



Plant (De)Selection & FireScaping

Welcome!

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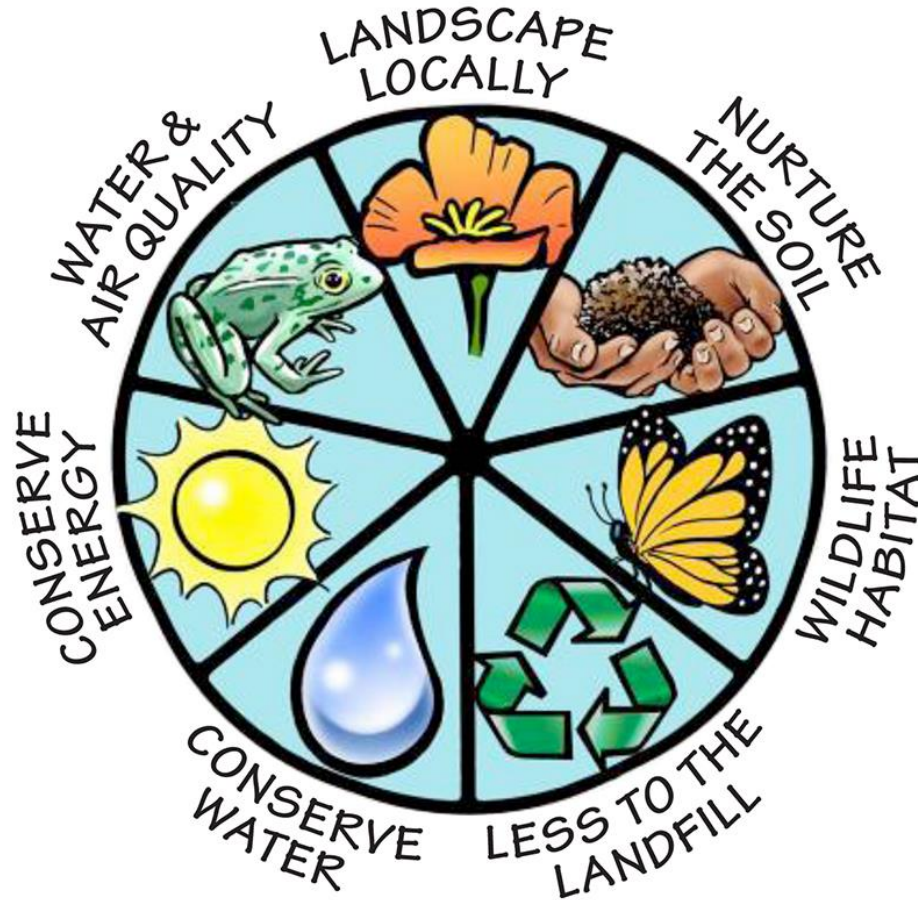


Presentation Overview

At the end of this presentation, you will be able to:

- Summarize ReScape California's Principles of Sustainable Landscaping
- Define 'Firescaping,' Why it's important, and How effective it can be
- List several Firescaping Actions one can take immediately with an existing landscape
- Summarize key plant identification, selection, design, and maintenance activities to 'firescape' existing and new landscapes
- Locate model landscape designs available online from the Sonoma-Marín Saving Water Partnership
- Summarize why Maintenance is an overarching process for success
- Summarize major process steps to create a new landscape/improve an existing one
- Identify online resources to assist in design, plant selection (WUCOLS), irrigation design (WELO), and Firescaping

