

Fire Safety

- “Fuels reduction” refers to the process of removing and rearranging vegetation to reduce the risk of fire spread.
- Fuels reduction is a critical wildfire mitigation strategy designed to protect homes, communities, and ecosystems from the threat of catastrophic wildfire. By strategically thinning overgrown vegetation — including brush, understory, and small-diameter trees — we reduce the amount of combustible material (known as “fuel”) available to feed a wildfire.
- This work creates defensible space, slows fire spread, and improves firefighter access and safety.
- In addition to improving fire resilience, fuels reduction can also benefit forest health by promoting the growth of fire-adapted native species, enhancing biodiversity, and restoring a more natural fire ecology to the landscape.

How Trees and Shrubs Are Selected for Removal

Our fuels reduction process is guided by both fire science and ecological best practices. Vegetation is not removed arbitrarily; instead, each tree or shrub is assessed based on its contribution to wildfire risk, overall forest health, and long-term landscape resilience. The following criteria are used to guide removal decisions:

1. Fire Behavior and Fuel Type

- **Ladder Fuels:** Small trees, dense shrubs, and low-hanging branches that can carry fire from the ground into the canopy are typically removed.
- **Highly Flammable Species:** Vegetation known to burn intensely, such as manzanita or certain dense conifers, may be prioritized for removal or thinning.
- **Dead or Diseased Material:** Standing dead trees, fallen limbs, and plants with signs of disease or decay are removed to reduce both fuel load and pest risk.

2. Spacing and Density

- **Overcrowding:** In overly dense areas, selective thinning is done to improve spacing between trees and prevent crown fires.
- **Competition:** Smaller or suppressed trees competing for resources beneath larger, healthy trees are often removed to enhance the vigor of retained specimens.

3. Ecological and Aesthetic Value

What to Expect

- **Habitat Considerations:** Where appropriate, we retain trees that provide wildlife habitat, nesting sites, or pollinator value.
- **Soil and Slope Stability:** On slopes or erosion-prone areas, root systems of select vegetation may be preserved to help stabilize the soil. Some slopes are too steep to safely operate equipment and may be alternately be removed by hand.
- **Homeowner Preferences:** Homeowners are encouraged to flag or mark trees they wish to retain *before* operations begin. We do our best to honor these preferences within the bounds of fire safety and project objectives.

4. Species Selection

- **Preferred Retention Species:** Native, fire-resilient species with wide spacing and healthy structure are more likely to be preserved. Examples include mature oaks and well-formed pines with high canopies and minimal undergrowth.
- **Invasive or Non-Native Species:** These may be removed to improve ecosystem function and reduce future fire risk.

Why Certain Trees and Shrubs May Be Retained

Our approach to vegetation management is thoughtful and ecologically informed. In coordination with local agencies and environmental guidelines, the following factors may influence which trees and shrubs are retained:

- **Ecological Value:** Some native trees and shrubs (e.g., mature oaks or specific wildlife-supporting species) provide critical habitat and are left in place when possible. Riparian areas, buffer zones adjacent to watercourses, ponds or lakes, require vegetation to be retained to provide watercourse bank stability to prevent erosion, provide water filtration, and provide critical habitat.
- **Structure and Spacing:** Trees that are widely spaced, healthy, and non-competing may be retained to maintain a natural, park-like appearance and reduce erosion.
- **Aesthetic or Cultural Significance:** Homeowners may identify trees they wish to preserve; however, these should be clearly marked prior to work starting.
- **Fire Behavior Considerations:** Flammable and ladder fuels (such as dense manzanita or tightly clustered conifers) are typically targeted for removal, while fire-resistant species may be left to help maintain ecological balance.

What to Expect During Mastication Work

Mastication is the mechanical shredding or grinding of brush, small trees, and woody debris into mulch-like material. It is fast, effective, and minimizes the need for burning or hauling vegetation off-site.

You may notice the following during the process:

- **Noise and Activity:** Expect the sound of heavy equipment, chainsaws, and crews working between early morning and late afternoon hours. We strive to minimize disruptions and comply with all noise ordinances.
- **Temporary Visual Impact:** The landscape may appear messy or heavily disturbed during and immediately after mastication. Exposed soil, shredded debris, and flattened vegetation are normal during this phase.
- **Surface Changes:** Machinery may leave temporary ruts or visible tracks. These areas typically settle over time or are smoothed out during final cleanup.

After the Work Is Complete

Once the fuels reduction work is finished, you can expect:

- **A Noticeable Change in Vegetation Density:** The area will appear more open, with lower ground-level fuels and improved spacing between trees.
- **Mulched Ground Cover:** Mastication creates a natural mulch that helps retain soil moisture and suppress future weed growth.
- **Improved Fire Safety:** With reduced ladder fuels and a more fire-resilient landscape, your home and community will be better protected in the event of wildfire.

We understand that the process can appear disruptive, but it is a vital step in safeguarding our community and restoring balance to the landscape. Thank you for your support and patience as we complete this important work.

BurnBot Operational Flow:

Our RMT (Remote Mastication Treatment) program is designed to manage vegetation efficiently and safely in challenging terrain. This approach combines skilled hand crews with specialized remote mastication machines to achieve thorough, responsible vegetation control.

1. Hand Crews – Strategic Prep Work

BurnBot - RMT

What to Expect



The process begins with our hand crews, who prepare the area for machine access. These crews use chainsaws and hand tools to remove brush and small trees, especially in tight or sensitive areas where machines cannot safely operate. Their work ensures a safer environment for machinery and helps define the treatment boundaries.

2. Remote Mastication – Targeted Machine Work

Once the area is prepped, remote-controlled mastication machines are brought in. These machines are designed to operate on steep or rugged terrain where traditional equipment can't go. They grind up woody vegetation into mulch on the spot, reducing fuel loads and improving access while minimizing soil disturbance. Operators manage the machines from a safe distance, allowing for precise, low-impact work in hard-to-reach locations.

3. Aesthetics

Once vegetation has been cleared, a clean-up crew comes through to focus on aesthetics. They remove leftover debris, ensure the area looks orderly, and restore a natural appearance where possible. This step supports both environmental standards and community expectations for a finished, professional look lean up.

For more information, contact BurnBot at info@burnbot.com