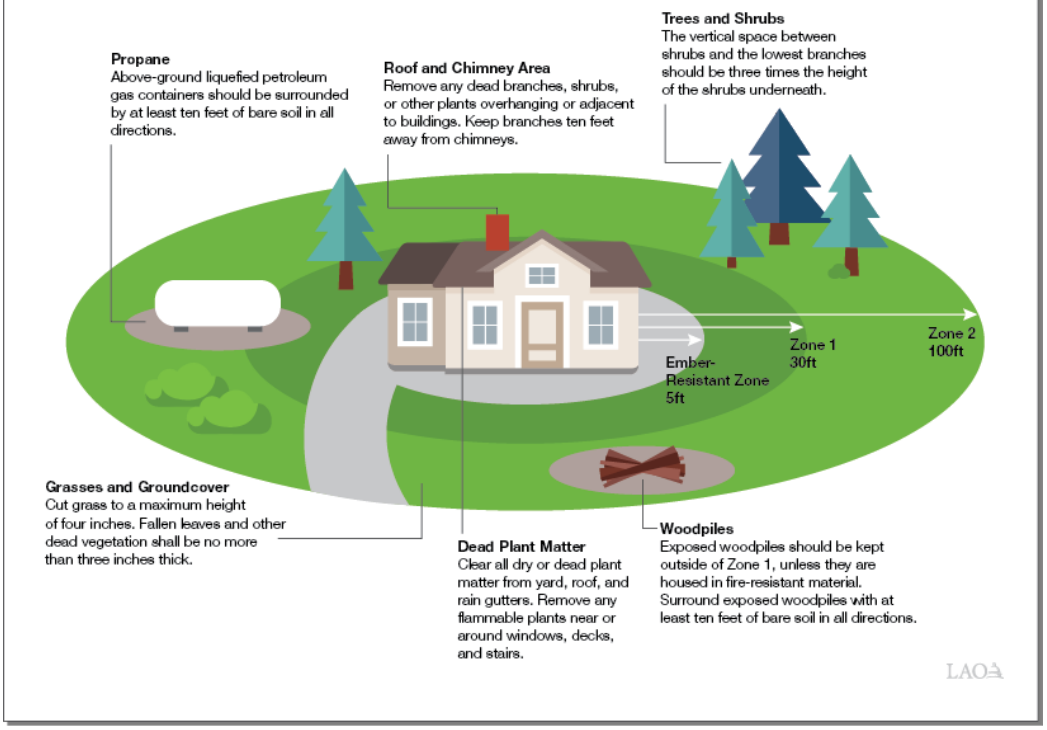
in the SRA and roughly 700,000 structures in Very High Fire Hazard Severity Zones in the LRAs.)

Under the existing regulations set by the Board, homeowners in these areas must meet specific requirements on their properties within two zones (and by the end of the calendar year, three zones): (1) certain requirements within 100 feet of structures and (2) additional, more stringent requirements within 30 feet of structures. These regulations include requirements related to maintenance of live vegetation (trees, shrubs, and grasses), clearance of dead vegetation, and the location and storage of wood piles and other flammable items near the structures.

Figure 6

Homeowner Requirements in Defensible Space Zones

Under State Law



In recognition that the area immediately surrounding a home is likely the most important for protecting a home from igniting during a wildfire, the Legislature passed Chapter 259 of 2020 (AB 3074, Friedman), which creates a third, "ember-resistant zone" within five feet of structures in SRAs and Very High Fire Hazard Severity Zones. The statute requires the Board to promulgate regulations to implement the requirement for an ember-resistant zone and to create a related guidance document.

On February 26, 2025, the Governor signed Executive Order N-18-25 reiterating the existing requirements in AB 3074 - requiring the creation of Zone 0 regulations. The order requires that the Board complete the regulatory process by no later than December 31, 2025.

Defensible Space Enforcement. Current law authorizes state and local fire agencies to issue citations for noncompliance. Local district attorneys and courts are responsible for enforcing

these penalties. Some local agencies have ordinances that include provisions for administrative fines, which are enforced by the local jurisdiction rather than the court. State and local agencies also have the legal authority to direct the cleanup of noncompliant properties and to assess the resulting abatement costs on the property owner.