ReScape California Principles: A Whole Systems Approach

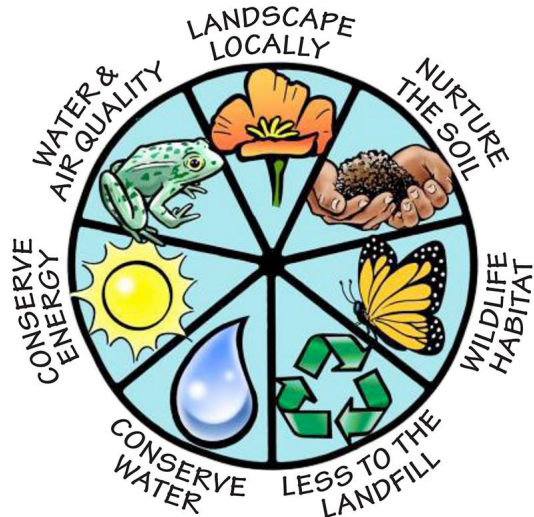




Shared Goals



R U S S I A N R I V E R
W A T E R S H E D A S S O C I A T I O N



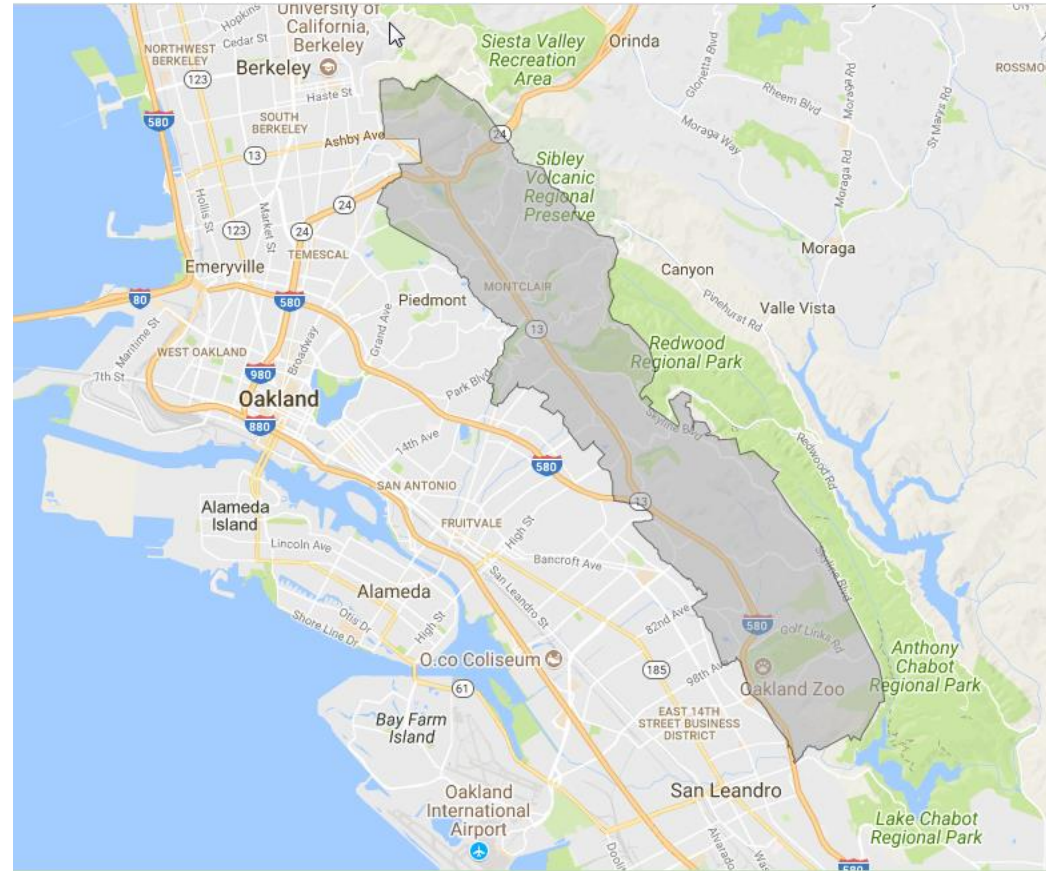
Clean Water Habitat Restoration Watershed Enhancement

To promote cooperation and implementation of projects that protect watershed resources, restore fisheries and improve water quality at reduced cost to our member agencies and communities they serve.



‘Fire Severity Zones,’ But...

- 6-8 months w/o rain
- Long growing season = loads of fuel
- Global warming and drought intensifies conditions and fires
- “Fire Safe” is like “Deer Proof”



Oakland High Severity Zone

Security?



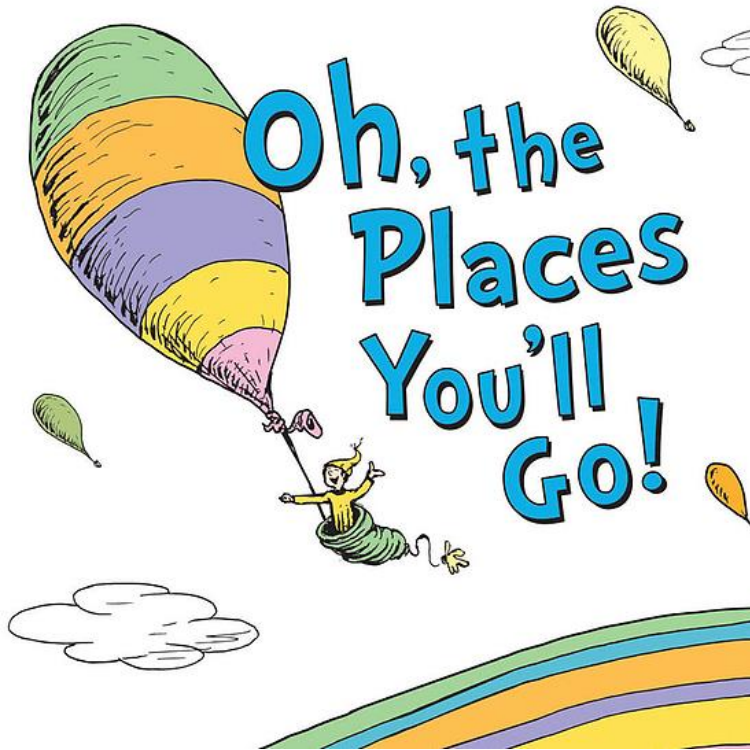
Firefighters' basic priorities

Protect:

