Home Hardening Meets Curb Appeal

City of Malibu

Fire Safety Liaison Bradley Yocum

National Preparedness Month 2022

Tonight we are going to:

- Find out exactly what Home Hardening is and why we should do it
- Demonstrate what we look for on a Home Ignition Zone Assessment (HIZA)
- Watch videos that will indicate the potential destructive power of wildfire
- Give you examples of fire wise landscapes and some of the plant species you can use
- Discuss new city and state ordinances that are in place to mitigate damage to homes before wildfire
- Review some of the good, bad, and ugly of plant species palettes that can be detrimental or helpful for to home safety during a wildfire
- Provide resources that with assist you with your landscape plant choices
- Show how you can sign up for a free HIZA

What is Home Hardening

- Home hardening, or fireproofing, is using fire-resistant materials and defensible space design to defend your home against wildfire and windblown embers. These fire-proofing material include roofing materials, vents, eaves and soffits, windows, garage doors, walls and siding, and decking.

What is Fire-Resistant Landscaping?

- Use of Fire-resistant plants
- Non-combustible hardscapes that act as fuel breaks
- Adequate and proper Irrigation
- Appropriate layout and distribution of landscape following best practices

Let's get them together



Typical plant species around homes in Malibu



Very common site in Malibu



Fire climax plant community



Homes and landscape plants are all a part of the climax fire community here in Malibu



Fire finds a way in



First let's find out why we want to harden our homes against wildfire.

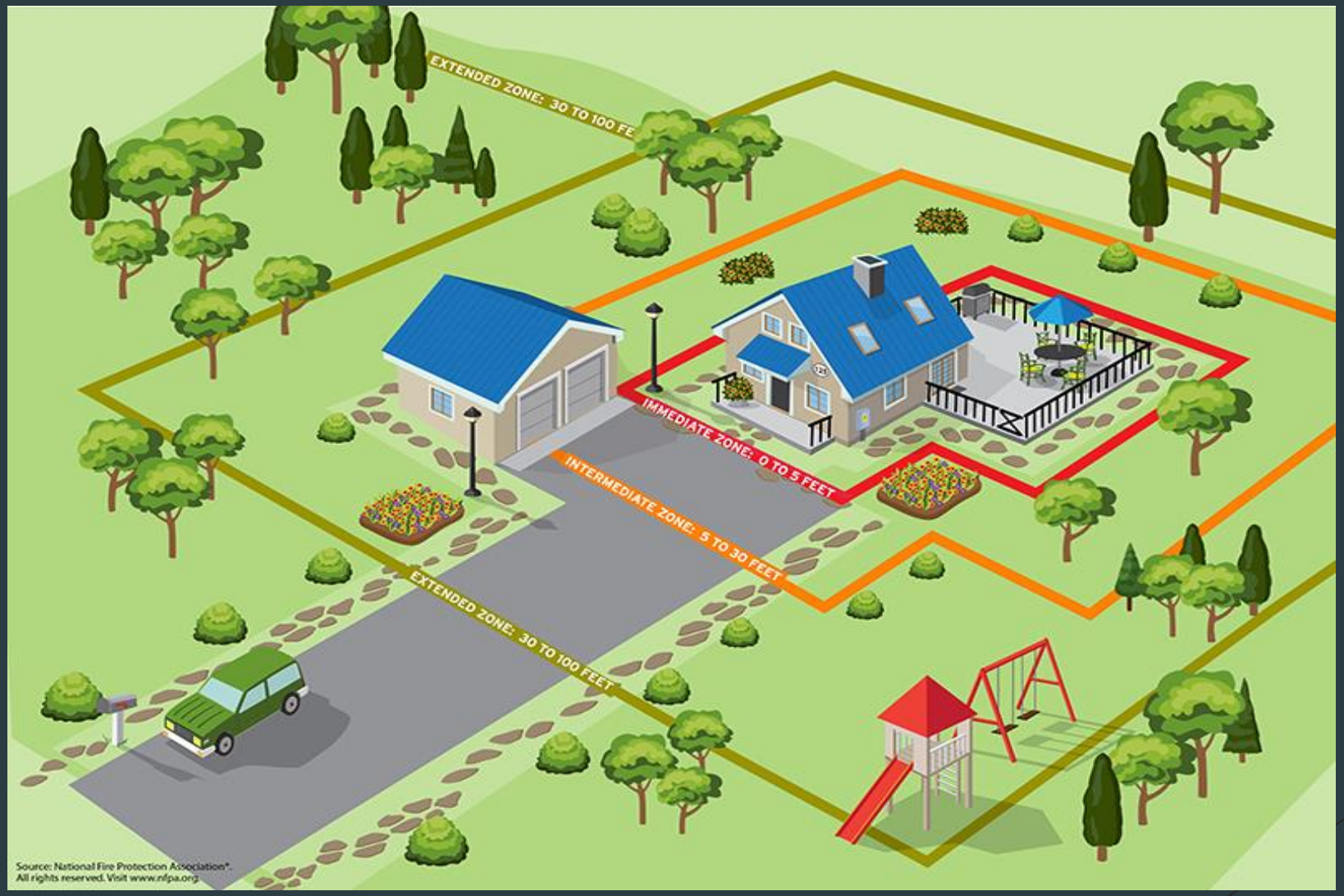
Why bother to harden our homes?

