PREVENTING AND MITIGATING CATASTROPHIC WILDFIRES

PLATFORM RECOMMENDATIONS AT-A-GLANCE

- Invest in Coordinators and Workforce to Unlock Private Sector and Community Efforts
- Support Data Analysis and Planning at the Site-Specific, Regional, and Statewide Levels
- Improve Regulatory Efficiency for Prescribed Fire and Grazing
- Increase Liability Insurance Options for Prescribed Burners and Prescribed Graziers
- Lengthen Grazing Leases and Cost-Share Infrastructure to Lower Cost of Prescribed Grazing

A CLIMATE PLATFORM FOR CALIFORNIA AGRICULTURE

This is one in a series of CalCAN policy briefs that describe approaches to moving California agriculture boldly and quickly toward a carbon-neutral and climate-resilient future. Together, they make up *A Climate Platform for California Agriculture.*

Access the full report at: calclimateag.org/ca-agriculture-climate-platform

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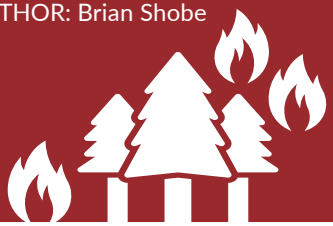

CalCAN
CALIFORNIA CLIMATE & AGRICULTURE NETWORK

INTRODUCTION

Between 2017 and 2022, catastrophic wildfires in California have killed 195 people, destroyed 51,274 structures, burned over 11 million acres, and cost billions of dollars.[117,118] These same wildfires have also become an increasingly significant source of GHG emissions in the state, fueling a vicious cycle in which catastrophic wildfires accelerate climate change which in turn contributes to more severe wildfire conditions (e.g., drought, extreme heat, etc.).[119] In 2020, wildfires were the second largest source of GHG emissions in the state.[120]

Farmers and ranchers have been on the front lines of these impacts in terms of evacuations, smoke, and lost property, livestock, crops, income, and insurance. For example, one industry analyst estimated the 2020 wildfires alone cost the California winegrape industry $3.7 billion in lost property, inventory, grapes, and the wine those grapes would have produced.[121]

Farmers and ranchers, who manage approximately 25 million acres of private land (one-quarter of the state's land mass) and millions of acres of public lands through grazing leases are well-positioned to scale up many of the solutions now recognized as critically important, including prescribed fire and prescribed grazing. They are motivated, have intimate knowledge of the land, and in some cases already have the equipment needed to help the state scale up fuel treatments.

2017 - 2022 Wildfires

195
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11 million
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[117] CalFire incidents archive.
[118] California Council on Science and Technology. (2020). The costs of wildfire in California.
[119] California Air Resources Board. Wildfires and climate change.
[120] Jerrett, M., et al. (2022). Up in smoke: California's greenhouse gas reductions could be wiped out by 2020 wildfires. *Environmental Pollution, 310.*
[121] Nelson, D. (2021, April 12). Exploring smoke taint on the fly.*UC Davis College of Agricultural and Environmental Sciences.*

FINDINGS

Catastrophic Wildfires Catalyzed Overdue Cultural Shifts

When asked what the most impactful development in wildfire mitigation has been in the past decade, almost every expert we interviewed responded by talking about cultural shifts. They pointed to the growing awareness of fire as an integral force in many of California's ecosystems and of indigenous Californians' extensive use of cultural burning for food and fiber production (e.g., to promote grassland grains, manage acorn pests, and stimulate new shoot growth for basketry materials). The experts also highlighted the growing recognition of the benefits of grazing animals for managing invasive weeds and fine fuels (e.g., grasses and weeds that ignite easily and spread fire quickly) and ladder fuels (e.g., shrubs and small, low-hanging tree limbs that carry fire from the ground level into brush and tree canopies). They saw these shifts as an exciting opportunity to build new partnerships to support ecological management practices that cultural fire practitioners, some on-the-ground conservation groups, and California farmers and ranchers have long advocated for.