- Life (humans)
- Property (humans' stuff)
- Environment (all the rest)



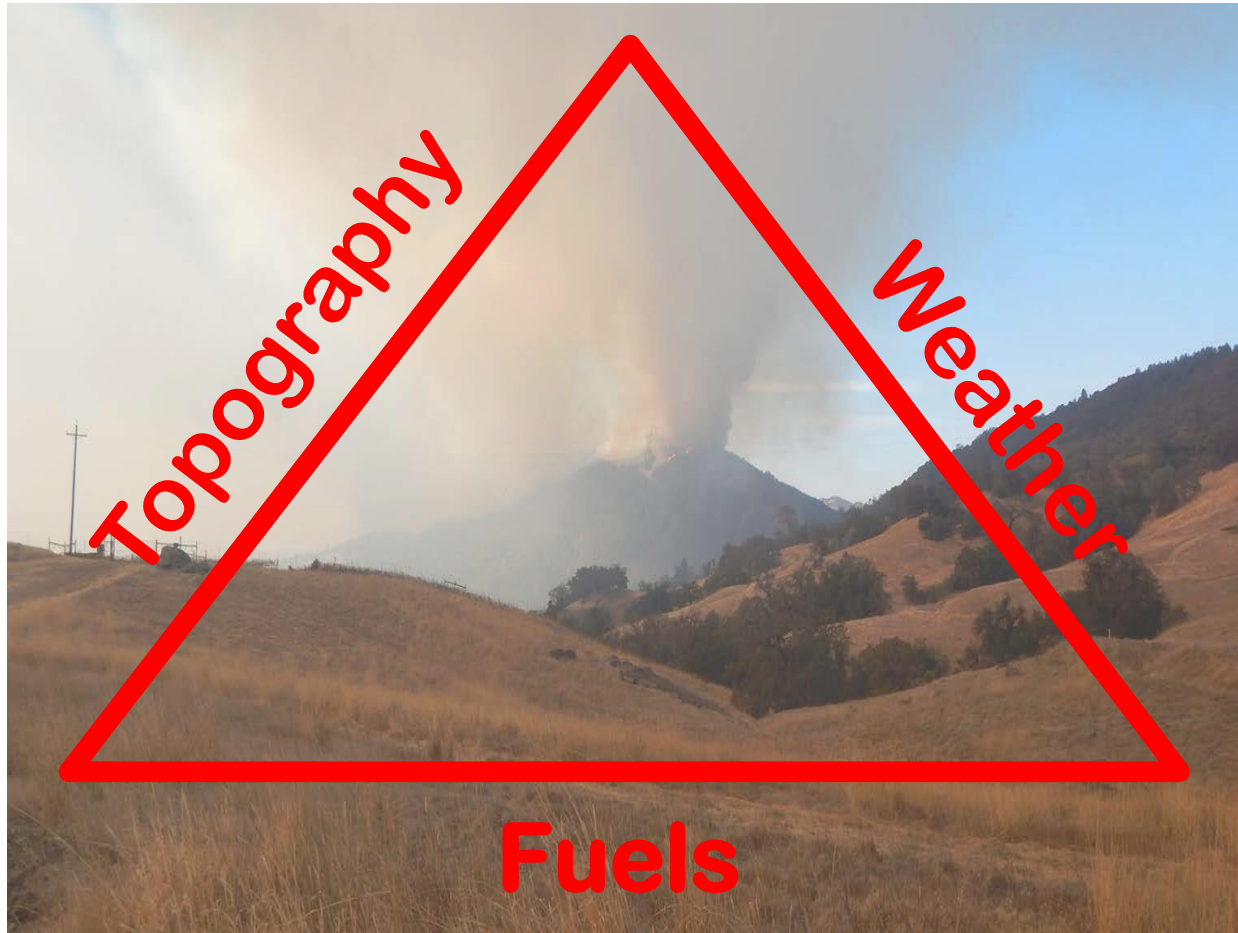
Flammability



Firebrands can go
a MILE



Our Considerations

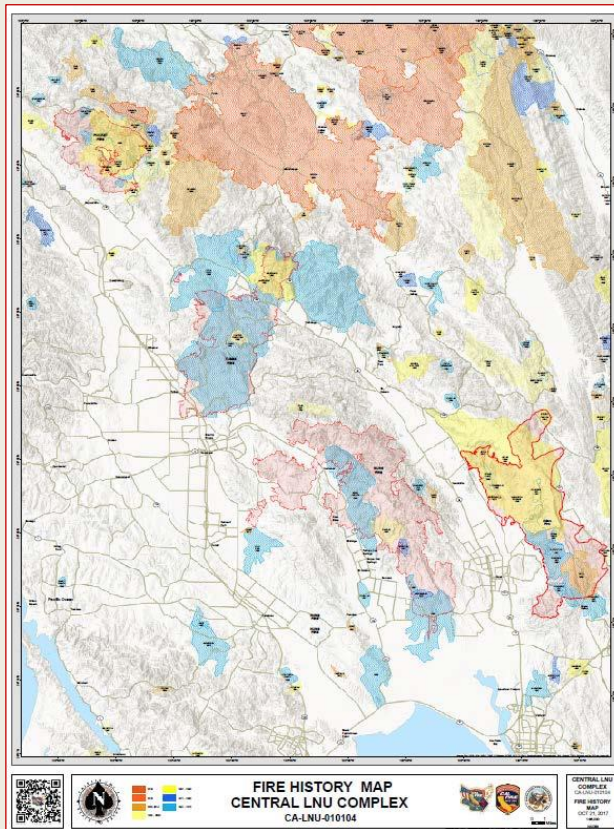


Burned Homes Surrounded by Unburned Eucalyptus Trees!



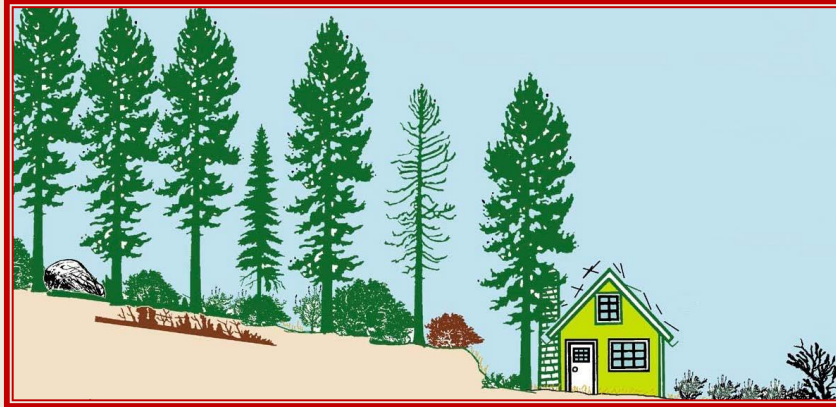
What Can We Do?

How did we get here?



What Can We Do?

Two Guiding Principles to prevent wildfire home ignitions:



**“Harden”
structures to
resist ignition**

AND

**Decrease
surrounding
vegetation**

Maintenance (Decrease Surrounding Vegetation) & Plant Selection (Past and Future)

- Removal:
 - Dead stuff (fuel)
 - Flammable materials (fuel)
- Reduction
 - Pruning (fuel)
 - Mowing (fuel)
- Replacement
 - Fire magnets (fuel again)
 - Stressed / dead plants (fuel)
 - Irrigation (preventing fuel)