Let's listen to the expert!!

Jack Cohen



DEFENSIBLE SPACE



https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Preparing-homes-for-wildfire

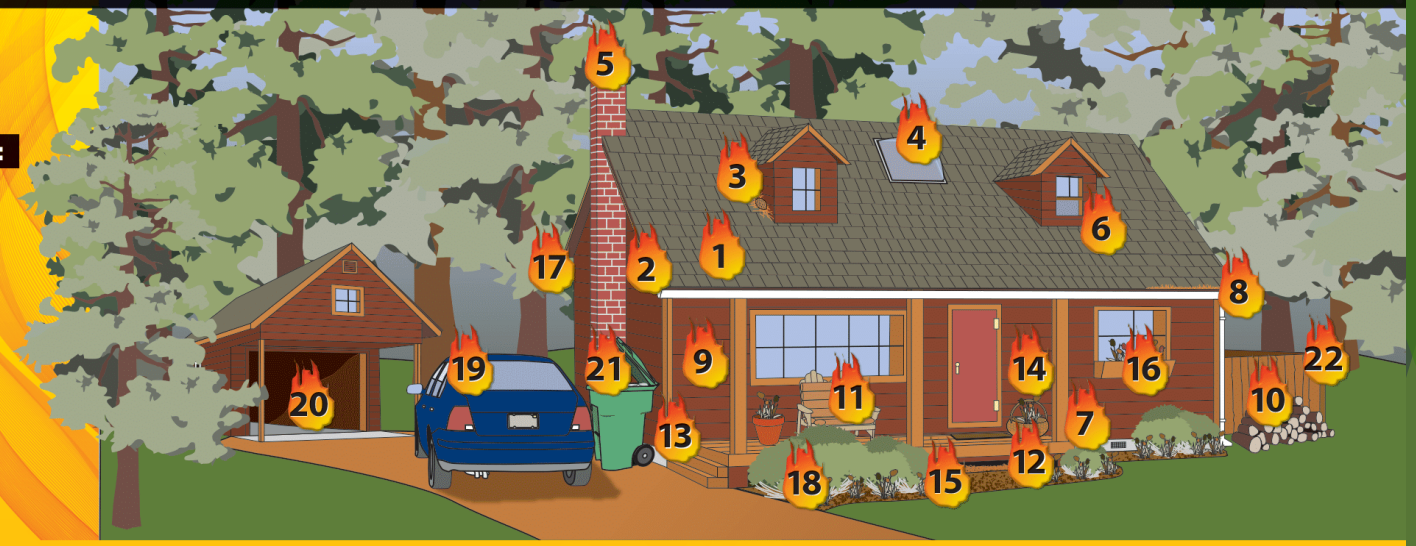


What we look for in a HIZA

WHERE IS THIS HOME VULNERABLE TO EMBER ATTACK?

