



**WEST BASIN**  
Municipal Water District

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# Firecaping Workshop

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Focusing on the:  
**Palos Verdes  
Peninsula**

April 21, 2021



## This Evening's Speakers

- **Melissa Buendia** – Facilitator
- **Director Harold C. Williams, MSCE, P.E.** – Introduction / Opening Remarks
- **Tammie Myers** (California Water Service) – Opening Remarks
- **Trevor Moore** (Los Angeles County Fire) – Opening Remarks
- **Douglas Kent, MS, MLA** – Class Instructor
- **Gus Meza** – Moderator
- **Jenyffer Vasquez** – Moderator
- **Matthew Veeh** – Moderator

# Mission

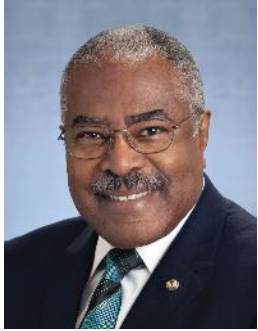
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Provide a **safe** and **reliable** supply of **high-quality water** to the communities we serve.

# Board of Directors

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Division I

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Harold C. Williams  
President



Division II

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Gloria D. Gray  
Immediate Past  
President



Division III

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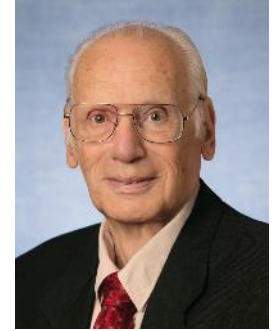
Desi Alvarez  
Secretary