Priority ONE: Roofs & Gutters

Important Concepts:

- The roof is a large, relatively flat surface, which makes it vulnerable, and a high priority.
- Your roof should be “Class A”. If you are not sure what it is, get an inspection.



Priority Two: Vents, Attic and Foundation





Structure Priorities

Structure Survival Priorities for Wildland Fire :

Exposure from embers that may have been blown a mile or more. Embers can also ignite near-home vegetation and debris:

1 Roof / Edge

2 Vents

3 Vegetation/Defensible Space and STUFF

Ember, radiant, and/or flame impingement exposures from near- home vegetation, other structures, and wildfire:

4 Windows

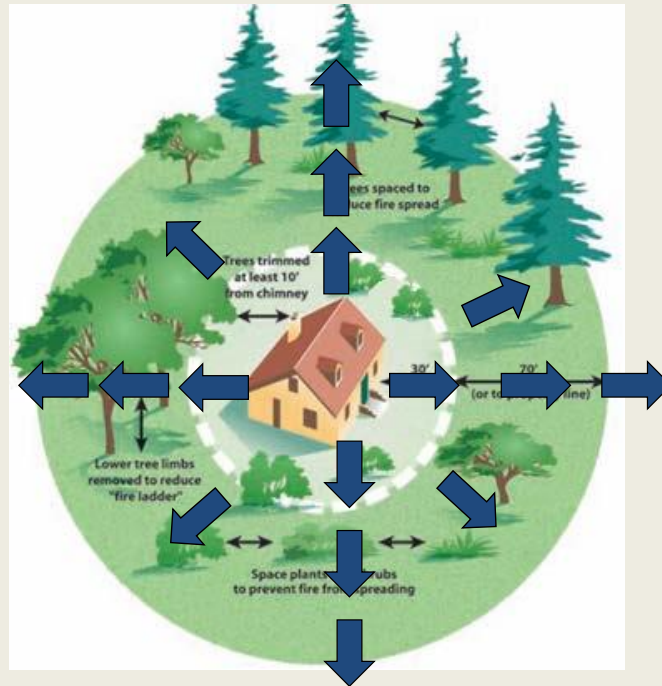
5 Decks

6 Siding

Dr. Steve Quarles, Insurance Institute for Business & Home Safety (IBHS)

Design & Maintenance!

