

# Wildland Fuels Management Methods – Prescribed Burns

## 1. What is a prescribed burn?

A low intensity planned fire conducted by trained and experienced crews and land managers completed within a specific weather and fuel condition window or “prescription” to achieve land management goals, such as clearing hazardous fuel, improving wildlife habitat, and/or restoring ecosystems. Prescribed fires are set under carefully monitored conditions matching a detailed plan, including factors of weather, fuel moisture, and wind speed.

## 2. What is the history and origins of prescribed burns?

Fire has been used as a tool since being harnessed by Neanderthals and early Homo sapiens. Prescribed fire or the use of fire as a tool to achieve desired environmental conditions has been used by Native American Tribes for millennia. As land was converted to private and governmental ownership across the United States, prescribed fire was adopted by said entities and continues to be used today as a cost-effective land management tool.

## 3. What academic studies demonstrate success of prescribed burns as opposed to alternative methods?

- <https://woods.stanford.edu/news/study-shows-controlled-burns-can-reduce-wildfire-intensity-and-smoke-pollution>
- <https://news.berkeley.edu/2025/11/17/prescribed-burning-helps-store-forest-carbon-in-big-fire-resistant-trees/>
- <https://www.sciencedirect.com/science/article/pii/S0095069624001554>

## 4. Why does the Fire Department choose to utilize prescribed burns over other types of fuel treatment methods?

There are five main methods for fuel reduction:

1. **Prescribed Herbivory:** Goats and sheep reduce fine fuels.
2. **Prescribed Burning:** Controlled fire to clear dead vegetation.
3. **Mechanical Thinning:** Masticators and graders to change fuel orientation and fire behavior.
4. **Manual Clearing:** Crews remove ladder fuels by hand.
5. **Herbicide Application:** Spraying vegetation with herbicide to kill vegetation or retard growth. The primary target with herbicide application is invasive weeds, such as star thistle or Arundo.

## Wildland Fuels Management Methods – Prescribed Burns

Every project requires a unique approach and application of one or more method. Prescribed burning is a cost-effective method to timely and efficiently reduce large fuel loads. The Summit to Summit fuel break is not accessible by trucks or chippers to remove cut vegetation and the amount of labor required to carry it out is inefficient, so burning piles in place is an efficient, safe, and cost-effective way to remove fuels. In the Dirt Mulholland area, broadcast burning is a highly cost-effective way to reduce fuel loads over a large area compared to pile burning, which takes much more time and personnel.

### 5. What are the short- and long-term benefits of utilizing prescribed burns?

Short-term benefits include the reduction of heavy vegetative fuel loads, which changes fire behavior, and reduces the energy release component and ember production, creating an opportunity for firefighter engagement during suppression activities.

Long-term benefits include allowing the ecosystem to naturally regenerate, and prescribed fire allows native obligate seeders to grow, where they were previously crowded out. This can increase biodiversity and allow resprouters the opportunity to grow back. (<https://smmtc.org/plantofthemonth/WoolseyfireRecovery.php>). If treatments are maintained in this limited vegetative condition, they will become permanent fuel breaks and allow opportunities for engagement during wildfire events.

### 6. What precautions are taken during a prescribed burn to protect the environment, personnel and homes?

A burn plan is created (similar to this template)

<https://www.fs.usda.gov/sites/default/files/2022-07/Burn%20Plan.pdf>.

The burn plan covers precautionary factors and is approved at the chief deputy level. Also, an Incident Action Plan (IAP) is created for the burn operation covering all resource assignments as well as safety, communications, medical, and contingency elements.

The time of year and seasonal rainfall play a critical role in determining the opportunity for prescribed fire. All burns must be completed inside a defined “window” with optimal weather and fuel conditions to limit risk and satisfy project objectives.

### 7. What environmental regulations need to be undertaken prior to a prescribed burn? Does LA County Fire follow the same regulations and procedures as CalFire?

## Wildland Fuels Management Methods – Prescribed Burns

All County of Los Angeles Fire Department fuel reduction projects are California Environmental Quality Act (CEQA) compliant. The Fire Department follows local, state, and Federal environmental laws. For this project, Dudek Environmental completed a Statewide Fuels Reduction Environmental Protection Plan (EPP). The EPP was developed to fulfill Governor Newsom's State of Emergency (SOE) proclamation signed on March 1, 2025, seeking to expedite fuels reduction projects to protect communities and reduce severe risks of catastrophic wildfire. This EPP provides best management practices (BMPs) and measures to minimize environmental impacts while completing fuels reduction projects. Specifically, these BMPs have been designed to protect air quality, water quality, Tribal cultural resources, special-status species, their habitat, and other habitat resources.