Division IV

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Scott Houston  
Treasurer

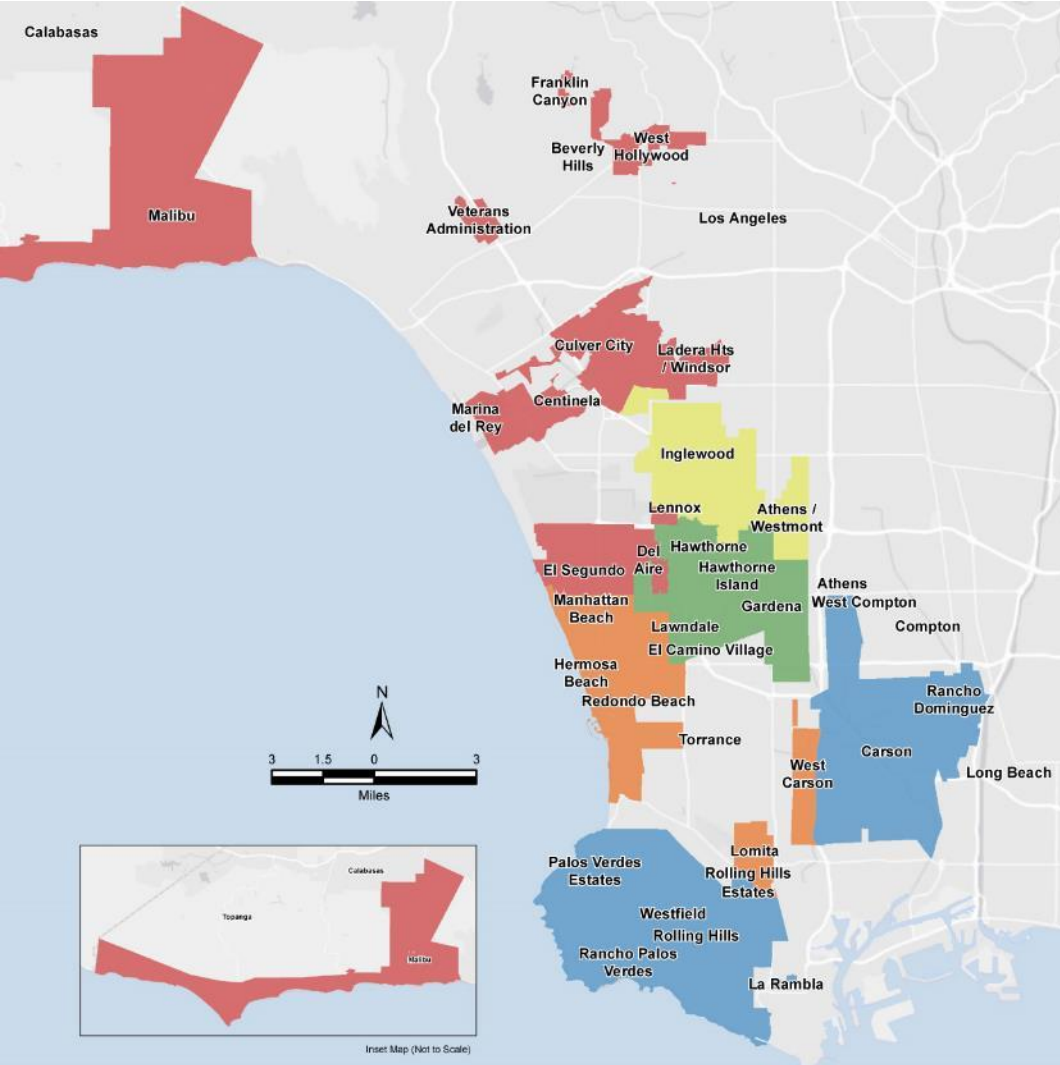


Division V

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Donald L. Dear  
Vice President

# Service Area



## Division I

Carson, Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, Rolling Hills Estates, and unincorporated LA County areas of Rancho Dominguez



## Division II

Inglewood, and unincorporated LA County areas of Lennox, South Ladera Heights, West Athens, and Westmont



## Division III

Hermosa Beach, Lomita, Manhattan Beach, Redondo Beach, and a portion of Torrance



## Division IV

Culver City, El Segundo, Malibu, West Hollywood, and unincorporated LA County areas of Del Aire, Lennox, Marina del Rey, North Ladera Heights, Topanga, View Park, Windsor Hills and Wiseburn



## Division V

Gardena, Hawthorne, Lawndale, and unincorporated LA County area of El Camino Village

# California Water Service Water Efficiency Programs



- Formed in 1926, 92 years of experience
- Service areas across CA, 100 Communities
- Serve 2 million Californians through almost 500,000 service connections
- Over 80 billion gallons of water annually
- More than 400,000 water quality tests per year

# Water-Efficiency Programs



## • Rebates

- [www.calwater.com/rebate](http://www.calwater.com/rebate)
  - High-efficiency toilets
  - High-efficiency clothes washers
  - Smart irrigation controllers
  - High-efficiency sprinkler nozzles

## • Conservation Kits

- [www.calwater.com/kit](http://www.calwater.com/kit)

## • Smart Landscape Tune-Up Program

- [www.calwater.com/conservation/tuneup](http://www.calwater.com/conservation/tuneup)





# Commercial Water-Efficiency Programs



- Rebates

- [www.calwater.com/rebate](http://www.calwater.com/rebate)

- High-efficiency toilets
- High-efficiency urinals
- Smart irrigation controllers
- Spray bodies w/ pressure regulation
- Large rotary nozzles
- High-efficiency sprinkler nozzles

- Customized Incentives

- Smart Landscape Tune-Up Program





# Conservation Resources



<https://www.calwater.com/conservation/resources/>

## Conservation

Rebates

Smart Landscape Tune-Up Program

Conservation Kits

H2O Challenge

Report Leaks and Waste

Conservation Resources

## Conservation Resources



California has a traditionally dry climate, making it important for us to make water conservation a way of life and use water wisely. Good conservation practices help ensure a reliable water supply into our future.

Cal Water is always here to assist you in your conservation efforts. The links below can help you save water and take advantage of the many water conservation programs and resources we offer.

### General information

- Conservation tips
- Drought information
- Drought-resistant plants
- Be water-wise and fire-wise
- Conservation reports
- Urban water management plans
- City of Hawthorne conservation program
- Instructional and conservation videos
- Useful web sites

### Conservation regulations

- Time-of-day watering restrictions
- Prohibited uses of water
- Local conservation ordinances
-  Rule 14.1
-  Schedule 14.1

### Cal Water resources

- Conservation rebates
- Conservation kits
- H2O Challenge





# Structures

**CREATING FIRE-RESISTANT PROPERTIES AND COMMUNITIES**

# Structures

## Your 1<sup>st</sup> Priority!

Whether firebrands or direct flame contact, your structure must be maintained to withstand an assault of intense heat and flying burning embers.