EMBER AWARENESS CHECKLIST

WHAT YOU CAN DO TO PROTECT YOUR HOME:



1. **WOOD ROOF**
   Replace wood roofs with fire-resistant types such as composition, metal and tile.
2. **ROOF OPENINGS**
   Plug openings at locations between the roof covering and roof deck using a noncombustible material.
3. **ROOF DEBRIS**
   Routinely remove leaf and pine needle debris from the roof.
4. **SKYLIGHTS**
   Replace plastic skylights with double-pane tempered glass on gabled or sloped roofs.
5. **SPARK ARRESTER**
   Install an approved spark arrester on chimneys.
6. **WINDOWS**
   Use multi-pane, tempered glass windows. Close windows if wildfire is threatening.
7. **VENTS**
   Cover all exterior vents with 1/8-inch corrosion resistant wire mesh or install new vents designed to resist ember entry. Use a louvered vent for the dryer.
8. **RAIN GUTTERS**
   Use noncombustible rain gutter covers. Inspect and keep gutters free of debris.
9. **SIDING**
   Fill gaps in siding and trim with caulk. Assure at least a six-inch separation between the ground and the start of the siding.
10. **WOODPILES**
    Move woodpiles at least 30 feet from the house.
11. **PATIO FURNITURE**
    Put combustible patio furniture inside or move 30 feet from the house if wildfire is threatening.
12. **DECK BOARDS**
    Replace deck boards <1" thick, or in poor condition, with thicker higher density decking (i.e., hardwood or plastic composite). Properly install metal flashing between the deck and house.
13. **DECK DEBRIS**
    Remove leaf and pine needle debris on top of deck and between deck board gaps.
14. **PORCH & DECK ACCESSORIES**
    If wildfire is threatening, remove door mats and combustible materials from the porch and deck. Place BBQ propane tanks indoors.
15. **UNDER THE DECK**
    Remove leaf and pine needle debris and other combustible materials from under decks. Enclose open sided decks with 1/8-inch corrosion resistant wire mesh.
16. **FLOWERBOXES**
    Remove plants and combustible materials (or flowerboxes as practical) from beneath windows if wildfire is threatening.
17. **EAVES**
    Enclose open eaves with a noncombustible material.
18. **FLOWERBEDS**
    Should be at least five feet from the house. Use noncombustible mulch like gravel. Routinely remove dead and dry plant material. Choose plants and flowers that are deciduous, herbaceous, low resin or non-resinous, succulent and/or low growing.
19. **VEHICLES**
    Close vehicle windows. Park in closed garage or away from the house.
20. **GARAGE DOOR**
    Adjust garage doors to achieve a tight fit. Close the garage door if wildfire is threatening.
21. **GARBAGE CANS & RECYCLING BINS**
    Use garbage cans with tight lids. Place recycling bins in garage or away from the house.
22. **WOODEN FENCES**
    Use a five-foot or longer noncombustible gate or fence section next to the house. Keep base of fence free of combustible debris.

THE UNIVERSITY OF ARIZONA Cooperative Extension

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ARIZONA FIRE ADAPTED COMMUNITIES

THE GREAT SEAL OF GILA COUNTY, ARIZONA 1881

This poster was created using Be Ember Aware! Will your home Survive When the Embers Arrive FS-09-05, produced by the University of Nevada Cooperative Extension. It was written by Ed Smith, Natural Resource Specialist, and Sonya Sistare, Living With Fire Program Coordinator. Graphic design, layout, and printing provided by the RJG Custom Publishing Group.

