

# Wildfire and Prescribed Fire in California

## What You Need to Know



## A Growing Threat to Air Quality

California faces the **worst air quality** challenges in the United States. This includes high levels of particulate matter, or ‘soot,’ which can penetrate deep into the lungs and increase the risk of respiratory and heart disease, stroke, and even cause premature deaths.

Clean air policies over the last few decades have resulted in tremendous improvements in air quality. However, wildfires and other extreme weather events fueled by climate change are making the challenge of cleaning our air more difficult.




Particulate matter is one of the main components of wildfire smoke. The American Lung Association’s 2024 “State of the Air” report found a record number of people were exposed to unhealthy levels of short-term particle pollution between 2020 to 2022, with major wildfire impacts seen over that time. 7 of the 10 cities most impacted by spikes in daily particle pollution were in California during this time.

*Illustration:* PM10 particles are approx. 10 microns in diameter, while PM2.5 particles are even smaller at 2.5 microns. Both types of particles are much smaller than the width of a human hair, around 50-70 microns in diameter.

Cutting greenhouse gas pollution from factories, power plants, cars and trucks is crucial to improving air quality and protecting public health from the impacts of climate change. However, additional measures are needed to fully address the growing wildfire crisis. One such measure is expanded use of prescribed fire.





When implemented under the right conditions, prescribed fire can:

1. Reduce wildfire risk
2. Lower the harmful smoke impacts associated with catastrophic wildfire

## What is Prescribed Fire?

Prescribed fire (also sometimes called prescribed burning or controlled burning) is the careful burning of areas that are vulnerable to wildfire under safe, controlled conditions to reduce wildfire risk and lower the harmful smoke impacts when wildfires do occur. Prescribed fires prevent dangerous buildup that could escalate a wildfire into a catastrophic fire.

Fire experts, air quality and public health officials work together to safely implement prescribed fire and minimize harmful smoke exposure in accordance with local and national air quality standards. Planned, predictable conditions include favorable atmospheric conditions and wind patterns that will allow smoke to move away from sensitive areas (e.g., populated areas, hospitals, schools and roadways).

Research shows that lack of capacity and funding are some of the most significant barriers to implementing prescribed fire at the scale needed to mitigate wildfire risk and protect public health. Air quality standards and regulations, including the Clean Air Act, were not found to be a primary barrier to increasing use of prescribed fire.

Data from the [California Air Resources Board](#) highlights that during peak burn season, about 90% of all days are identified as “permissible or marginal burn days,” during which a prescribed fire could be conducted.

## Expanding Prescribed Fire and Protecting Public Health

Addressing the wildfire crisis and protecting public health go hand in hand. Efforts to expand use of prescribed fire should work within existing air quality protections that help keep our air clean and safe to breathe. Additional measures to reduce the public health impacts associated with wildfire and prescribed fire smoke exposure include:

- Air quality surveillance coupled with public outreach and public notification systems
- Indoor air filtration and clean air spaces
- Provision and use of respiratory protective equipment
- Additional emergency planning and response, including protections for vulnerable populations

The federal Wildland Fire Mitigation and Management Commission came to a consensus in its recommendations to Congress that there are “opportunities to work within the Clean Air Act and the associated regulatory systems and processes to accommodate both increased use of beneficial fire and protection of public health from smoke impacts.”

To learn more about the American Lung Association’s work on Prescribed Fires in California, visit [Lung.org](https://www.lung.org).