Top: Bond  
Fire, 2020.



Bottom:  
Woolsey  
Fire, 2018



# Structures: Of Concern to the Peninsula

## *Topics*

Ridgetop Living

Outbuildings

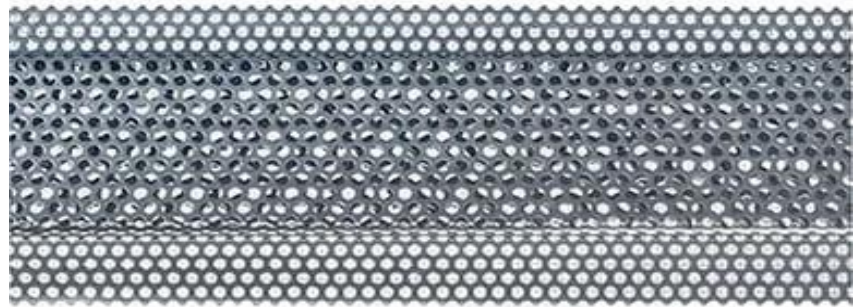
Small Lots



# Structures: Ridgetop Living

## *Problems*

- Elongated flames
- Intense heat
- Firebrands propelled by convection



Vulcan Vent: Fire and ember safe

## *Solutions*

- Screens
- Eaves
- Trim
- Siding



## Structures: **Outbuildings** *Needs Attention*

- Basic maintenance
- Weatherization
- Check screens



Firebrands can ignite these two outbuildings. The overflowing rain gutters (left) and the big gaps in the door (top) create opportunities and fuel for firebrands.



## Small Properties

As illustrated by the state's deadliest and most destructive wildfires, small lot neighborhoods are particularly vulnerable to loss. The reason is because there is not enough distance between the homes to buffer the intense heat and a domino effect is created. Homes burn at about 1,110F.

