

# City of Placerville

## Defensible Space Guidelines



### Improved Property:

#### A. Purpose

These guidelines are directory and not mandatory and are intended to provide examples of fuel modification measures that may be used to create defensible space around structures. Fuel characteristics and terrain vary throughout the City of Placerville. Individual site characteristics may affect the fuel treatment required.

A defensible space perimeter provides firefighters with a safe working environment that allows them to protect buildings and structures from encroaching wildfires and minimizes the chance that a structure fire will escape to the surrounding wildland.

The vegetation surrounding a building or structure is fuel for a fire. Research and experience have shown that fuel reduction around a building or structure increases the probability of it surviving a wildfire. *Fuel reduction through vegetation management is the key to creating good defensible space.*

Common practices to ensure creation of adequate defensible space include:

- Reducing the amount of fuel around the building or structure, providing separation between fuels, and/or reshaping retained fuels by trimming. Defensible space can be created by removing dead vegetation, separating fuels, and pruning lower limbs.
- Arranging the tree, shrubs and other fuel sources in a way that makes it difficult for fire to transfer from one fuel source to another. It does not mean cutting down all trees and shrubs, or creating a bare ring of earth across the property.

A property owner's responsibility is to provide 100 feet of defensible space around all structures and occupied buildings on their property, or to the property line if it is less than 100 feet from any structure.

Removal of trees may require City approval if the trees are part of an approved landscaping plan or if the trees are protected as mitigation through an environmental review process. The removal of trees may also be subject to the City's "Woodland and Forest Conservation Ordinance" (City Code Title 8, Chapter 13).

Vegetation removal can cause soil disturbance, soil erosion, and regrowth of vegetation, and introduce non-native invasive plants. Always keep soil disturbance to a minimum, especially on steep slopes. Erosion control techniques such as minimizing use of heavy equipment, avoiding stream or gully crossings, using mobile equipment during dry conditions, and covering exposed disturbed soil areas will help reduce soil erosion and plant regrowth.

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Areas near water (riparian areas), such as streams or ponds, are a particular concern for protection of water quality. Avoid removing vegetation associated near water features or using heavy equipment in these areas; and do not clear vegetation to bare mineral soil.

### B. Definitions

**Aerial fuels:** All live and dead vegetation in the tree canopy or above surface fuels, including tree branches, twigs and cones, snags, moss, and high brush. Examples include trees and large bushes.

**Defensible Space:** The area where basic wildfire protection practices are implemented, providing the key point of defense from an approaching wildfire or escaping a structure fire. The area is characterized by the establishment and maintenance of a firebreak within 30 feet of an occupied building or structure and a reduced fuel zone that extends between 30 to 100 feet away from a building or structure.

**Flammable and combustible vegetation:** Fuel as defined in these guidelines.

**Fuel:** Vegetative material, live or dead, which is combustible during normal dry weather.

**Ladder Fuels:** Fuels that can carry a fire vertically between or within a fuel type, such as from dry grass to shrubs and shrubs to trees.

**Occupied Building:** A structure, either potentially or actually occupied by persons on either a permanent or temporary basis including but not limited to residences and businesses.

**Reduced Fuel Zone:** The area between 30 and 100 feet away from the building or structure.

**Structure:** Any building that is used for support or shelter of any use or occupancy.

**Surface fuels:** Loose surface litter on the soil surface, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches that have not yet decayed enough to lose their identity; also grasses, low and medium shrubs, tree seedlings, heavier branches and downed logs.

### C. Fuel Treatment Guidelines

**The guidelines below are intended to be used by implementing General Guidelines 1, 2, 3, 4, 5 and either 6a or 6b, as described below.**

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### General Guidelines:

1. Maintain a defensible space by removing and clearing all flammable and combustible vegetation within 30 feet of any structure. Single specimens of trees or other vegetation may be retained provided they are adequately-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a structure.
2. Dead and dying woody surface fuels and aerial fuels within the Reduced Fuel Zone (30 – 100 feet) shall be removed. Loose surface fuels shall be permitted to a depth of 3 inches. This guideline is primarily intended to eliminate trees, bushes, shrubs and surface debris that are completely dead or with substantial amounts of dead branches or leaves/needles that would readily burn.
3. Grass/turf areas should be kept green and mowed to 6 inches in height or less.
4. Maintain at all times a ten-foot (10') minimum clearance of vegetation next to the roadside, including private roads and driveways.
5. Down logs or stumps anywhere within 100 feet from a structure, when embedded in the soil, may be retained when isolated from other vegetation. Occasional (approximately one per acre) standing dead trees (snags) that are well-spaced from other vegetation and which will not fall on buildings or structures or on roadways/driveways may be retained.
6. Within the Reduced Fuel Zone (30 – 100 feet), one of the following fuel treatments (6a or 6b) shall be implemented. Properties with greater fire hazards will require greater clearing treatments. Combinations of the methods may be acceptable as long as the intent of these guidelines is met.

#### **6a. Reduced Fuel Zone (30 – 100 feet): Fuel Separation**

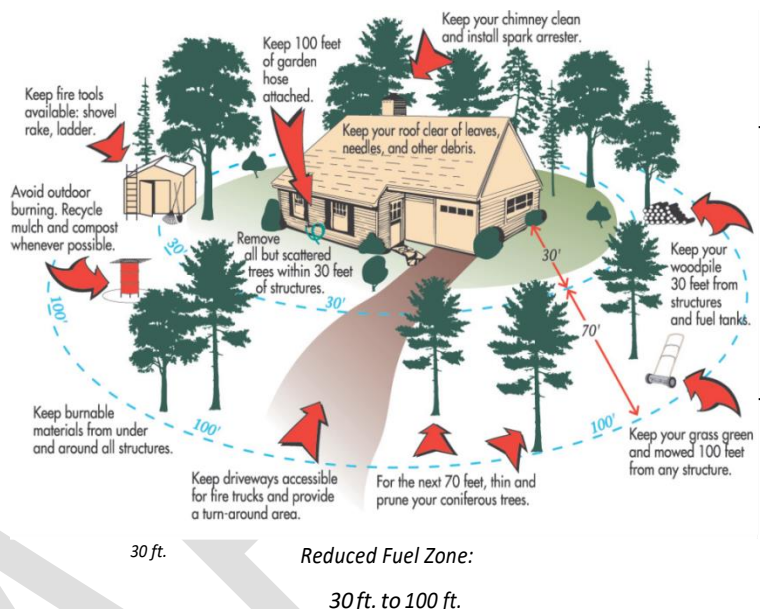
In conjunction with General Guidelines 1, 2, and 3, above, minimum clearance between fuels surrounding each building or structure will range from 4 feet to 40 feet in all directions, both horizontally and vertically. (Exception: See Continuous Tree Canopy defined in 6b)

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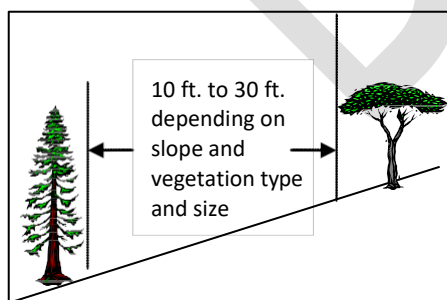
Clearance distances between vegetation will depend on the slope, vegetation size, vegetation type (brush, grass, trees), and other fuel characteristics (fuel compaction, chemical content, etc.). Properties with greater fire hazards will require greater separation between fuels. For example, properties on steep slopes having large sized vegetation will require greater spacing between individual trees and bushes (see Plant Spacing Guidelines below). Groups of vegetation (numerous plants growing together less than 10 feet in total foliage width) may be treated as a single plant. For example, three individual manzanita plants growing together with a total foliage width of eight feet can be “grouped” and considered as one plant and spaced according to the Plant Spacing Guidelines in this document.



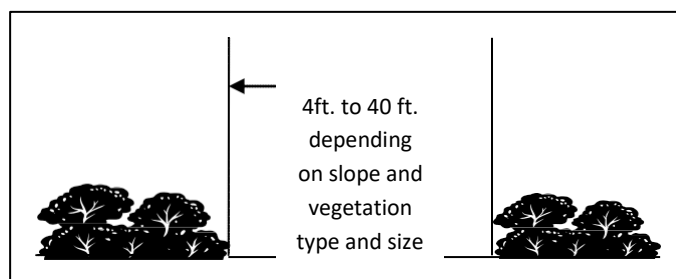
### Clearance requirements include:

- Horizontal clearance between aerial fuels, such as the outside edge of the tree crowns or high bush.