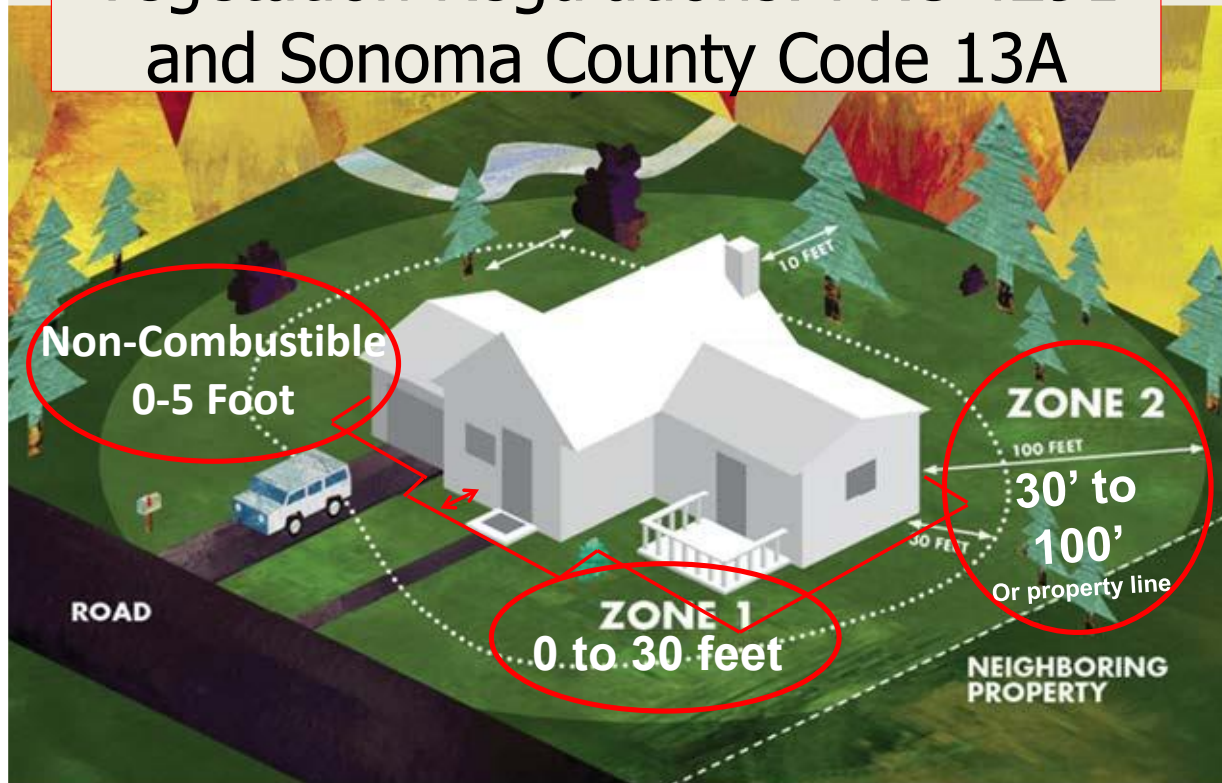
Start with the House and work out



➡ *Start with the house and work out* ➡

Zoning Out

Vegetation Regulations: PRC 4291 and Sonoma County Code 13A



<https://sonoma-county.ca.gov/FES/Fire-Prevention/Hazardous-Vegetation/>

No Plants Next to Structures

0 to 5 feet from building walls

- **GREATEST HAZARDS:** Plants adjacent to combustible siding, foundation or soffit vents, windows, interior corners.
- Install hard surfaces--concrete walkway, noncombustible mulch
- Landscape vegetation: irrigated lawn and low-growing herbaceous (non-woody) plants.
- Shrubs and trees, particularly conifers, are not recommended
- Remove dead plant material.



5 Feet from Structures

- 0-5'
- 5-30'
- 30-100'



- Non-combustible hardscaping
- Low combustibility plants such as non-woody, non-resinous, perennials.
- Take special care with planting near vents, windows, interior corners.

To 30 Feet from Structures

- To 30' away from the structure
- Primary goal: people can get out, fire fighters can get in



31-70 Feet From Structures

- Approx. 30-70' from a protected structure....
- Primary goal is to stop a ground fire.



50% Slope: 70 Feet Plus 50 Feet

Practices:

- Add 10' for every 10% increase in slope (i.e., 120' for a property at 50% slope)
- Select less flammable plants and materials
- Remove/reduce fuel load



Defensible Space: Slow a Fire

- From 70' outward
- Primary goal is to dramatically slow a fire



Defensible Space!!!

- Does save homes
- Should improve forest health and habitat
- Is required by law: PRC 4290 & 4291
- Can be expensive, is never-ending
- Is the responsibility of the homeowner



Tiptoe Through the Flowers

Defensible Space is

NOT

MOONSCAPE

Vegetation is allowed!



Native Wildflowers, Feed the Wildlife, Enjoy Too!

Practices:

- Use slower growing, slower burning vegetation.
- Clear excess dead stuff



<https://www.feis-crs.org/feis/>

look up fire regimes!