As two interviewees noted, for much of the 20th century, public agencies and conservation groups had been converting lands previously managed with fire and/or grazing into open spaces or wilderness areas with little to no vegetation management. The subsequent lack of management on these lands allowed the encroachment of shrubs and accumulation of thatch in grasslands, the dense overgrowth of forests, and the prolific invasion of weeds like brooms and thistles—all conditions fueling our catastrophic wildfire problem now. The silver lining of recent catastrophic fires, according to one expert, is that many public agencies and the broader public have woken up to this problem and are now working to return beneficial fire and grazing to the lands they manage.

Photo Credit: iStock

Farmers and Ranchers Provide Valuable Firefighting and Wildfire Prevention Services

Firefighters often tell us they see farms and ranches—and grazed lands in particular—as wildfire buffers and areas where they can safely mount their defense against a wildfire, but this is rarely acknowledged in public discussions on wildfire prevention and firefighting. An ongoing study led by UC Davis underscores the critical role farmers and ranchers play in aiding wildfire response personnel.[122] Seventy-one percent of the study's 519 farmer and rancher respondents contributed to emergency response efforts. This included providing local knowledge to firefighters about local fire behavior or access routes, supplying water for firefighting, creating fire breaks, assisting neighbors in defending homes, and aiding in evacuating people and others' livestock.

In discussions about controlled burns, it is a positive, albeit long overdue development, that indigenous peoples of California are now regularly recognized for their long history of cultural burning. Two of the experts we interviewed noted that what is often overlooked in these discussions is that California ranchers also historically used controlled burns in California, in part inspired by what they observed about indigenous

[122] Jimenez, N. P., et al. (2023), *The wildfires and agriculture study.* Manuscript in preparation.

management. Ranchers even used to form range improvement associations—what would today be called prescribed burn associations—to support each other in larger-scale prescribed burns. But this practice largely stopped in the second half of the 20th century due to increasing regulations.[123] This shared cultural history between California Tribes and ranchers of using fire to restore ecosystems for food and fiber production, including better forage for both domesticated and wild ungulates (hooved herbivorous mammals such as sheep, goats, cattle, deer, elk, and bison), offers an opportunity to build a powerful political alliance to enact the policies needed to scale up good fire.

Firefighters have long described grazing as an effective tool for slowing or stopping the spread of wildfires and providing the fuel conditions firefighters need to safely and effectively fight fires. Recent field trials examining the impact of grazing on wildfire behavior backs up firefighters' observations, finding that grazing effectively reduces flame length and spread in many conditions.[124] Cattle grazing alone removed an estimated 11.6 billion pounds of non-woody plant materials (i.e., wildfire fuels) in California in 2017, and at no cost to the state.[125] If that grazing were to be removed, tens of millions of acres would need to be treated with other means. For that reason, a couple of the experts we interviewed noted they would like to see the cultural shifts described above go a step further by more explicitly valuing ranchers for the ecosystem and wildfire prevention services they and their animals provide. One expert, noting that targeted sheep and goat grazing operations are now regularly paid for their fuel abatement services, suggested it may be time to reevaluate the prices that cattle ranchers pay to public land managers as tenants to graze.

Progress of a wildfire stopped at the boundary of Brisa Ranch in Pescadero, CA.

Scaling Solutions Requires People and Planning

To get to the scale of vegetation management needed in the state, we will need a lot more people engaged in the work. While one-time grants for discrete vegetation management projects are helpful, funding to develop the capacity of *people* and *communities* is what the experts we interviewed said would result in long-term, sustainable fuels reduction work and healthy fire ecosystems.

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[123] Biswell, H., (1999). Prescribed burning in California wildlands vegetation management. University of California Press.
[124] Foss and Shapero, in process
[125] Ratcliff, F., et al. (2022). Cattle grazing reduces fuel and leads to more manageable fire behavior. *California Agriculture*, *76*(2).

To tap into state and federal funding for vegetation management and associated equipment and infrastructure, private landowners are often required to have site-specific forest management or grazing management plans developed by a registered professional forester or certified rangeland manager. The up-front cost of developing these technical plans is often a significant barrier but they are important to ensure state and federal agencies and taxpayers that their investments will result in science-based ecological management.

Of course, preventing catastrophic wildfires will require more than just a patchwork of private landowners doing their part. Local and regional governments such as cities, counties, special districts, and joint powers authorities need to map, plan, prioritize, permit, and do the necessary public outreach to implement strategic landscape-level fuels management initiatives where they will have the greatest impact on reducing wildfire risk in a region. At the state level, agencies that regulate or fund wildfire risk reduction activities must continue to coordinate to ensure their actions are complementary to each other.