Trees



Shrubs

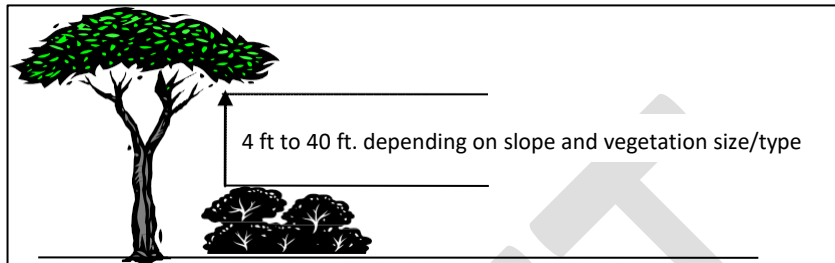


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## *Horizontal clearance between aerial fuels*

- Vertical clearance between lower limbs of aerial fuels and the nearest surface fuels and grass/weeds. Vertical clearance removes ladder fuels and helps prevent a fire from moving from the shorter fuels to the taller fuels.



## **Vertical clearance between aerial fuels**

Plant Spacing Guidelines		
Guidelines are designed to break the continuity of fuels and be used as a “rule of thumb” for achieving compliance with the City of Placerville Vegetation Management Ordinance.		
<b>TREES</b>	<b>Minimum horizontal space from edge of one tree canopy to the edge of the next (see 5b)</b>	
	<b>Slope</b>	<b>Spacing</b>
	0% to 20%	10 feet
	20% to 40%	20 feet
	Greater than 40%	30 feet
<b>SHRUBS</b>	<b>Minimum horizontal space between edges of shrubs</b>	
	<b>Slope</b>	<b>Spacing</b>
	0% to 20%	2 times the height of the shrub
	20% to 40%	4 times the height of the shrub
	Greater than 40%	6 times the height of the shrub
<b>VERTICAL SPACE</b>	<b>Minimum vertical space between top of shrub and bottom of lower tree branches:</b> 3 times the height of the shrub	

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### 6b. Reduced Fuel Zone: Defensible Space with Continuous Tree Canopy

To achieve defensible space while retaining a stand of larger trees with a continuous tree canopy, apply the following treatments:

- Generally, remove all surface fuels greater than 6 inches in height. Single specimens of trees or other vegetation may be retained provided they are adequately-spaced, well- pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.
- Remove lower limbs of trees ("prune") to at least 6 feet up to 15 feet (or the lower 1/3 branches for small trees). Properties with greater fire hazards, such as steeper slopes or more severe fire danger, will require pruning heights in the upper end of this range.

### Unimproved Parcels:

#### A. Purpose

These guidelines are directory, not mandatory and are intended to provide examples of fuel modification measures that may be used to create fuel reduction on unimproved parcels within City of Placerville. Fuel characteristics and terrain vary throughout the City of Placerville. Individual site characteristics may affect the fuel treatment required.

A defensible space perimeter provides firefighters with a safe working environment that allows them to protect buildings and structures from encroaching wildfires and minimizes the chance that a structure fire will escape to the surrounding wildland.

Research and experience have shown that fuel reduction around a building or structure increases the probability of it surviving a wildfire. ***Fuel reduction through vegetation management is the key to creating good defensible space.***

Common practices to ensure creation of adequate defensible space include:

#### C. Fuel Treatment Guidelines

Unimproved parcels shall meet the following;

Any Unimproved parcel of less than two acres (2ac.) shall be cleaned of all debris prior to May 1<sup>st</sup> or the start of fire season, whichever occurs first.

- (1). Dead and dying woody surface fuels and aerial fuels within the Reduced Fuel Zone shall be removed. Loose surface fuels shall be permitted to a depth of



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(2) Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a structure.

(3). Down logs or stumps anywhere, when embedded in the soil, may be retained when isolated from other vegetation.