Selecting Plants, Designing/Updating Irrigation

- Use less water. Design with lower water-use plants.
- CNPS:
 - <https://www.cnps.org>
 - CNPS Milo Baker Chapter
<https://bit.ly/2MMHidk>
- WUCOLS:
 - https://ucanr.edu/sites/WUCOLS/WUCOLS_IV_User_Manual/Categories_of_Water_Needs/
- Water Efficient Landscape Ordinance (WELO):
 - <https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Model-Water-Efficient-Landscape-Ordinance>
- Sonoma-Marín Saving Water Partnership, Landscape Design Templates:
 - <http://www.savingwaterpartnership.org/concept-plans-and-design-templates/>



Plants Might Ignite Other Materials (Fuses)

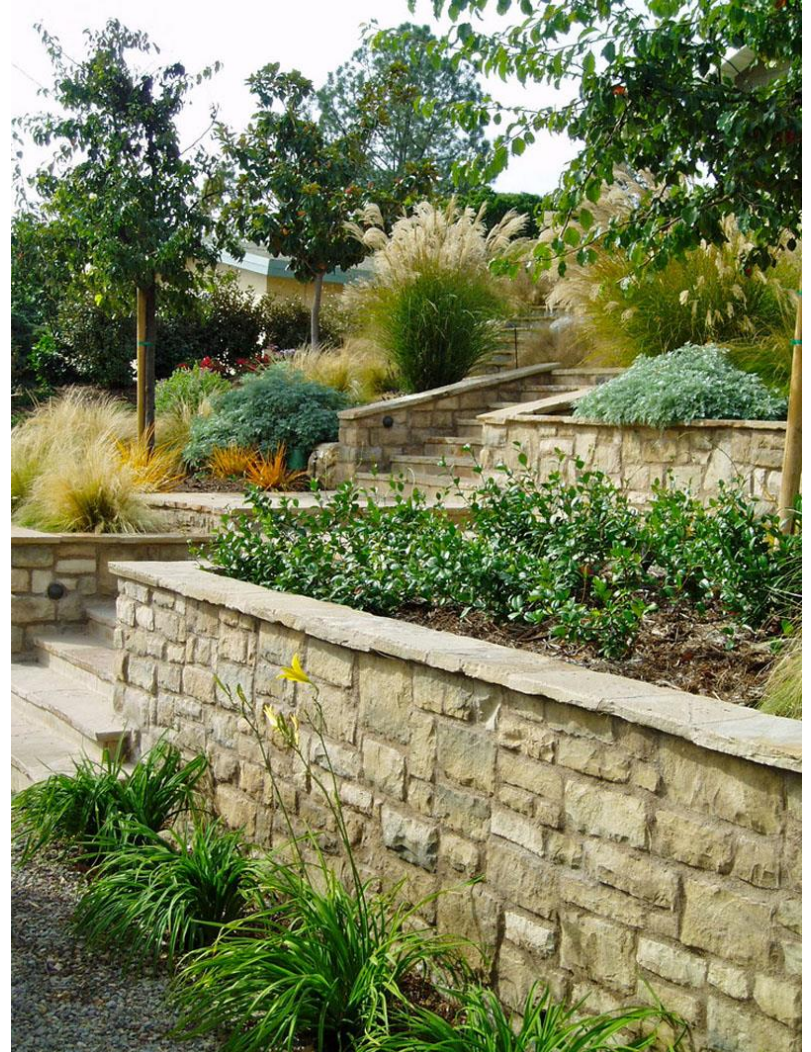
Materials

- Buildings
- Planters
- Furniture
- Arbors
- Trellises
- Sheds
- Railings
- Side Fences, Gates



Fire Breaks

- Terracing
- Paving
- Pools
- Lush lawns
- Non-flammable structures
- Boulder walls





Selecting & Removing Plants

What Plants are **most flammable**? Why?

<https://www.firesafemarin.org/plants/fire-prone>

What plants are **fire resistant**? How resistant? Why?

