

CREATING FIRE SAFE CANYONS

The open canyons of Rolling Hills play an important role in the community. These canyons provide wildlife habitat, visual backdrops, recreational opportunities, and increased fire hazards. Canyons serve as a chimney, drawing the heat of a fire up to the top of the canyon.



This guide offers recommendations for managing the canyons to reduce fire hazards while supporting the benefits the canyons provide to the community. Each homeowner is responsible for any fuel management on the full extent of their property, including those areas in the canyon. Because the canyons are owned by many, management can also be advanced through collaboration. Costs can be reduced and the resulting scene more unified, and natural-looking if many owners work together. The steps are the same whether a group of owners are working together or if the work is to be done by an individual owner.

This guide is one of a series of 5 that describe the steps recommended to create and maintain fire safe vegetation in Rolling Hills. Also refer to the other guides:

- How to Get the Work Done
- Making and Keeping a Fire Safe Home Site
- Best Practices for Fuel Reduction
- Choosing Fuel Treatment Methods

Step 1. Consider the desired uses of the canyons:

- Is the canyon used for pasture?
- Is grass or brush the preferred vegetation?
- What is the initial effort desired? Are you going to treat the entire area at once or make incremental improvements?
- What frequency cycle of maintenance preferred? A little every year? More intensive treatments periodically?

Step 2. Identify features that limit potential treatment options.

- Is there a history of slides and surface erosion that would preclude use of machinery?
- How steep are the slopes?
- What access is present?
- Do riparian corridors run within the canyon?
- What invasive exotic plants are common?

Only dead material can be removed in riparian areas



Erosion and landslides limit treatment methods and timing



Remove invasive exotic plants – like mustard – first.

Step 3. Now you are ready to identify the goals of your canyon's fire fuel treatment. By changing the vegetative fuels in the canyons you can change fire behavior. The intent of fire fuel treatment is to reduce fire intensity and rate of fire spread. Choose the appropriate goals for your canyon:

- Removing dead vegetation
- Reducing volume of vegetation in trees, shrubs and grass
- Reduce height of brush and grass
- Removing connections in vegetation
 - From vegetation to structures
 - Between brush groupings
 - Between brush and trees
 - From grass to brush on roadsides



Step 4. Choose a strategy for managing your canyon

There are three strategies for managing the canyons. Chose the best for your canyon by thinking about what you want for the finished result:

A. Shaded fuelbreak - Trees with no shrubs. Only grass or very short shrubs beneath the tree canopy.



- ❖ Bare underneath tree canopies – chips (cutting and distributing fuels is not as good as chipping below trees)
- ❖ Must be done by hand
- ❖ Ok-looking from above and side
- ❖ Moderate effect on invasives
- ❖ Maintenance is longer interval (5-7 years) but harder to do as the separation from the underside of a tree canopy and the top of the shrubs below must be maintained

B. Mosaic groupings – clusters of similar vegetation with grasslands separating groupings of trees from groupings of shrubs.



- ❖ Can mimic natural openings
- ❖ Edge effect may be detrimental to wildlife
- ❖ Can be done with small machines
- ❖ Maintenance interval is annually for grass between shrubs, approximately 5 years within shrubs)

C. Shortened shrubs - only shrubs, with no grass or trees



- ❖ Keeps ground intact
- ❖ May not work in some shrub species (sage)
- ❖ Will look ugly first year
- ❖ Best soil protection
- ❖ Maintenance interval is 3-5 years

Step 5. Determine a schedule managing your canyon

Vegetation can be managed over time, with progress made each year, or you may wish to treat large areas all at once. Chose the best schedule, keeping in mind a few aspects:

1. The most significant effort consists of the initial treatment. Initial treatment can be accomplished on a portion of the canyon each year until all the intended area to be treated has been so. If only some of the canyon is to be treated, start at the area closest to a structure.