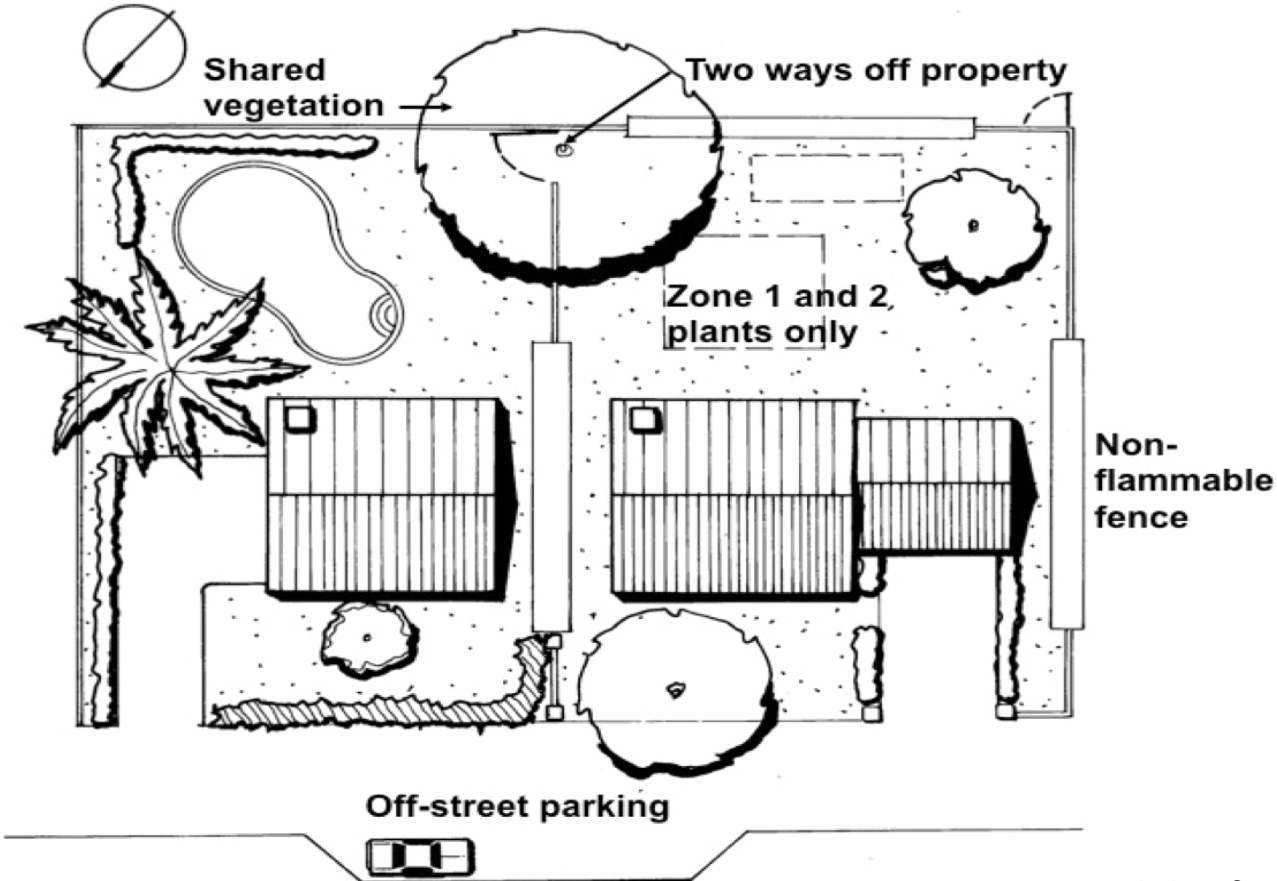


Old Fire, 2003





# Structures: Small Lot Design Strategies



See next slides for details

## Structures: Small Lot Design Strategies

**The Roof:** Installing and maintaining a fire-retarding roof is possibly the most important aspect to protecting a house on a small lot.

**Off-Street Parking:** Gridlock is common in high-density neighborhoods, but more so during wildfires. Off-street parking and pullouts will greatly speed travel times.

**Escape Routes:** Dense neighborhoods need as many escape routes as possible.

**Fences:** The pursuit of privacy adds an incredible amount of fuel to any property, but it is compounded on small lots. Separate structures with a concrete wall.

**Plant Selection:** Fire retardant and fire-resistant plants only on small lots.

**Shared Vegetation:** Not every property needs a tree. Oftentimes a homeowner can simply let their neighbor's tree grow over and onto their property.

**Pools and Spas:** Design your pool or spa so that you or fire fighters have easy access to the water and drain outlets.



## Structures: To Do

- Ensure all openings are screened.
- Clean **roof** and gutters.
- Manage **seams** and fill gaps.
- Paint, if not sand, all peeling **paint**.
- Make your **address** visible.





# Questions

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## Structures

*Palos Verdes Peninsula  
Fireescaping Webinar*

A night-time photograph showing a city illuminated by streetlights and building lights. In the background, a large mountain is engulfed in a massive fire, with bright orange and yellow flames and thick smoke rising into the dark sky. The fire appears to be spreading across the mountain's slopes. The city lights are concentrated in the valley below the mountain, creating a stark contrast with the dark, fiery landscape.

# First Five Feet

**CREATING FIRE-RESISTANT PROPERTIES AND COMMUNITIES**

## First Five Feet: 2<sup>nd</sup> Priority

The first 5 feet of your home plays a pivotal role in its protection.

- **Avoid storage.** Compost bins, toy boxes, coat and shoe cupboards, and recycle and trash cans should be placed outside of this area.
- **Absolutely no flammable plants.** The most flammable include buckwheat, cypress, eucalyptus, juniper, and any other plant with a brittle nature and fragrance.
- **Absolutely no woody dry organic mulches.** Inorganic mulches, like river rock, are preferred. If organic mulch is needed, then use only humus, the most decomposed.
- **Avoid the use of fabrics,** which includes awnings, cushions and umbrellas.
- **Avoid erecting shading devices with the first 5 feet.** Not only will this help stop a fire from connecting to a structure, it also gives the wind and firebrands an easy exit, instead of trapping them.



