

Frequently Asked Questions: Prescribed Burns in Marin



Photo: Marin Water

Q. What is a prescribed burn?

Prescribed burns are recognized as an important tool for caring for California's landscapes. Decades of fire exclusion have harmed the health of our fire-adapted ecosystems here in Marin County, and heightened the risk of severe wildfires, especially in our changing climate.

A *prescribed burn* is a beneficial fire that is intentionally used to meet land management goals. *Beneficial fire* is a term that includes prescribed burns, *cultural burning* by Indigenous peoples, *pile burning*, and other kinds of managed fire to restore fire to California's landscapes and boost ecological resilience.

Prescribed burns can only be lit following a specific prescription (set of environmental conditions such as temperature, wind speed, fuel moisture, etc.) These burns require significant preparation and planning. A prescribed burn takes place only when strict criteria are met for safe conditions. Other terms for prescribed burn include *prescribed fire*, *controlled burn*, or *broadcast burn*^{i,ii}.

Cultural burning by Indigenous peoples encompasses practices that support land and community health. For millennia, these practices have included burning for community safety, food and fiber tending, wildlife, disease prevention and control, and ceremonial practices^{iii,iv,v}.

Q. What is a pile burn?

Pile burning refers to burning piles of woody debris created during forest health treatments such as targeted thinning, forest pathogen management or invasive species removal.

Pile burning schedules take into account wildlife cycles, such as bird nesting seasons, and avoid active periods to minimize disturbance. These burns help remove excess vegetation that could otherwise contribute to wildfire spread, supporting healthier forests and safer communities.

Pile construction often occurs during the "off-season" of prescribed burns, when it's too hot and dry to safely conduct burns. This work continues vegetation management efforts year-round by preparing material for burning once cooler, wetter conditions return in the fall or spring.

Pile burns are always carefully planned, permitted, and monitored by trained professionals to ensure they are conducted safely and under appropriate weather conditions.

Q. What are the benefits of prescribed fire?

Benefits of prescribed fire can vary from place to place, but generally include:

- Decreasing the severity of future wildfires and their potential impacts to nature and communities, by reducing the buildup of dead vegetation and reducing fire fuel levels across the landscape.
- Prescribed burns can help slow the spread of wildfire, providing firefighters a better opportunity to protect nearby communities.
- Prescribed fire can be an efficient and cost-effective way to remove excess fuels across a large area.
- Increasing biodiversity by improving conditions for fire-adapted species and restoring native plant communities, recycling nutrients, maintaining a patchwork of different habitat types (such as woodlands, grasslands and chaparral), and reducing the incidence of plant pests and diseases.
- Selecting for species or conditions identified and valued by the Federated Indians of Graton Rancheria.

Q. What is fire's role in Marin's landscapes? How do we know that our landscapes need fire?

One Tam released the [Marin Regional Forest Health Strategy](#) in 2023, a document that outlines threats to forest health and details the evidence behind its recommendations for improving forest health and resilience. Contributors included One Tam partner staff and scientists, consultants, and the Federated Indians of Graton Rancheria (the Tribe)—the only federally recognized Tribe whose ancestral territory is present-day Marin. One Tam continues to collaborate with the Tribe to ensure their perspectives and stewardship practices help guide this work.^{vi}

Through this work we know that California's landscapes, including Marin, have been heavily shaped by fire until colonization and the widespread fire exclusion practices that followed. *Fire exclusion* refers to modern fire suppression and the disruption of Tribal cultural burning practices due to colonization. Prescribed burns are one way to help reverse these impacts, such as buildup of hazardous fuels and the loss of native species, and to restore fire's role in our ecosystem.

Fire is not only a natural process, but also a creative force. Beneficial fire helps:

- Keep grasslands open by preventing shrubs and trees from taking over, preserving space for pollinators and wildlife.
- Recycle nutrients back into the soil, supporting healthier forests and meadows.
- Stimulate germination of certain plants and allow oaks, wildflowers, and other fire-adapted species to thrive.
- Control invasive plants, pests, and disease.

- Reduce excess fuels that can otherwise build up and contribute to extreme wildfires.

By reintroducing fire carefully and intentionally, we can restore these ecological benefits and maintain the diverse, fire-adapted landscapes that define Marin.

