# WILDFIRE IS COMING. ARE YOU READY?

To be <u>Ready for Wildfire</u> starts with maintaining an adequate <u>defensible</u> <u>space</u>, using <u>fire-resistant landscaping</u>, and <u>hardening your home</u> by using fire-resistant building materials. Defensible space is the buffer you create by removing dead plants, grass and weeds. This buffer helps to keep the fire away from your home. Fire-resistant vegetation contributes to making defensible space effective by surrounding your home with plants unlikely to catch fire. Hardening your home means using construction materials that can help your home withstand flying embers that can find weak spots in the construction, which can result in your house catching fire. It takes the combination of both defensible space and home hardening to give your house the best chance of surviving a wildfire.

# Use this survey to:

- Determine how prepared your home is for wildfire
- Learn what steps you can take to better prepare your home for wildfire

# By examining three key components of wildfire readiness:



Create and maintain 100 feet of Defensible Space around your home.



Surround your home with fire resistant landscaping.

HOME HARDENING



Use fire-resistant building materials to protect your home from wildfires.

The Department of Forestry and Fire Protection serves and safeguards the people and protects the property and resources of California.



Defensible Space - Zone 1

Within 30 feet of all structures or to the proeprty line.



#### \* A. Do you have branches within 10 feet of any chimney or stovepipe outlet?

A chimney/stovepipe is a vertical channel or pipe that conducts smoke and combustion gases up from a fire or furnace and typically through the roof of a building.

O Yes			
O No			



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\* B. Do you have leaves, needles or other vegetation on roofs, gutters, decks, porches, stairways, etc.?

Embers can land on accumulated flammable material found on roofs, gutters, decks, porches and stairways and start the house on fire.

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\* C. Do you have any dead and dying trees, branches and shrubs or other plants adjacent to or overhanging buildings?

O Yes	
O No	



Remove dead limbs within 15' of the ground. Dead dense manzanita is extremely flammable. It's ok to leave live manzanita, thinned of all dead branches.



These trees have been properly pruned of dead limbs.

\* D. Do you have dead and dying grass, plants, shrubs, trees, branches, leaves, weeds and needles within 30 feet of your home?

O Yes		
O No		



There must be 30' of clearance, down to bare mineral soil, from all sides of the house and decks. Short stubble may remain, if the trimmings are raked away. Grass that is mowed but not removed within 30' of a structure will not stop the spread of fire to or from the structure.



Grass must be cut as low as possible with trimmings raked away if they are within 30' of the structure.

 \* E. Do shrubs and live flammable ground cover have appropriate separation within 30 feet of all structures?

Highly flammable plants have:

- Flammable oils, or gummy, pitchy, resinous sap
- Large amount of fine, dead, twiggy, leafy, thatch material or loose papery bark
- Not maintained (dead material removed) or appropriately irrigated.
- Juniper, lavender and rosemary are highly flammable when not properly maintained.

It is important to have separation between these plants to limit fire spread when they are close to structures because of these factors.

O Yes	
O No	



It's best to have NO plants besides homes, but thin, airy and well spaced plants are better than dense shrubs. Low growing plants are better than tall ones.



Prune lower limbs, separate plants, and remove leaf litter beneath bushes to interrupt the fire's path through landscape.



Sometimes we have to compromise. The compromise between fire safety and structural safety can include removing dead branches from manzanita on the slope, limbing trees, removing flammable shrubs, and trimming and maintaining the ground cover to the lowest possible height.

\* F. Do you have flammable vegetation or items that could catch fire that are adjacent to or below combustible decks, balconies, and stairs?

O Yes			
O No			



Remove flammables from under all structures.

\* G. Do you have all woodpiles located 30 feet from any structure unless completely covered in a fire-resistant material?

O Yes
O No
O No Woodpiles



# Defensible Space - Zone 2

Within 30-100 feet of all structures or to the property line.



#### \* H. Do you have annual grass and forbs\* that exceed 4 inches in height?

Cut grasses and forbs down to a maximum of 4 inches in height. Grass may be kept up to 18 inches in height where necessary to prevent erosion.

\* Forbs are herbaceous flowering plants that are not a grasses.

O Yes			
O No			



I. Answer I.a. - I.c. questions below about horizontal or vertical clearance between grass, shrubs, and trees and canopies touching.

The spacing between grass, shrubs, and trees is crucial to reduce the spread of wildfires. The spacing needed is determined by the type and size of brush and trees, as well as the slope of the land. For example, a property on a steep slope with larger vegetation requires greater spacing between trees and shrubs than a level property that has small, sparse vegetation.

Also, overcrowding of small trees create a fire hazard and form ladder fuels to carry fire from the ground into the larger trees.



**Separate** plants using a diamond pattern to maintain privacy and fire safety.



Thin, space, and prune trees for fire safety.



Allow extra vertical space between shrubs and trees. Lack of vertical space can allow a fire to move from the ground to the brush to the treetops like a ladder.