Current State and Local Defensible Space Efforts. CalFire and local agencies administer a range of programs aimed at addressing the barriers homeowners face in creating and maintaining defensible space, as well as improving compliance with defensible space requirements.

Defensible Space Inspections. Inspections are the main type of activity state and local agencies undertake related to defensible space. During inspections, inspectors visit properties to assess their compliance with defensible space requirements. CalFire conducts general public outreach through different media outlets and provides printed information to homeowners upon inspection. CalFire also reports that the main purpose of its inspection program is to educate the public.

Many local agencies report that their defensible space programs include public education through participation at community events and/or the provision of brochures or other written information to homeowners, often during inspections. Some local agencies also use inspections as an opportunity to educate homeowners about defensible space. Additionally, the state is home to over 100 local fire safe councils, which typically focus on educating their local communities about wildfire. These community-based groups serve many, but not all, parts of the state.

California Wildfire Mitigation Grant Program (Home Hardening) The California Wildfire Mitigation Program (CWMP) was created as part of the State of California's effort to strengthen community-wide resilience against wildfires. The California Governor's Office of Emergency Services (Cal OES) has partnered with the California Department of Forestry and Fire Protection (CAL FIRE) to develop a comprehensive wildfire mitigation program that focuses on cost-effective structure hardening and retrofitting to create fire-resistant homes as well as defensible space and vegetation management activities.

The primary goal of the CWMP is to offer financial assistance to vulnerable populations in wildfire prone areas throughout California. Governor Gavin Newsom signed Assembly Bill 38 in 2019 authorizing Cal OES and CAL FIRE to enter into a joint exercise of powers agreement (JPA) to oversee the development and implementation of the Program in accordance with the California Wildfire Mitigation Program's business plan.

For detailed information about the program's implementation status of CWMP, please refer to the California Wildfire Mitigation Program Authority March 2025 Status Report, which is included as a separate attachment for this hearing.

Funding:

The state has significantly augmented funding for wildfire resilience-related activities across a variety of departments in recent years through two main actions. First, the Legislature passed statutes—Chapter 626 of 2018 (SB 901, Dodd) and Chapter 155 of 2021 (SB 155, Committee on Budget and Fiscal Review)—that dedicated $200 million annually from 2019-20 through 2028-29 from the Greenhouse Gas Reduction Fund to support forest health and fire prevention activities.

Second, the Legislature approved three major wildfire and forest resilience budget packages in 2021 and 2022, which together pledged a significant amount of one-time funding for wildfire resilience to the California Department of Forestry and Fire Protection (CalFire) and a variety of other state departments. Together, these commitments total $3.6 billion across over the nine-year period from 2020-21 through 2028-29—$2.6 billion through the wildfire resilience budget packages along with an additional $1 billion outside of those packages. (These totals incorporate a modest reduction of roughly $200 million compared to initial plans for the wildfire resilience budget packages due to a decline in the state's fiscal condition.)

The figure below summarizes these funding commitments. As of the 2024-25 fiscal year, the state has already appropriated $2.7 billion, with an additional cumulative $900 million planned to be provided in forthcoming annual state budgets through 2028-29. (The figure displays major state augmentations for wildfire resilience and prevention over the past several years, but it is not comprehensive of all spending and may omit some smaller items.)

Summary of Recent State Wildfire and Forest Resilience Funding[a]

2020-21 Through 2028-29 (In Millions)

Program	Department	Multiyear Total[b]
Resilient Forests and Landscapes		**$2,073**
TBD forest health and fire prevention activities	TBD	$1,000[c]
Forest Health Program	CalFire	552
Stewardship of state-owned land	Various	246
Post-fire reforestation	CalFire	100
Forest Improvement Program	CalFire	75
Forest Legacy Program	CalFire	45
Tribal engagement	CalFire	40
Reforestration nursery	CalFire	15
Wildfire Fuel Breaks		**$761**
Fire prevention grants	CalFire	$475
Prescribed fire and hand crews	CalFire	129
CalFire unit fire prevention projects	CalFire	90
Forestry Corps and residential centers	CCC	67

Regional Capacity		**$500**
Conservancy projects	Various Conservancies	$350
Regional Forest and Fire Capacity Program	DOC	150
Forest Sector Economic Stimulus		**$102**
Workforce training grants	CalFire	$53
Climate Catalyst Fund Program	IBank	27
Transportation grants for woody material	CalFire	10
Market development	OPR	7
Biomass to hydrogen/biofuels pilot	DOC	5
Science-Based Management and Other		**$114**
Monitoring and research	CalFire	$38
Remote sensing	CNRA	30
Prescribed fire liability pilot	CalFire	20
Permit efficiencies	CARB & SWRCB	12
State demonstration forests	CalFire	10
Interagency Forest Data Hub	CalFire	4
Community Hardening		**$74**
Home hardening	OES & CalFire	$38
Defensible space inspectors	CalFire	20
Land use planning and public education	CalFire & UC ANR	16
Total		**$3,623**

[a]As of the 2024-25 Budget Act.