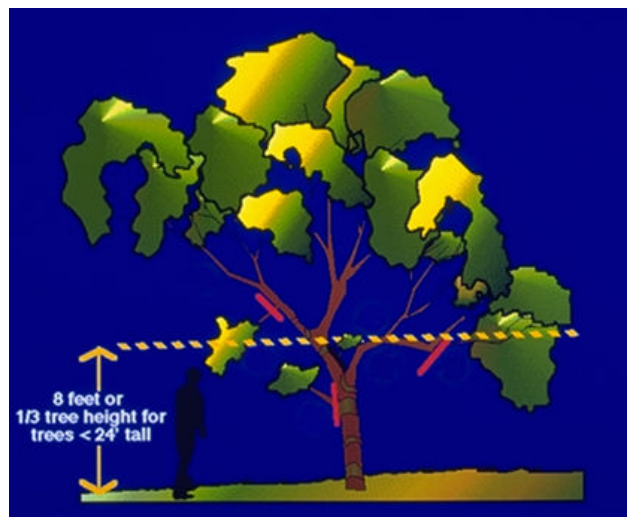
2. Vegetation grows back. Maintenance is relatively easy and low-cost, but necessary. Grass will need to be mowed annually, shrubs re-trimmed every 3-5 years, and trees branches trimmed every 5-7 years.

Once you or your group has selected your strategy for managing your canyon you are ready to use the other guides in this series to get the fire fuel treatment done.

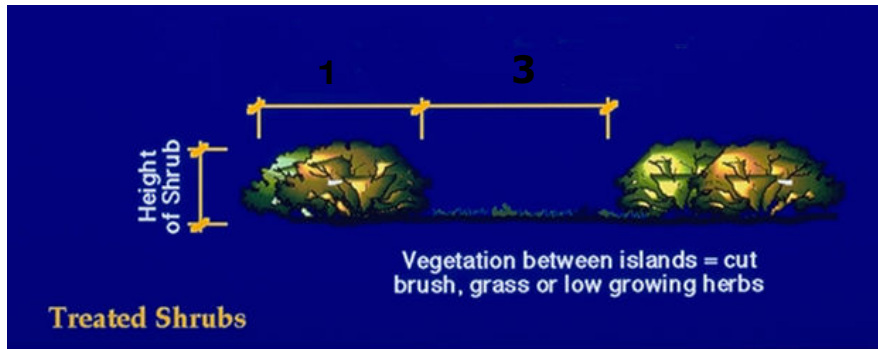
Practices to Follow, Regardless of Strategy

1. Provide for less fire hazard closer to structures – leave more vegetation further away
2. Remove exotics first (mustard, castorbean, volunteer Aleppo pine and pepper trees)
3. Then focus on more flammable native species
4. Protect the unusual & distinctive plant species and remove the common species
5. Retain groundcover
 - ✂ Leave grass stubble up to 4" tall
 - ✂ Distribute natural leaf litter or mulch evenly up to 2 inches
 - ✂ Smaller patches better than big patches
 - ✂ Orient bare patches horizontal to the slope

Prune branches to a height of 8 ft above the ground. In young trees, prune branches on the lower one-third of the height of the tree. Do not disturb or thin the tree canopy. This promotes growth in the understory, which is more easily ignited.



Create spaces between shrubs and trees



Create shrub islands, mosaics, or groups. Design groups of plants small enough to provide horizontal separation between groups. This allows proper maintenance and helps slow the spread of fire. **The space between groups should be greater than three times the height of the tallest shrubs.**

The shrubs and trees in this canyon are well-spaced



Techniques To Use

Several types of treatments are possible to treat the vegetation to reduce fire hazard. These span hand labor (including the use of power tools), mechanical equipment (walk-behind tractors or full-sized tractors), livestock (horses, sheep or goats), and spot application of herbicides.

A Guide to Fuel Management Treatments describes these Techniques in more detail. However, the nature of canyons makes some techniques easier or harder to use:

- Because of the larger area occupied by the canyons and higher costs of hand labor, this techniques is generally cost effective and is reserved for canyon areas closer to homes, stables or other structures.
- Grazing may be more suitable in canyons because of the larger area encompassed by fencing. Fencing is generally the greatest cost.
- Mechanical treatments are applicable, but not in areas prone to landslides, nor in riparian corridors.