## First Five Feet: Do you see it?



The wood, containers and tools provide opportunities for ignition and unnecessarily add risk to an otherwise fire-hardened home.



# First Five Feet: **Shade Structures**

## *Problems*

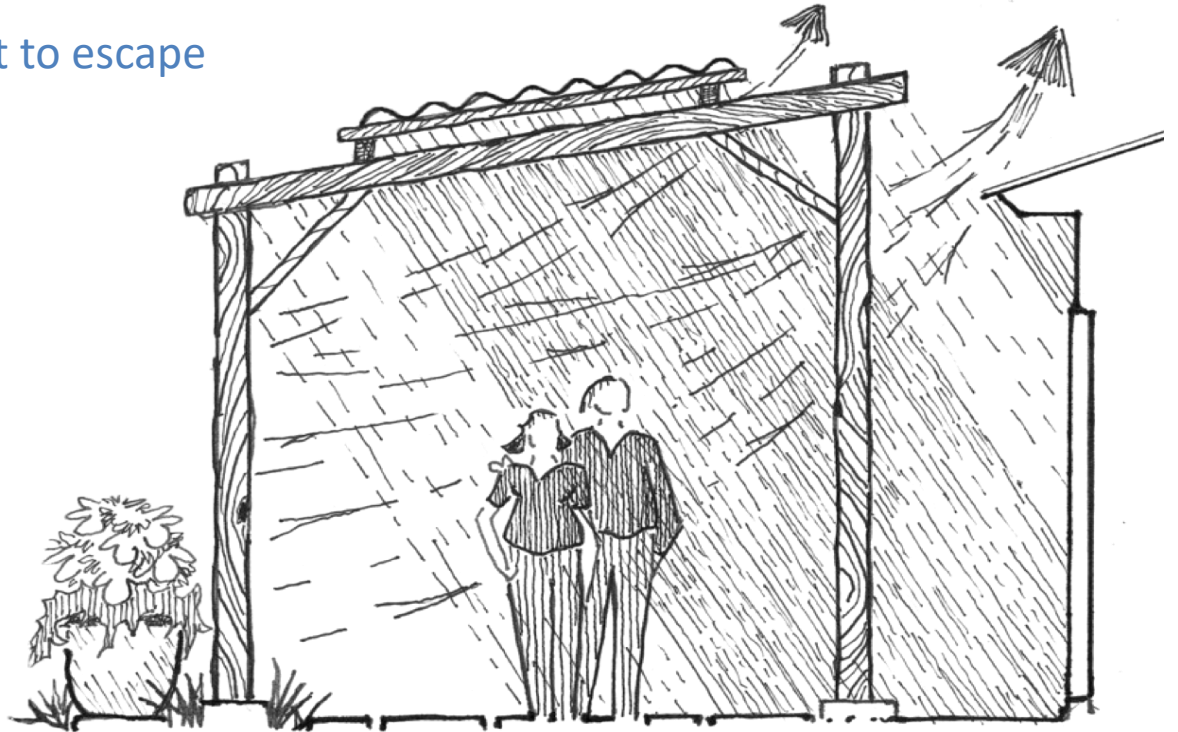
- Poorly maintained
- Attached to structures



# First Five Feet: **Shade Structures**

## *Solutions*

- Detach from structure
- Slant to allow heat to escape
- Care for the wood





# Questions

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## First Five Feet

*Palos Verdes Peninsula  
Fireescaping Webinar*



# Defensible Space

**CREATING FIRE-RESISTANT PROPERTIES AND COMMUNITIES**

# Defensible Space: **Zone 1**

## *The Garden Zone / Defensible Space*

- **Distance:** Extends 30 ft from house or structure.
- **Primary Goal:** Able to withstand flying embers and intense heat. Only zone that selected plants can be dependent on imports, mainly water and fertilizers.
- **Secondary Goal:** This area has to maintain a high recreational, functional and/or economical value.