Regulatory Inefficiency Is a Drag on Prescribed Burns and Grazing

The California Environmental Quality Act (CEQA) applies to every state-funded fuels treatment project, meaning that every prescribed fire and prescribed grazing project that receives state funding must evaluate, disclose, address, and mitigate when feasible any anticipated environmental impacts of the project. Completing the CEQA process, which often includes hiring a consultant, conducting biological site evaluations, and producing a ream of documentation, often delays prescribed fire and grazing projects by 6 to 12 months and costs between $60,000–80,000 per project, according to the experts we interviewed. One interviewee noted that ranchers have consistently declined to host prescribed burn trainings on their properties because they do not want to be involved in the CEQA process. For these reasons, the experts we interviewed cited CEQA costs and requirements as a major barrier to scaling up state-funded prescribed fire and grazing projects.

Jeffery Stackhouse, Humboldt County UCCE advisor, participates in a controlled burn on a ranch in Humboldt County.

Some of these experts noted that the California Vegetation Treatment Program (CalVTP),[126] a Programmatic Environmental Impact Report (PEIR), offers some hope of progress in improving the CEQA process for qualifying projects. However, they also noted that there are still gaps in the PEIR and limited examples or guidance to learn from, especially for prescribed grazing projects. For example, the CalVTP PEIR only applies to prescribed grazing on slopes less than 50 percent, so one grazing project had to pay for an environmental consultant to develop a document specifically to address slopes greater than 50 percent, adding significant costs and delays to the process.

[126] California Vegetation Treatment Program

Farmers and Ranches Need Affordable Liability and Commercial/Residential Fire Insurance

Liability insurance for both prescribed burns and prescribed grazing businesses came up as a challenge in our interviews. For prescribed burns, the challenge is that there are currently no commercially available liability insurance options. One positive development is the $20 million prescribed fire liability claims fund pilot created by SB 926 (Dodd) and launched in June 2023.[127] However, this pilot program is currently limited to coverage of $2 million for a maximum of 200 projects at a time and is set to expire in 2028. As such, there is still a long-term need for commercially available insurance for burn bosses[128] or their businesses.

Some prescribed sheep and goat grazing businesses face a different challenge, which is that their liability insurance rates have dramatically increased because their insurer has decided to classify them as "landscaping" businesses instead of as agricultural livestock management businesses. These business owners say they have only found one insurer in California willing to cover them, so they have been forced to accept the higher rates despite the apparent misclassification.

Lastly, many farmers and ranchers in our network have had their residential and/or commercial fire insurance policies dropped, which puts them in severe financial risk and can result in them being denied a mortgage or loan. The state's FAIR plan (Fair Access to Insurance Requirements)[129] has worked as a last resort for some of these farmers and ranchers, but others have been unable to participate due to a $20 million cap on commercial property coverage.

Infrastructure and Longer-Term Grazing Leases Can Lower the Cost of Prescribed Grazing

The availability and condition of infrastructure such as perimeter fencing, corrals, and livestock watering systems are often significant factors in determining what type of animal can be used for grazing, at what scale, and at what cost. Generally speaking, maintained perimeter fencing, functioning corrals, and livestock watering systems lower the cost of grazing by any type of livestock. This infrastructure also makes it easier to utilize cattle, which can graze larger areas at a lower cost than sheep and goats. Where such infrastructure has been removed, deteriorated, or destroyed due to wildfires, temporary mobile fencing and mobile watering systems must be used, which result in higher labor costs and present other challenges for livestock managers such as animals escaping and trucking in water.

In interviews with grazing experts, the lack of permanent infrastructure, cost-sharing funding available for permanent infrastructure investments, and long-term contracts/leases in California, especially on public lands, came up repeatedly as significant barriers to reintroducing prescribed grazing and sustaining that grazing long term.

Moreover, on lands where grazing and controlled burning were removed, shrub encroachment and the accumulation of brush over multiple decades mean that returning those practices to those lands sometimes requires more up-front work to clear brush.

