Advice to Grow By ... Ask Us!

UCCE Master Gardeners San Mateo & San Francisco Counties

# Wildfire Safety Protect Your Home!

## Presented by UC Master Gardeners of San Mateo and San Francisco Counties



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## Defensible Space – Zone 0 – 0-5 Feet The Ember Resistant/ Noncombustible Zone



Photo – Lisa Erdos

- Implement on all sides of the home
- Use rock mulch, hardscape, mowed green lawn
- Less focus on plant lists more focus on placement and maintenance

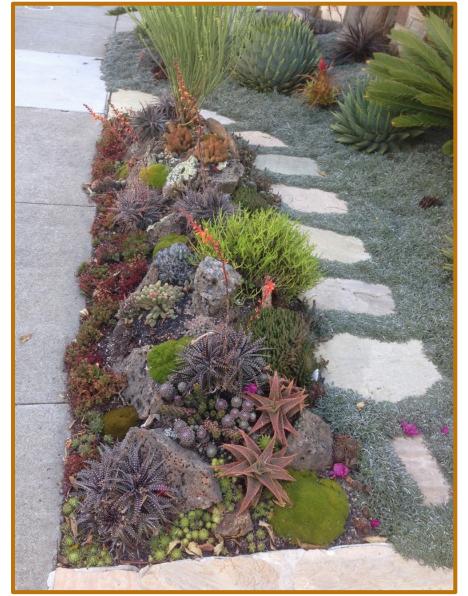


Photo – Lisa Erdos



## **Defensible Space – Zone 1 – 5-30 Feet**

- LEAN There is a small amount of vegetation present.
- CLEAN Vegetative debris and dead materials are routinely removed.
- GREEN Vegetation
   within this zone is kept
   green and well irrigated
   during the fire season.



### Defensible Space – Zone 2 – 30-100 Feet The Reduced Fuel Zone



Photo Yana Valachovic Humboldt County

- Create islands of vegetation
- Thin and prune taller vegetation
- Use mounds to create visual cover

## Soil for Zones 5-30 feet and Beyond Healthy Soil Is Important!

- Amend Garden soil with compost Organic Matter
- Compost ABSORBS water and HOLDS Water in soil.
- Compost is rich in slow-release nutrients allowing plants to establish quickly and GROW bigger roots with less fertilizers and water.



Photo-Calscape, 2010

Foothill Penstemon Penstemon heterophyllus



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2009

Photo-Neal Kramer

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Western Sword Fern

Polystichum munitum

Small flowered Melica Melica imperfecta

## Mulch

### **0-5 feet Recommendations:**

- All the mulch treatments tested are combustible and not recommended for use within 5 feet of the house or other structures.
- Use noncombustible rock, gravel, concrete and pavers within 5 feet of the house.



Photo-C. Nations



# Mulch

### 5-30 feet and Beyond Recommendations:

- After you add compost to your garden beds or pots, add mulch, a thin layer of wood chips, about 1 inch deep around the dripline of plants. This is the least flammable mulch application.
- As wood chips decompose, they will hold in moisture, resulting In less water use.
- Wood Chips suppress weed growth and feed the soil resulting in healthier roots and plants
- Mulch and compost together help plants survive drought, wind, and wildfires.



Photo-UCANR





Taking care of the soil is important given: Climate Change Less Rain Longer Wildfire Seasons

Compost and mulch can be applied 2-3 x per year.

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Photos-Lisa Erdos

## **Fire Resistant Plant Characteristics**

- The physical characteristics of a plant determine whether a plant will catch on fire, keep a fire going, and then propel a fire. Fire resistant plants share certain physical characteristics:
  - Deciduous plants less flammable than evergreens
  - Broadleaf plants less flammable than those with needle and blade like leaves
  - Moist and easily bent leaves less flammable than stiff and leather like leaves
  - Thick leaves less flammable than fine or thin leaves



**Photo-Cynthia Nations** 

### **Fire Resistant Plant Characteristics** Fire resistant plants share certain physical characteristics

- Plants that produce a low amount of litter less flammable than those that produce a lot of litter
- Plants with sap that looks more like water less flammable than plants with thick, gummy, or resinous sap
- Plants without fragrance less flammable than plants with aromatic qualities
- Plants with silver or gray leaves with high mineral and ash content less flammable that those without (Some plants, like the highly ignitable native fragrant sages, do not follow this rule.)
- Plant leaves without hair (cilia) less flammable than those with hair



## Fire Resistant Plant Characteristics Summary

- Store water in leaves or stems
- Produce very little dead or fine material
- Possess extensive, deep root systems for controlling erosion
- Maintain high moisture content with limited watering
- Grows slowly and needs little maintenance
- Are low growing in form
- Contain low levels of volatile oils or resins
- Have an open, loose branching habit with a low volume of total vegetation



Annual-Red Maids *Calandrinia menziesii* Photo-Joe Decruyenaere, 2008

Annual-Tidy Tips Layla platygloss Photo-Sen A. O'Hara, 2008





Mariposa Lily Calochortus venustus Photo-Lynn Watson, 2006



Photo-Pixabay Bobby dazzler100

Groundcover – Clumping Gazania Gazania 'Clumping'.