<https://www.firesafemarin.org/plants/fire-resistant>

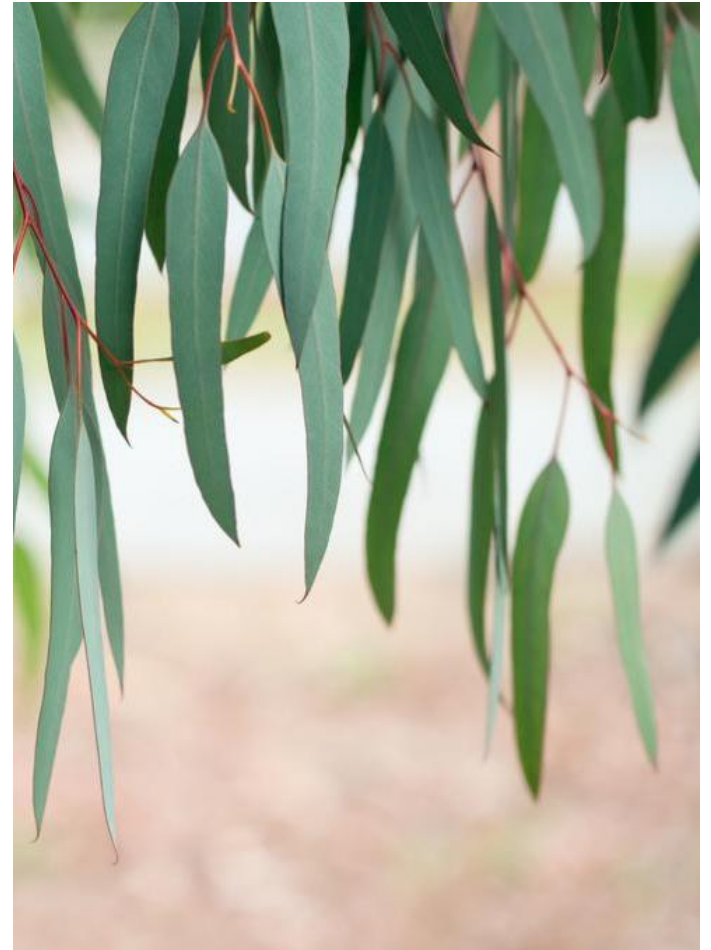
UCCE **Sonoma County** Fire Wise Landscape Resources

http://cesonoma.ucanr.edu/Disaster_Resources/Fire_Resistant_Landscape/

Selecting Firewise Plants

<https://ucanr.edu/sites/postfire/files/248491.pdf>

Eucalyptus, Pines, Junipers, other Conifers



Embers, Firebrands,...



Be Safe, Hire Experienced Folks



Thin



Limb up 10'-
15'

Reduce Volume

It's Maintenance!



Turn This

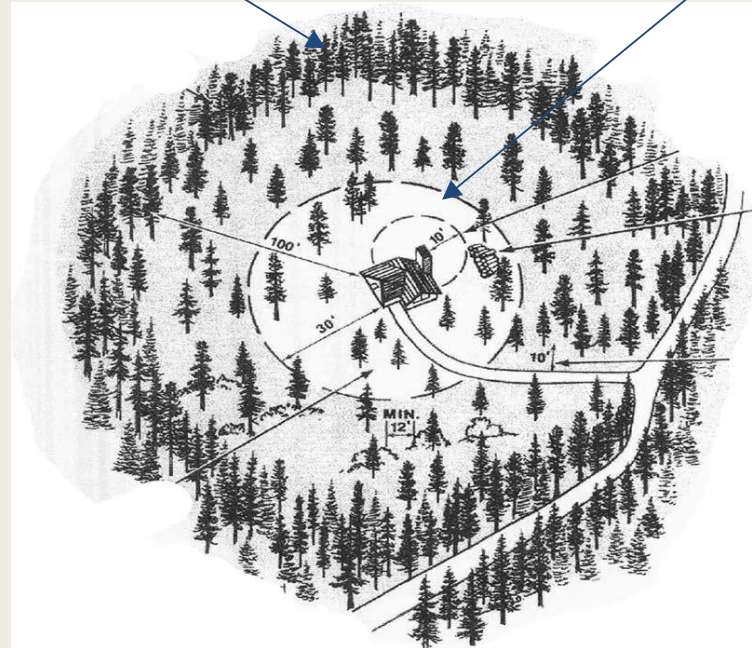


To This

Apt for Smaller Properties?

Turn This

To This


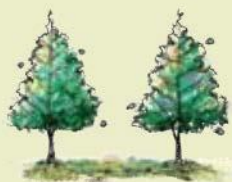






Original Plant Selections

Name that Risk!



Slope & Vegetation Guidelines

| Minimum Horizontal Clearance | |
|---|--|
| SHRUBS | TREES |
| <p>From edge of one shrub to the edge of the next</p> <p>Flat to mild slope (0% to 20% slope) Two times (2x) the height of the shrub (Two shrubs 2' high should be spaced 4' apart)</p>  | <p>From edge of one tree canopy to the edge of the next</p> <p>Flat to mild slope (0% to 20% slope)</p>  <p>10 feet</p> |
| <p>Mild to moderate slope (20% to 40% slope) Four times (4x) the height of the shrub (Two shrubs 2' high should be spaced 8' apart)</p>  | <p>Mild to moderate slope (20% to 40% slope)</p>  <p>20 feet</p> |
| <p>Moderate to steep slope (greater than 40% slope) Six times (6x) the height of the shrub (Two shrubs 2' high should be spaced 12' apart)</p>  | <p>Moderate to steep slope (greater than 40% slope)</p>  <p>30 feet</p> |

Clearance between shrubs should be 4 to 40 feet depending on the slope of the land and size and type of vegetation.

Our New Maintenance 'Filter'

Name that Risk!



Chippers Available

Help is out there!

