



# RESEARCH BRIEF

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## Prescribed Burns for Improved Wildfire Management in California

*Prescribed burns are an effective tool for mitigating the risk of catastrophic wildfires, but multiple barriers to implementation need to be addressed if it's to reach its full potential as a management practice in California.*

Although great strides to increase prevention measures were made following the recent catastrophic wildfire seasons in California, more collaborations between legislators and experts are essential for the development and implementation of new prescribed-burn policies to arise.

### Background

Extensive evidence supports the conclusion that prescribed burns and other fuel reduction treatments can be an effective way to keep forests healthy and productive. By preemptively burning highly combustible vegetation and machine thinning new growth in advance of fire season, practitioners were also able to reduce the threat to human populations resulting from devastating wildfire events. Yet, despite their effectiveness, prescribed burns are now considered to be an under-utilized resource in the wildfire prevention portfolio.

### POINTS FOR POLICY MAKERS

- ▶ **Sociopolitical barriers that prevent landowners from beginning and conducting the burn planning process must be addressed.** These include: risk-related barriers such as fear of liability and negative public perceptions; resource-related barriers like limited funding, crew availability and experience; and regulations-related barriers that encompass poor weather conditions for burning as well as other environmental regulations.
- ▶ **Current policies, practices and recommendations appear too conservative to allow the state to reach proposed fuel treatment goals, particularly on state and private land.** Recent proposals focus on reducing disincentives, for example, addressing liability concerns on state and private lands rather than incentivizing or enforcing fuel treatments across federal and non-federal lands.
- ▶ **Fundamental shifts in prescribed-burn policies, beyond those currently under consideration, are necessary to address wildfires in California and worldwide.** Recent policies have sought to address mainly risk-related challenges, although these and regulations-related challenges remain. Improvements that may incentivize burns could come by making changes to emissions calculations as well as standardizing air boards and burn records to achieve greater consistency.
- ▶ **Gaps between planning and implementation of prescribed burns should be recognized and bridged.** Measures that identify and remedy systemic barriers that result in the creation of this burn gap are required in order for implementation efforts to succeed. This might involve increased availability of resources such as trained firefighters; addressing burn limitations resulting from environmental regulations; and providing consistent funding that would allow for burns and auxiliary treatments like mechanical thinning to be employed.

To understand why prescribed burns are not more routinely incorporated into standard forest management practice throughout California, Stanford scholars evaluated existing barriers to as well as opportunities for greater deployment as a fire prevention method. Using an approach that included expert interviews and evaluation of prescribed burn data from the state, the researchers identified three primary categories of barriers that prevent landowners from beginning and conducting the burn planning process:

- **risk-related barriers** such as fear of liability and negative public perceptions;
- **resource-related barriers** like limited funding, crew availability and experience;
- **regulations-related barriers** which encompassed poor weather conditions for burning, as well as environmental regulations limiting it.

These barriers — risk, limited resources and regulations - combine to create gaps between planning and implementation. Other challenges to wider deployment include a complex system of different requirements for burns on private, state or federal lands. Conducting a prescribed burn anywhere in California requires a burn plan, state and local air board approval, good weather conditions and trained personnel unless it's conducted by private landowners. In addition, a gap exists between the acres planned for prescribed burning and the acres actually burned each year, which is attributed to a lack of financial and human resources as well as air quality regulations that often limit consecutive burn days.

Political will is currently high to take significant steps to mitigate wildfire in California, opening a window of opportunity for new policies that encourage better prevention measures. Funding has also been made available for public education efforts to promote the need for more intensive forest fuel treatments and interventions like prescribed burns, but these have largely been awareness campaigns.

## ABOUT THE AUTHORS



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This brief is based on the paper “**Barriers and enablers for prescribed burns for wildfire management in California**” published in *Nature Sustainability* (2020).

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