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[127] CalFire Prescribed Fire program

[128] Burn bosses are individuals who are certified to plan, organize, and execute prescribed fires. California has a state certification program for prescribed fire burn bosses.

[129] The FAIR Plan is available to California residents and businesses in urban and rural areas who cannot obtain insurance through a regular insurance company.

RECOMMENDATIONS

Invest in Coordinators and Workforce to Unlock Private Sector and Community Efforts

Fuels management, especially for fine fuels, is an annual requirement, which means it requires sustained community effort. We recommend the state prioritize more funding for 1) coordinators for groups like prescribed burn associations and fire safe councils, whose work mobilizes broader communities to engage in short- and long-term fuel reduction on mostly private lands and 2) trainings and workforce development for burn bosses, mastication/thinning crews, and herders, which are in short supply, limiting the ability of private sector businesses to meet growing demand. Multiple interviewees highlighted the work of the Watershed Research and Training Center as a model for building the capacity of local organizations.[130]

Support Data Analysis and Planning at the Site-Specific, Regional, and Statewide Levels

For site-specific planning, the state should consider providing additional cost-sharing assistance through programs like the California Department of Food and Agriculture's (CDFA) recently established Conservation Planning Grant Program.[131]

For regional planning, the state should continue to invest in the Regional Forest and Fire Capacity Program[132] to help more communities conduct vegetation data analysis and develop and implement Regional Wildfire Mitigation Plans as Santa Barbara County has done.[133] Santa Barbara County's regional planning efforts resulted in the largest prescribed grazing project in the county to date.[134]

For statewide planning, the State Wildfire and Forest Resilience Task Force has been an effective forum for multi-agency strategic planning and coordination, which has made significant progress in advancing policies, partnerships, and investments to scale up forest thinning, fuel breaks, and prescribed fire on state and federal lands.[135] However, the value and role of grazing—the state's largest and most scalable fuel management technique—has been mostly overlooked by the Task Force. For example, the Task Force's "Wildfire and Forest Resilience Action Plan" does not identify any goals or actions specific to prescribed grazing.[136] The next update to that action plan, due January 1, 2026, should rectify that oversight.

Improve Regulatory Efficiency for Prescribed Fire and Grazing

The state should continue efforts to help applicants to state-funded wildfire prevention grants comply with CEQA requirements through training, guidance, improvements to CalVTP, and examples of streamlined and successful CEQA processes. With some additional effort on behalf of CalFIRE, documents addressing gaps in CalVTP's PEIR (e.g., grazing on slopes greater than 50 percent) could be turned into a standard project requirement and folded into CalVTP, which would prevent another project from having to repeat the same process in the future.

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[130] Watershed Research and Training Center

[131] Conservation Planning Grant Program

[132] Regional Forest and Fire Capacity Program

[133] Learn more about the Santa Barbara Regional Wildfire Mitigation Program at https://rwmpsantabarbara.org/.

[134] For more information on regional wildfire mitigation approaches, see Moritz, M. A., et al. (2022) Beyond a focus on fuel reduction in the WUI: The need for regional wildfire mitigation to address multiple risks. *Front. For. Glob. Change, 5*.

[135] State Wildfire and Forest Resilience Task Force

[136] State Wildfire and Forest Resilience Task Force (2021). California wildfire and forest resilience action plan.

Increase Liability Insurance Options for Prescribed Burners and Prescribed Graziers

Building on the success of the prescribed fire claims fund and the data that will emerge from its implementation, the insurance commissioner and legislature should explore options to encourage insurers in California to offer commercial prescribed fire insurance. The insurance commissioner's office should also explore options to correct the misclassification of prescribed grazing businesses as landscaping businesses and encourage more than one insurance provider in the state to offer liability insurance to those businesses.

Lengthen Grazing Leases and Cost-Share Infrastructure to Lower Cost of Prescribed Grazing

In order for livestock managers to agree to invest their own capital in rebuilding permanent infrastructure, they often require cost-sharing support and a long-term grazing contract or lease of at least five years or more. To facilitate these conditions, the state should offer cost-sharing assistance for permanent grazing infrastructure (e.g., via the Wildfire Prevention Grants Program), and state land management agencies (e.g., California Department of Fish and Wildlife, California State Parks, etc.) should offer longer grazing leases or contracts.