- Sonoma County Chipper Program:
- Phone: 707-565-6070
- Website: sonomacounty.ca.gov/FES/Fire-Prevention/Curbside-Chipper-Program
 - Google "Sonoma County Chipper"



<https://sonomacounty.ca.gov/FES/Fire-Prevention/Curbside-Chipper-Program/>

BF Principles & Process

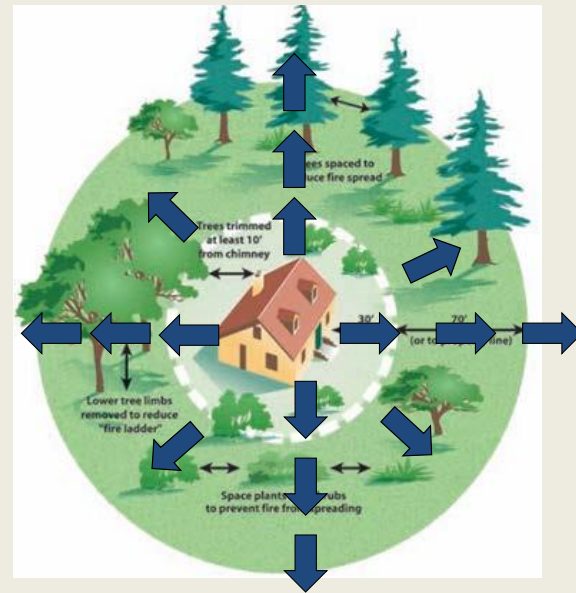
- Analyze the soil: How?
For What?
- Landscape Locally?
- Why Compost?
- Design for Low Water Use
and Fire Safety
- Protect Soil While You
Build
- Continuously Improve
Existing and New Gardens
- Protect the Environment



A Key Point

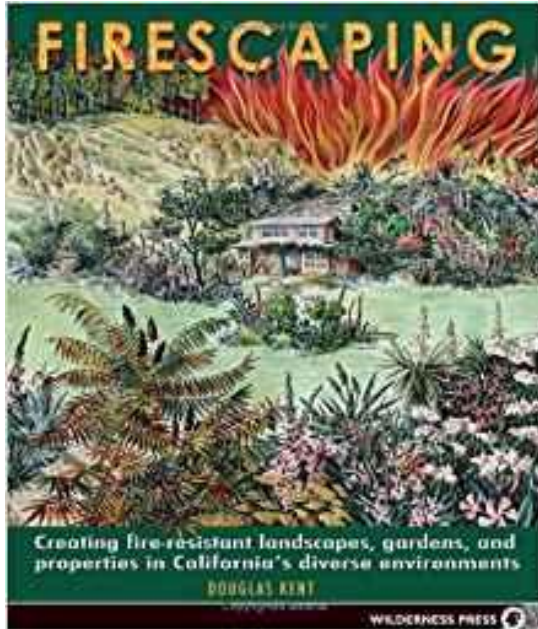
- Design and Plant Selection to limit the damage and buy time.

Start with the House and work out



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Additional Resources



- FIRESCAPING
by Douglas Kent
- UC ANR pubs
 - <https://anrcatalog.ucanr.edu/pdf/8228.pdf>
- ReScapeCA.org
 - <https://rescapeca.org/resources/for-community-leaders-landscape-professionals/>

More Resources

- Fire Safe Sonoma:
<http://www.firesafesonoma.org/main/>
- Sonoma Homeowners Guide:
http://www.firesafesonoma.org/main/sites/default/files/living_with_fire.pdf
- CalFire:
<http://www.readyforwildfire.org>
http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps
- Diablo Fire Safe Council
http://www.diablofiresafe.org/veg_removal.html
- Insurance Institute for Business and Home Safety
<https://disastersafety.org>
- Oakland Fire Safe Council:
<http://oaklandfiresafecouncil.org/the-new-fire-demonstration-garden-at-gateway/>
- FireWise USA:
<https://www.nfpa.org/Public-Education/By-topic/Wildfire/Firewise-USA>



More Resources

UCANR Publication 8228, Home Landscaping for Fire
<https://anrcatalog.ucanr.edu/pdf/8228.pdf>

Calscape (CNPS) **7095** Plants Native to California <https://calscape.cnps.org>

Sonoma-Marín Saving Water Partnership Landscape Design Templates
<http://www.savingwaterpartnership.org/concept-plans-and-design-templates/>

Elaine Ingham, Soil Food Web: <https://www.soilfoodweb.com>

Soil Food Web Labs & Consultants: <https://soilfoodweb.mykajabi.com/p/find-a-consultant-lab>

Teaming with Microbes: The Organic Gardener's Guide to the Soil Food Web (Revised Edition):
http://www.timberpress.com/books/teaming_microbes/lowenfels/9781604691139

A Firescaped Garden is never created once, but
maintained over a lifetime

-Douglas Kent



Photo credit: University of Wisconsin
Ecosystem and Landscape Ecology Lab



Let's Get Outside and Make a Real
Difference

- New Insights Gained?
- Questions to Answer?
- Next Steps on Your Projects?

Thank You!    