Q. What preparation is done for a prescribed burn?

Planning a prescribed burn involves months, or sometimes years, of preparation, coordination, and community education. Preparation includes site analysis, monitoring to avoid impacts to sensitive species, communications planning, pre-treating certain areas, and more. Prescribed burns are most often a collaborative initiative—partnership and coordination between land stewards, fire agencies, regulatory agencies, and others are a key part of planning and conducting a prescribed burn.

Highly experienced staff and sufficient resources (firefighters, fire engines, helicopters, and other mechanized equipment) are required to safely conduct a burn. In Marin, trained wildland firefighters conduct the prescribed burns.

The date and location of a prescribed fire is based on daily and seasonal weather, fuel conditions, air quality, and other factors influencing fire behavior and its effects. If determined conditions are favorable, fire resources and trained personnel are present throughout the duration of the planned burn to ensure the fire remains within its prescription. Weather readings are taken on site in the day(s) leading up to a burn. The National Weather Service develops a specific weather forecast that is unique to the burn location based on these observations. The final decision to proceed is made on the morning of the announced date, only after a small test burn confirms conditions are safe and permission has been granted by the Bay Area Air District and the local jurisdiction.

Following the burn, active patrols occur for several days, or even weeks, afterward to make sure the fire stays within the designated areas. Firefighters conducting these patrols monitor for any fire that burns outside the perimeter.

Q. What can the community expect?

While the community may see and smell smoke in the air during and after the burn, it's important to know that the Bay Area Air District only approves prescribed burns when weather conditions are favorable for smoke to dissipate and disperse. This process helps ensure compliance with requirements and is designed to minimize impacts on nearby communities.

Communication with the public happens before, during, and after a prescribed burn to ensure public safety and to protect the places receiving a prescribed burn.

In Marin County, you can stay informed of prescribed burns by signing up to the "Prescribed Burn" notification group in AlertMarin. Visit [Emergency.MarinCounty.gov](https://www.emergency.marincounty.gov), click "Sign up for emergency alerts," log in, and check the "Prescribed Burns" box.

Q. What are the right conditions for a prescribed burn to take place?

Prescribed burns are allowed only when safe conditions are met. These include weather (such as temperature, humidity, wind), fuel conditions, and resource availability (such as trained fire crews). Some of these factors can vary by site. Burn planners and/or land managers identify a window in which conditions are likely to be safe to conduct a burn, including favorable fire behavior and dispersion of smoke. The final permission is granted by the fire agency with jurisdiction and the local Air District.

Q. Does prescribed burning affect wildlife?

One Tam agencies conduct monitoring for species that could be affected by a prescribed fire, such as nesting birds or bats, following best practices and compliance requirements, and take steps to mitigate potential harm when needed.

Most animals are adapted to fire and rely on the food and habitat opportunities it creates. During a prescribed burn, animals typically leave the area or seek refuge underground or in moist places, often returning soon after the fire is complete. Many species actively use burned areas in the days and weeks that follow to graze on new growth, hunt in more open spaces, or build homes in areas less likely to burn in a future wildfire.

While some wildlife may be affected by prescribed burns, the impacts are far fewer and less severe than those caused by fast-moving wildfires. Burns are generally scheduled outside of nesting seasons, when young animals may be less able to move. If burning during these times is unavoidable, biologists conduct surveys to locate nests or other sensitive areas and determine appropriate protection measures.

Prescribed burns are also ignited in ways that give wildlife time and opportunity to move out of harm's way. Many animals choose to leave the area temporarily due to human activity and power equipment use leading up to and during a burn and frequently return shortly after a burn is complete.

Q. Does prescribed burning emit carbon?

Prescribed burns do release carbon dioxide however they produce much less carbon and smoke than wildfires. Prescribed burns only target natural vegetation, whereas a wildfire burns everything in its path including homes, vehicles and other human-made materials that generate large amounts of toxic smoke.

By carefully reducing vegetation under controlled conditions, prescribed burns lower the risk of high-intensity wildfires and create natural fuel breaks that slow fire spread, giving firefighters greater opportunities to contain and stop a wildfire.