Any unimproved parcel of two acres or more or multiple continuous parcels under the same ownership shall either be cleaned of all debris or have a minimum thirty-foot wide firebreak/shaded firebreak around the perimeter in place prior to May 1<sup>st</sup> or the start of fire season, whichever occurs first.

(1). Firebreaks shall be disked around the entire perimeter of the parcel. Scraping will also be allowed, provided that the scraped material is removed or spread evenly over the remaining unscraped property.

(2). Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a structure.

(3). Down logs or stumps anywhere within 100 feet from a structure, when embedded in the soil, may be retained when isolated from other vegetation.

Vegetation removal can cause soil disturbance, soil erosion, regrowth of vegetation, and the introduction of non-native invasive plants. Always keep soil disturbance to a minimum, especially on steep slopes. Erosion control techniques such as minimizing use of heavy equipment, avoiding stream or gully crossings, using mobile equipment during dry conditions, and covering exposed disturbed soil areas will help reduce soil erosion and plant regrowth.

Areas near water (riparian areas), such as streams or ponds, are a particular concern for protection of water quality. Avoid removing vegetation associated with water features or using heavy equipment in these areas, and do not clear vegetation to bare mineral soil.

Properties with greater fire hazards will require greater clearing treatments. Combinations of the methods may be acceptable as long as the intent of these guidelines is met.

Clearance distances between vegetation will depend on the slope, vegetation size, vegetation type (brush, grass, trees), and other fuel characteristics (fuel compaction, chemical content, etc.). Properties with greater fire hazards will require greater separation between fuels. For example, properties on steep slopes having large sized vegetation will require greater spacing between individual trees and bushes (see Plant Spacing Guidelines below). Groups of vegetation (numerous plants growing together less than 10 feet in total foliage width) may be treated as a single plant. For

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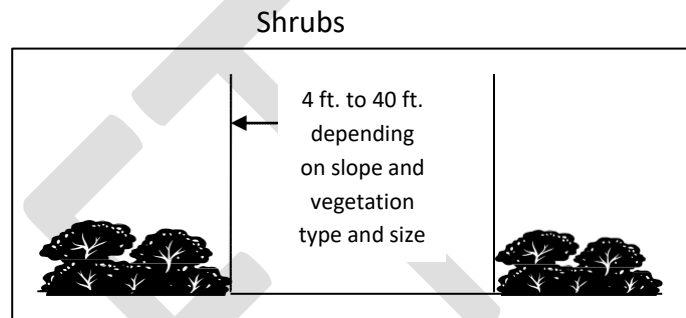
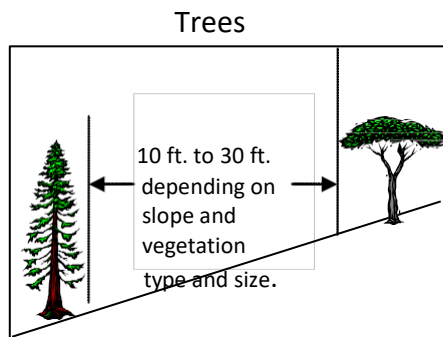
## Defensible Space Guidelines



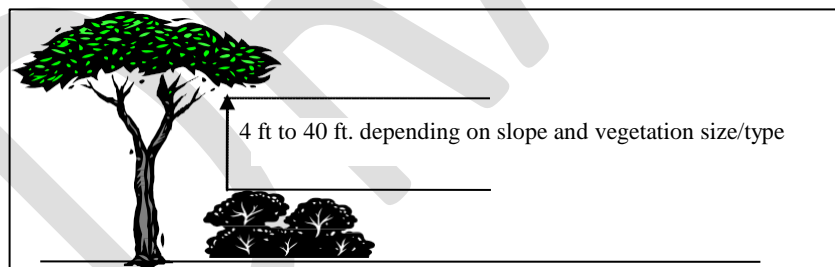
example, three individual manzanita plants growing together with a total foliage width of eight feet can be “grouped” and considered as one plant and spaced according to the Plant Spacing Guidelines in this document.

### Clearance requirements include:

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*Vertical clearance between aerial fuels*



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