Local and state laws affecting Malibu and Very High Fire Hazard Severity Zones

- Malibu's City Ordinance 461
- Assembly Bill 38
- Assembly Bill 3074

Malibu's ordinance 461:

- New construction and rebuilds
- Water usage and irrigation
- Palms prohibited on new construction
- Cypress, Cedar, Pine and Eucalyptus 50 feet from any structure
- 0-5 feet ember free zone (No bark, wood chips, artificial turf, shrubs, plants or trees) Succulents are an exception.
- 10-foot clearance on each side of roadway/driveway of combustible growth.
- Planning checks for the original plans before starting work and final for sign off.

Assembly Bill 38:

- State bill that went into effect July 2021
- Homes sold in High or Very High Fire Hazard Severity Zones
- Seller must get obtain a defensible space inspection that is compliant with the standard prior to sale
- Los Angeles County Fire, Forestry Division, Brush Clearance or Defensible Space Unit performs the inspections (good for 6 months)
- Must be in compliance with the Los Angeles County Fire Code and State Home Hardening requirements
- This is a point-of-sale real estate transaction only and realtors are still learning the requirements.

Assembly Bill 3074:

- Was written in response to the many catastrophic fires that have occurred in California
- It will be implemented in January 2030 with Cal fire charged to interpret and delegate to local fire authorities
- For Malibu it will be the Los Angeles County Fire Department, Forestry Division The bill would require more intense types of fuel reduction and a ember free zone the forest 5 feet from structure

Effects of Wildfire

- Did the surrounding landscape vegetation play a part in this terrible loss?



Firewise Landscaping



Fire Safer Landscaping - Examples



Fire Safer Landscaping - Examples



Nice mixture of plant species and distribution

Fire Safer Landscaping - Examples

- Very nice mosaic
- Good use of most of the plants
- What planting do you see that may be an issue during a wildfire?





Hardscape – gravel, mulch, stone

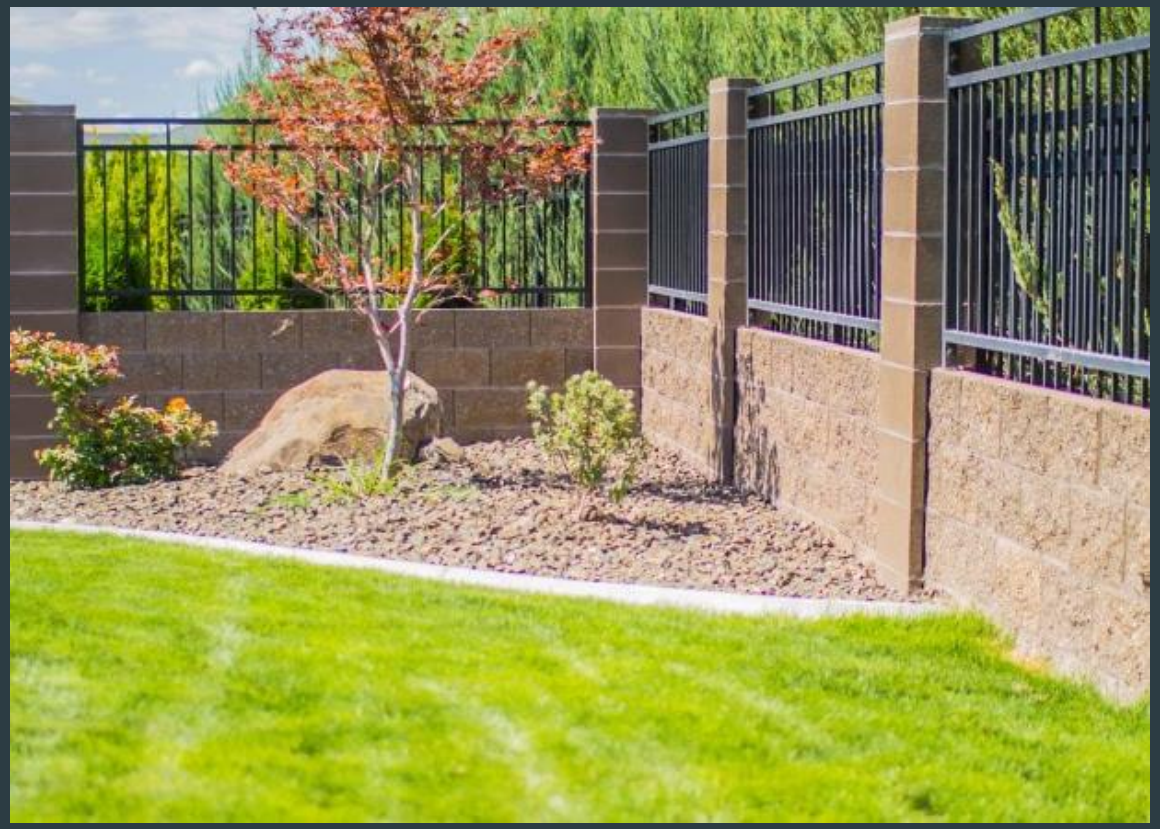
- Incorporate **“firebreaks” of non-flammable hardscaping, such as driveways, patios, inorganic mulches or water features** in your landscape design Break your property into concentric rings or “zones” of planting, with the most fire wise plants closest to your home, then gradually giving way to drought tolerant naturalized species