## *Topics*

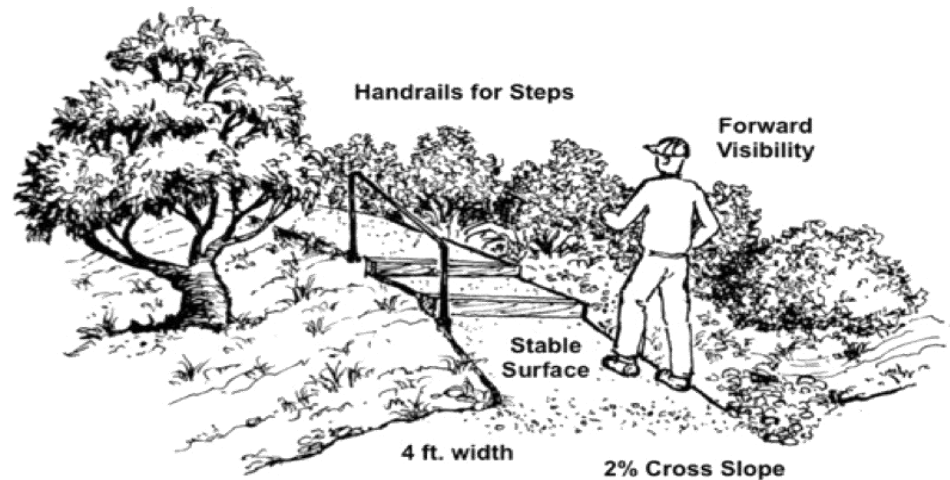
- **Paths**
- **Fences**
- **Landscape Features**



# Defensible Space: Pathways

*Pathways are vital for fleeing and fighting*

- They should encircle a structure
- They are 4 feet wide and stable
- There are no obstructions that hinder swift travel

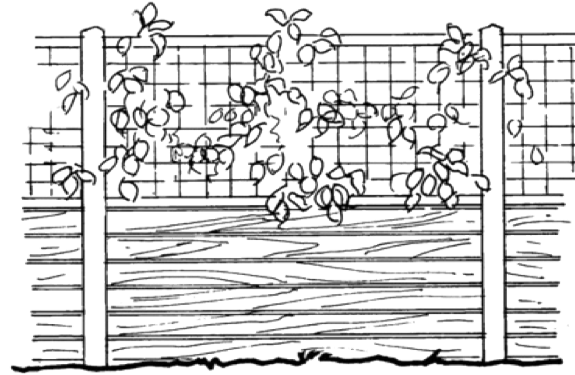
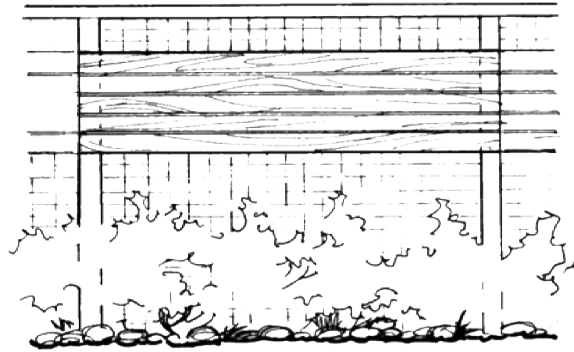


# Defensible Space: Fencing





# Defensible Space: Fencing



# Defensible Space: Landscape Features

## *Needs Attention*

- Basic maintenance
- Clean and preserve wood
- Remove flammable items from around landscape feature



## Defensible Space: To Do

- Remove all flammable items within the first 5 feet!
- Remove dead, **dying** and diseased vegetation.
- Maintain landscape features, such as fences and tree houses.