[b]Includes $2.6 billion approved through discrete wilfire and forest resilience budget packages in 2021 and 2022, as well as $200 million annually from 2024-25 through 2028-29 authorized by Chapter 155 of 2021 (SB 155, Committee on Budget and Fiscal Review).

[c]Specific activities and departments TBD in future years.

TBD = to be determined; CalFire = California Department of Forestry and Fire Protection; CCC = California Conservation Corps; DOC = Department of Conservation; IBank = California Infrastructure and Economic Development Bank; OPR = Governor's Office of Planning and Research; CNRA = California Natural Resources Agency; CARB = California Air Resources Board; SWRCB = State Water Resources Control Board; OES = Governor's Office of Emergency Services; and UC ANR = University of California Agriculture and Natural Resources.

Staff Comments

The Subcommittee members may wish to ask the following questions:

1. What are the challenges the State faces when it comes to data collection and finding effective metrics that translate to desired outcomes? For example, what are the benefits

and limitations of measuring acres treated as a metric for project outcomes? What other metrics are effective in evaluating whether our wildfire prevention efforts are achieving their desired outcome?

2. To what extent is the State investing in monitoring projects once they are completed? How does CalFire's Fuels Treatment Effectiveness Reports contribute to our understanding of fire behavior on land treated and stewarded before and after fires?

3. The State needs to invest in fire suppression and fire prevention, and at times, it can look like these important efforts are fighting for the same dollars. How does the Legislature ensure adequate investment in both fire prevention and fire suppression?

4. Similar to question 3, there is also at times a perceived competition between focusing prevention efforts around densely populated areas and more rural areas of the state. Why must the state invest in both of these areas for our long-term sustainability and vitality?

5. What are the unique needs of the landscapes that panelists have worked on to make those landscapes more fire resilient? How do our existing investments and grant programs complement or hinder work on that particular landscape?

6. In what ways do you think the State has improved in being more strategic in prioritizing project placement and ensuring projects are working together to increase fire resilience? How can we improve? How are projects feeding into a larger plan? How are they complementing each other?

7. What does the Legislature need to better understand about wildfire prevention overall?

For Panel 2:

8. What role do local governments need to play in creating better community preparedness against wildfires? What localities should the State look to as examples of where this work is already happening? How can the State improve its relationship with local governments to ensure we are working on defensible space and home hardening together versus in a fragmented and duplicative way?

9. What are the enforcement challenges for implementing defensible space?

10. How can the State of California support and incentivize a widespread behavior shift among homeowners to adopt home hardening and defensible space practices, given that these wildfire prevention measures are often an individual's responsibility?

11. What is the plan for prioritizing interventions in the Local Responsibility Area, given that needs vary widely, from home hardening in some places to improving evacuation routes in others?

12. What is the average cost per structure in for the California Wildfire Mitigation Grant program (including federal and state funds)? How does the cost per structure vary based on whether federal funding is used as a match? Based on the characteristics of the community? Other factors?

13. Does the administration expect to use federal matching funds to help support projects? Why/why not? What are the advantages/disadvantages of using federal funds as a match? How much in new HMGP or other federal funding do you anticipate would be available to California to support activities such as home hardening?

14. What lessons learned have been gathered thus far from implementing the California Wildfire Mitigation Grant program?

15. Are there steps that could be taken to make this program more scalable? Any opportunities to reduce the cost per structure?

16. What would be the advantages/disadvantages of requiring a cost share or providing funding as a loan rather than grant?

17. Are there steps that could be taken to increase the speed of getting projects completed?

18. What do you see are the options moving forward on the State's approach and involvement in home hardening, given that the State cannot foot the bill for hardening every home that needs retrofits in California?

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