The BMPs were jointly developed by the California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), California Department of Forestry and Fire Protection (CAL FIRE), California Department of Fish and Wildlife (CDFW), California Coastal Commission (CCC), State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) (collectively, Water Boards), Department of Conservation (DOC), and California Air Resources Board (CARB). Details of this plan are public and can be found here:

<https://experience.arcgis.com/experience/44774e7d2cb1438ca901a38793e2fdec/page/Approved-Projects-Dashboard>

### 8. How does this approach balance some of the environmental concerns raised in the CalFire lawsuit?

Climax chaparral seral stage is typically defined by academia as an age class of 30-130 years before stand replacement. Vegetation age class is defined by the number of years since the last disturbance. Increased fire frequency may lead to type conversion, "...although intervals of at least 5 to more than 15 years are believed to be required to allow sufficient time for post-fire chaparral recovery (Zedler 1995), it remains unclear whether there is a specific minimum-interval threshold at which type conversion is most likely."

<https://esajournals.onlinelibrary.wiley.com/doi/10.1002/ecs2.2796>

The Fire Department plans projects to limit fuel disturbance with vegetation under a 7-year age class to prevent type conversion. The ideal age class is between 7-15 years, as vegetation over 15 years and definitely over 25 years has an increasing dead fuel component that may lead to catastrophic wildfire. Invasive species burn projects are the exception, where consecutive burn years are needed to significantly reduce the invasive species seed source - Russian star-thistle is a prime example.

## **Wildland Fuels Management Methods – Prescribed Burns**

All burn treatments being applied in currently planned projects are well beyond the 30-year chaparral burn rotation age. The Summit-to-Summit project area last burned in the 1967 Junction Fire (58-year age-class), and the Dirt Mulholland land management project last burned in the 1984 Mulholland Ridge Fire (41-year age-class). These projects are well beyond a typical fire-adapted ecosystem, where dead fuels are naturally removed and resprouting occurs after a fire, along with fire follower seeds germinating that have been dormant for years.

### **9. Do prescribed burns damage or destroy native habitats?**

A low intensity prescribed fire completed at the right time of year can improve ecosystem health. Wildlife tends to be highly active along edges created by fuel treatment projects. They prefer areas that offer prospect and refuge, the ability to hide in thicker vegetation, next to open areas with new growth to forage. A variety of age classes (habitats) and biome edges, provided they are continuous, such as in the Santa Monica Mountains, offer the greatest opportunity for wildlife to flourish. A key objective with all burn projects is to enhance habitat, while reducing the possibility of catastrophic wildfire. The recent Woolsey and Palisades fires are examples of decadent age class fuels with a heavy dead-fuel component, combined with critical fire weather, leading to devastating outcomes. Ecosystems impacted by large fires such as these will return to a climax condition if the fire return interval is sufficient. We are already seeing native vegetation return in most areas of the Woolsey burn scar because little disturbance has occurred since the 2018 fire seven years ago. This is further antidotal evidence that the minimum disturbance time frame is more than five years to prevent type conversion, which is a BMP for the Department.

### **10. When vegetation grows back after an initial prescribed burn, what is the procedure to maintain and control the area in the future?**

With our monitoring program, we revisit each treatment site every six months and assess vegetation growth (seasonal and rainfall dependent). After the assessment and based on the season, a plan is determined for treating new growth. As an example, treating Big Rock with goats (prescribed herbivory) now would be ineffective as it just burned (low fuel volume) and recent rains may impact slope stability, so it will not be treated at this time.

### **11. What proactive measures does the Fire Department take to make sure the prescribed burn doesn't get out of control?**

A burn plan is created (similar to this template)

<https://www.fs.usda.gov/sites/default/files/2022-07/Burn%20Plan.pdf>.

## **Wildland Fuels Management Methods – Prescribed Burns**

The burn plan covers many all-precautionary factors and is approved at the chief deputy level. After burn plan development, an Incident action plan (IAP) is also created defining all resource (crews, engines, etc.) assignments as well as all safety, communications, medical, and contingency elements.

### **12. Potential FAQs**

Fuel breaks can help slow or stop a fire from a wildland area entering a neighborhood, but also a fire originating in the neighborhood spreading to wildlands beyond the community.

A fuel break will probably not stop a Santa Ana wind-driven fire, but not all large fires are wind driven; in fact, two of the largest fires in the Los Angeles County's history (the 2009 Station Fire and the 2021 Bobcat Fire) were driven by fuels and topography, not wind. After the wind abated in the January Palisades event, the fire progressed northward towards Topanga, primarily driven by fuels and topography.