# Questions

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## Defensible Space

*Palos Verdes Peninsula  
Fireescaping Webinar*



# Plants

**CREATING FIRE-RESISTANT PROPERTIES AND COMMUNITIES**

## Plants: Less Flammable

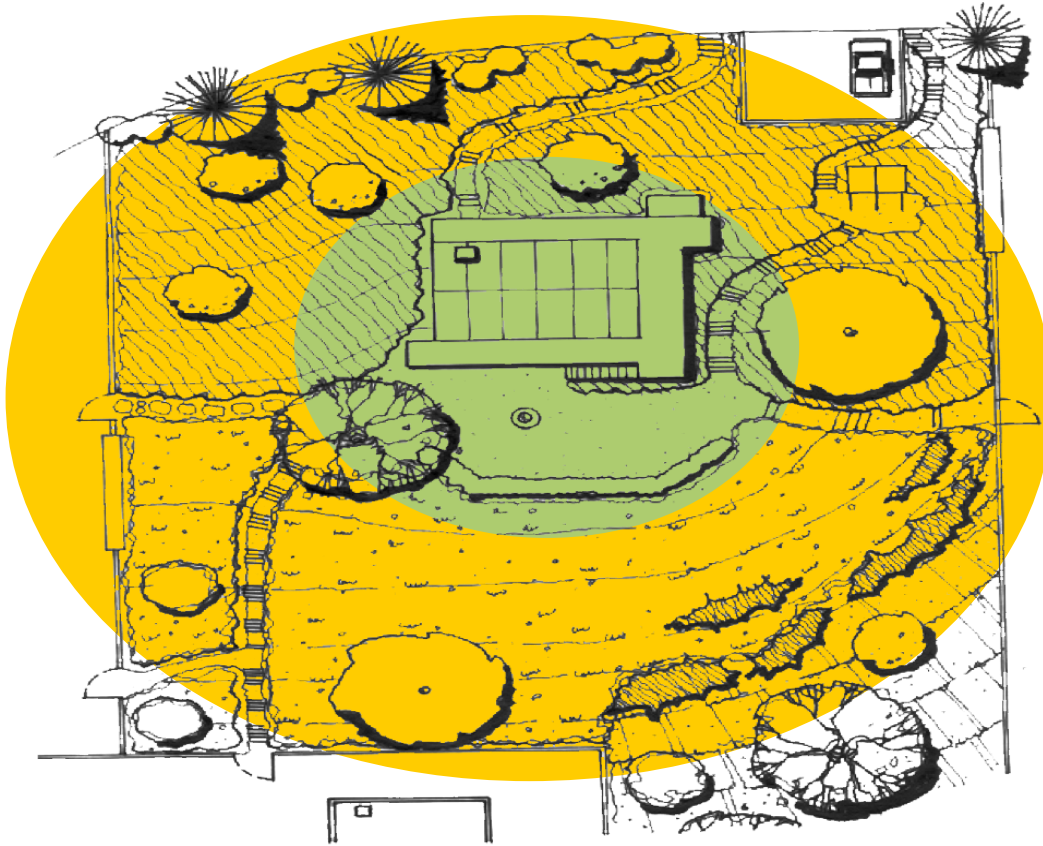


Coral bells (*Heuchera*) and *Carex pansa* have many ideal attributes.

### *Knowing Traits is More Important than Lists*

- Broadleaf plants
- Moist and easily bent leaves
- Thick leaves
- Low amount of litter
- Sap that looks more like water
- Plants without fragrance
- Plants with silver or gray leaves
- Plant leaves without hair

# Plants: Less Flammable



**FIRE  
RESISTANT**



**FIRE  
RETARDANT**



# Plants: Less Flammable



## Fire Retardant

Agapanthus	Grape
Cercis – Redbud	Liquidambar
Crape Myrtle	Philodendron
Fescue	Photinia
Flax	Succulents
Gazania	



## Fire Resistant

Artemisia ‘Silver King’  
Ceanothus  
Cistus – Rockrose  
Coast Live Oak  
Cotoneaster  
Lemonade Berry  
Mallow  
Native Verbena  
Toyon  
Yarrow  
Yucca

# Plants: Less Flammable - Lists



Citrus is notoriously good at resisting the effects of fire and intense heat.