Perennial – Lupine Lupinus spp.

## Fire Resistant Plant Examples



Shrub – Mirror Plant *Coprosma spp.* 



Fruit Trees – Apple, Apricot, Cherry, Lemon, Lime, Nectarine, Orange, Pear Persimmon, Plum, Prune, Tangerine



Perennial-California Poppy Eschscholzia californica

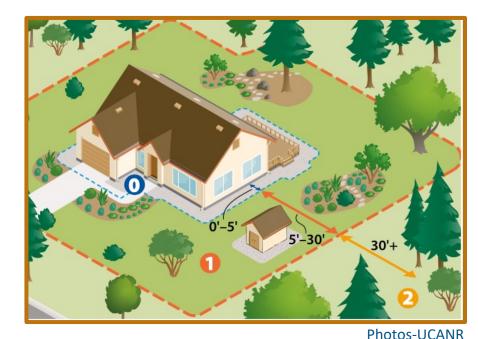
Photo-Calscape, 2010



Deciduous Tree-Western Redbud Cercis occidentalis

# Firewise Landscaping: Protect Your Home!





# Before





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## **Protecting Your Neighborhood**

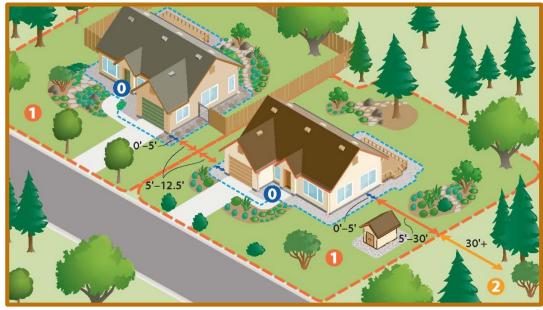


Photo-UCANR

Overgrown Trees and Shrubs on Roof

If you don't own a 100-ft zone or more around the

house: Prioritize implementing the recommended actions under Zone 0 and 1.



**Photo-Cynthia Nations** 



Neighboring Overgrown Trees



**Photo-Cynthia Nations** 



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### References

- Fine Gardening Firesecaping and Wildfire Recovery: An Interview with Douglas Kent: https://www.finegardening.com/article/firescaping-an-interview-with-douglas-kent
- Fire in California: Defensible Space: <u>https://ucanr.edu/sites/fire/Prepare/Landscaping/DefensibleSpace/</u>
- Fire in California: Mulch: <u>https://ucanr.edu/sites/fire/Prepare/Landscaping/Mulch/</u>
- Hedayati, F., C. Stansell, D. Gorham, and S. L. Quarles. 2018. Wildfire Research: Near-building Noncombustible Zone: <u>https://ibhs.org/wildfire/near-building-noncombustible-zone/</u>
- Kent, Douglas (2019). *Firescaping: Protecting Your Home With a Fire-Resistant Landscape*.
- Prepare for Wildfire: Fire-Resistant Landscaping: <u>https://www.readyforwildfire.org/prepare-for-wildfire/get-ready/fire-resistant-landscaping/</u>
- Quarles, S. and Smith, E. (2008). The Combustibility of Landscape Mulches. University of Nevada Cooperative Extension. <u>https://anrcatalog.ucanr.edu/Details.aspx?itemNo=8695</u>
- Rubin, G. and Warren, L. (2013). The California Native Landscape: The Homeowner's Design Guide To Restoring Its Beauty and Balance.
- The Combustibility of Landscape Mulches: <u>https://naes.agnt.unr.edu/PMS/Pubs/1510\_2011\_95.pdf</u>
- Valachovic, Y., Quarles, S., & Swain, S. (2021). Reducing the Vulnerability of Building to Wildfire: Vegetation and Landscaping guidance. <u>https://anrcatalog.ucanr.edu/pdf/8695.pdf</u>
- Wildfire Home Retrofit Guide: <u>http://www.readyforwildfire.org/wp-</u> <u>content/uploads/Wildfire\_Home\_Retrfit\_Guide-1.26.21.pdf</u>
- Wildfires: Protecting Our Homes-and Our Forests: <u>https://sonomasun.com/2021/06/22/wildfires-protecting-our-homes-and-our-forests/</u>

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#### Acknowledgements

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Call our helpline at: (650) 276-7430

*Email* questions to: <u>mgsmsf@ucanr.edu</u> (please include your name, city, phone # (best time to call), question/descrition of problem, photos)

*When our helpline offices reopen, visit* us in three locations (closed on holidays). If bringing samples, please enclose in a sealed container.

Mondays 9am-4pm Elkus Ranch Conference Center 1500 Purisima Creek Road Half Moon Bay, CA 94019

Website: smsf-mastergardeners.ucanr.edu

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