Remove small plants and vines attached to house

- Some plant types are prone to dead material buildup, like society garlic and agapanthus

Hardscaping - fencing



- Use a non-combustible fence section when it's attached to a building.
- The area at the base of the fence should be kept clear of debris. Flame spread to the building will be more likely if fine vegetative fuels (e.g., pine needles, leaf litter, and small twigs) have accumulated. Avoid placement of combustible mulch near the fence.

Maintenance

- Maintenance is just as important as plant selection
- No litter on the ground
- Mulch in areas around home where appropriate to add beauty and protection
- Mow grasses and weeds on a weekly basis
- Water plant material appropriately per plant requirements

Fire-Resistant Plants: Characteristics

1. Stores water in leaves or stems
2. Slow-growing with little maintenance needed
3. Lower growth habit
4. Not invasive
5. Low levels of oils and resins
6. Deep rooted (erosion control)
7. Higher moisture content

Examples of Fire-Resistant Plants



- Coast live oak
- Quercus agrifolia
- California native
- Thick bark helps protect tree from small ground fire
- Stores water in leaves and stems
- Very nice accent in landscape



Crape Myrtle

- Open loose branching habit
- Grow slowly and need little maintenance
- Maintain high moisture content with little watering



Aloes

- Store water in leaves and stem
- Grow slowly with little maintenance
- Produce very little dead and fine material

Examples of Fire-Resistant Plants Succulents



Flammable Plants- Chamise



- Plants contain flammable resins and oils
- Native
- Low fuel moisture during summer and fall. Plant adapted to fire type community such as the Santa Monica Mountains

Pines



Palms



Pampas grass



- Produces dense amount of receptive fine fuels that are very flammable
- Buildup of dead material is part of this plants habit

How to sign up for free HIZA

www.malibucity.org/firesafety

Resources for Home Hardening

- www.MalibuCity.org/FireSafety
- www.ready.gov
- Ready.LACounty.gov
- www.ReadyForWildfire.org
- www.MalibuCity.org/DisasterNotifications
- Low Cost Retrofit List (ca.gov)
- Fire Safe Marin County Plant List (firesafemarin.org)
- Fire-Resistant Plant List (firesafesdcounty.org)
- Napa County Firewise Plants List (napafirewise.org)
- Preparing Your Home - Fire in California (ucanr.edu)