## Fire Resistant

- **Bird**
- **Food**
- **Lawn Alternatives**
- **Medicine**
- **Native**
  - Chaparral
  - Desert
  - Woodland Understory
- **Succulents**
- **Temperate**
- **Tropical**

## Plants: The Problem with Lists



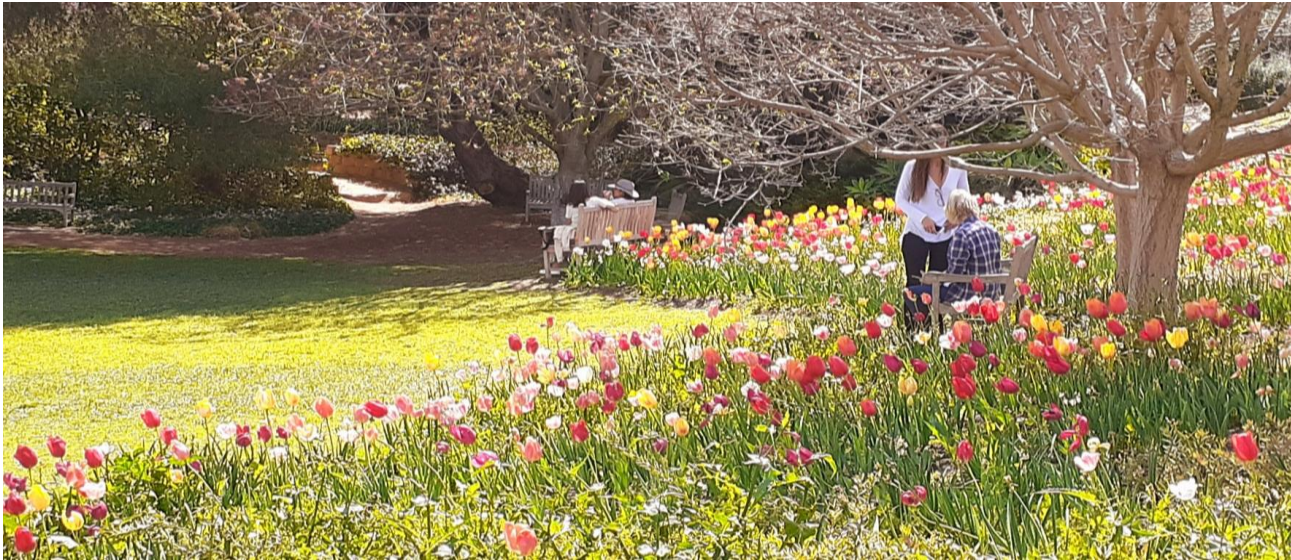
- Too Old
- Diseased
- Injured
- Pest Infested
- Not Healthy

***Maintenance is the Fulcrum of Fire Safety***



## Plants: To Do

- Remove dead, **dying** and diseased vegetation.
- **Replace** vegetation before it becomes an economic liability and fire risk.
- Do not let your plants **dry** out.





# Resources

## State Approved Air Vents for Fire Protection

- Brandguard Vents, San Clemente, CA  
<https://www.brandguardvents.com/>
- Embers Out LLC, Yorba Linda, CA  
<https://www.embersout.com/>
- Vulcan Technologies, San Rafael, CA  
<http://www.vulcantechnologies.com/>

## Flame Retardant Paints

All the companies below provide Class A paints, the most fire retarding and state approved.

- BanFire
- FireTech
- FlameOFF
- INSL-X
- Krylon
- Master Flame
- Zero Flame

## Nursery Centers with Experience in Fire Protection

- Armstrong Nurseries, Torrance
- Elwood Nursery, Rolling Hills Estates
- South Coast Botanic Gardens, Palos Verdes Estates

## Qualified Landscape Contractors

California Landscape Contractors Association, “Find a Contractor”

<https://member-clca.org/max/4DCGI/directory/contractor/index.html>

## California Department of Forestry, Building Materials Listing

<https://osfm.fire.ca.gov/divisions/fire-engineering-and-investigations/building-materials-listing/bml-search-building-materials-listing>

## Insurance Institute for Business and Home Safety (IBHS)

<https://ibhs.org/risk-research/wildfire/>



For more information about fire protection, water conservation and/or West Basin Municipal Water District, please contact one of the individuals listed

# Thank you!

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# Questions

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