Q. Where is prescribed burning occurring?

Across California, currently about 125,000 acres per year are undergoing prescribed burns.^{vii} Prescribed burning on Marin's public lands accounts for a small portion of this. Each year, agencies are using the Marin Regional Forest Health Strategy and their individual land management plans and priorities to choose sites as candidate areas for prescribed burns.

To stay informed about prescribed burns in our area:

- You can follow our One Tam agency partners and Marin County Fire Department to hear about planned prescribed burns.
- In Marin County, you can stay informed of prescribed burns by signing up to the "Prescribed Burn" notification group in AlertMarin. Visit [Emergency.MarinCounty.gov](https://www.emergency.marincounty.gov), click "Sign up for emergency alerts," log in, and check the "Prescribed Burns" box.
- Apps such as Watch Duty, PulsePoint and others can also provide up to date information about prescribed burns and wildfires in our area.

Q. What other landscape stewardship actions help besides prescribed burns?

Prescribed burns are one in a suite of stewardship tools and are sometimes used in conjunction with other efforts. Other types of active stewardship work to promote fire resilience include targeted removal (sometimes called thinning) of excess young trees or understory vegetation through mechanical removal, manual pulling, grazing, chipping, mulching, and other methods. These types of actions may be intended to mimic fire, manage invasive plants, improve forest structure, and/or maintain fuel breaks. Like prescribed burns, such actions reduce fuels and help maintain diverse habitats. They can be used where prescribed burns are not possible, or to prepare an area for a prescribed burn. None of these mechanisms offers all the same benefits that our fire-adapted landscapes need.

Q. Where can I learn more?

There are lots of resources out there to learn more about prescribed burns and beneficial fire. Here are a few local ones:

- [One Tam forest health page](#) – View the [Marin Regional Forest Health Strategy](#)^{viii}, plus resources to help digest it. These FAQs draw heavily from this document, which outlines threats to Marin's forests and how we can increase their health and resilience.
- [Self-guided forest health tours](#) – Take one of these activities with you on your next outing to learn more about a special place and the work we're doing to help.
- [Visit the Tam Van](#) – Connect with staff and pick up a printed self-guided tour.
- [Fire Safe Marin](#) – Learn more about wildfire preparedness in Marin County.
- [Marin Wildlife Prevention Authority](#) – Learn more about work happening to make Marin County more wildfire-resilient.

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- ⁱ National Park Service (NPS). (2020, March 19). Wildland fire: What is prescribed fire? Retrieved on December 12, 2022 from <https://www.nps.gov/articles/what-is-a-prescribed-fire.htm>
- ⁱⁱ California Wildfire and Forest Resilience Task Force. (2022). California's strategic plan for expanding the use of beneficial fire. Prescribed Fire Work Group. <https://wildfiretaskforce.org/wp-content/uploads/2022/05/californias-strategic-plan-for-expanding-the-use-of-beneficial-fire.pdf>
- ⁱⁱⁱ Anderson, M.K. (2019). The use of fire by Native Americans in California. In J.W. van Wagtendonk, N.G. Sugihara, S.L. Stephens, A.E. Thode, K.E. Shaffer, & J.A. Fites-Kaufman (Eds.), *Fire in California's Ecosystems* (2nd ed., p.381). University of California Press. <https://www.ucpress.edu/book/9780520286832/fire-in-californias-ecosystems>
- ^{iv} Firesticks Alliance Indigenous Corporation. (n.d.). What is Cultural burning? Firesticks. Retrieved on December 10, 2022 from <https://www.firesticks.org.au/about/cultural-burning/>
- ^v [Chapter 3: Stewardship and Partnership with the Federated Indians of Graton Rancheria](#)
- ^{vi} [Chapter 3: Stewardship and Partnership with the Federated Indians of Graton Rancheria](#)
- ^{vii} California Air Resources Board (n.d.) Prescribed burning. Retrieved on December 8, 2022 from <https://ww2.arb.ca.gov/our-work/programs/prescribed-burning/about#:~:text=HowPrescribedBurnsareRegulated,the%20risk%20of%20catastrophic%20wildfires>
- ^{viii} Golden Gate National Parks Conservancy. (2023). Marin Regional Forest Health Strategy. Tamalpais Lands Collaborative (One Tam). <https://www.onetam.org/our-work/forest-health>