To determine the proper vertical spacing between shrubs and the lowest branches of trees, use the formula below.



\* I.a. Are all tree branches at least 6 feet from the ground?

0	Yes
0	No
l.b. Do trees?	you have extra vertical spacing (3x height of shrub) between shrubs and
0	Yes
0	Yes

Horizontal Spacing 🗢

Horizontal spacing depends on the slope of the land and the height of the shrubs or trees. Check the chart below to determine spacing distance.



\* I.c. Do the trees and shrubs on your property have effective horizontal spacing as indicated in the image above?



\* J. If you have exposed woodpiles, do you have a minimum of 10 feet clearance, down to bare mineral soil, in all directions?

O Yes
Νο
O No Woodpiles



Move woodpiles 30 feet away from the structure, maintain a minimum of 10 feet clearance down to bare mineral soil, and do not cover with a flammable tarp.

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#### \* K.a. Are dead and dying woody surface and aerial fuels removed?

- Aerial Fuel: Standing and supported live and dead combustibles not in direct contact with the ground and consisting mainly of foliage, twigs, branches, stems, cones, bark, and vines.
- **Surface Fuel:** Fuels lying on or near the surface of the ground, consisting of leaf and needle litter, dead branch material, downed logs, bark, cones, and low stature living plants.

O Yes			
O No			

\* K.b. Do you have surface litter that exceeds a depth of 3 inches, such as fallen leaves or needles, twigs, bark, cones, and small branches?

- **Surface Litter:** needles, leaves, small twigs, cones, etc, on the forest floor. All parts of the litter are still recognizable and will ignite very quickly from sparks, embers, or flames.
- **Duff:** The layer of decomposing organic materials lying below the litter layer of freshly fallen twigs, needles, and leaves and immediately above the mineral soil.organic material and it will burn.

O Yes			
O No			

# \* L. Do you have logs or stumps embedded in the soil that are close to other vegetation?

O Yes			
O No			



Rotten logs are vulnerable to embers. Remove the logs or isolate them by removing surrounding leaves, needles and duff.

Other Defensible Space Requirements:

In and around the property.



\* M. If you have outbuildings or propane tanks, do you have 10 feet of clearance to bare mineral soil and no flammable vegetation with an additional 10 feet around the exterior?

O Yes
O No
O No Outbuildings or Propane Tanks



\* N. Are address numbers displayed in contrasting colors (4" min. size) and readable from the street or access road?

- Numbers that contrast with your background is easier to view from the street or access road in the event of an emergency
- Numbers should not be less than 4" high with a minimum stroke width of 1/2
- Numbers shall be legible and placed in a position that is visible from the street or road fronting your property
- If you cannot view your home from the public way, a monument pole or other sign or means should be used to identify their is a structure

O Yes		
O No		



\* O. Are chimney and/or stovepipe openings covered with a 3/8 and 1/2 inch metal screen mesh?

O Yes
O No
O No Chimney or Stovepipe



#### Home Hardening

Flying embers from a wildfire can destroy homes up to a mile away. Taking the necessary measures to harden (prepare) your home can help increase its chance of survival when wildfire strikes.

\* Ignition-resistant building materials are those that resist ignition or sustained burning when exposed to embers and small flames from wildfires. Examples of ignition-resistant materials include "noncombustible materials" that don't burn, exterior grade fireretardant-treated wood lumber, fire-retardant-treated wood shakes and shingles listed by the State Fire Marshal (SFM) and any material that has been tested in accordance with SFM Standard 12-7A-5.

#### What roof material was used?

The roof is the most vulnerable part of your home. Homes with wood or wood shingle roofs are at high risk of being destroyed during a wildfire. Build your roof or re-roof with materials such as composition, metal or tile. Block any spaces between roof decking and covering to prevent embers from catching. For more information on roof ratings visit this <u>website</u>.



What type of eaves were installed on your home?

Eaves and soffits should be protected with ignition-resistant or noncombustible materials.





What type of vents were installed on your home?

Vents on homes create openings for flying embers.

- Cover all vent openings with 1/16-inch to 1/8-inch metal mesh. Do not use fiberglass or plastic mesh because they can melt and burn.
- For an extra layer of protection, install vents that protect against both embers and flame.



# What material covers the exterior siding of your home?

Wood products, such as boards, panels or shingles, are common siding materials. However, they are flammable and not good choices for fire-prone areas.

- Build or remodel your walls with ignition-resistant\* building materials, such as stucco, fiber cement wall siding, fire-retardant-treated wood, or other approved materials.
- Be sure to extend materials from the foundation to the roof.

Vinyl has a higher melting point but it melts and exposes the wood. For this reason, Vinyl is not consider ignition-resistant\* building material.



#### What type of windows do you have?

\*

Heat from a wildfire can cause windows to break even before the home is on fire. This allows burning embers to enter and start fires inside. Single-paned and large windows are particularly vulnerable.

• Install dual-paned windows with one pane of tempered glass to reduce the chance of breakage in a fire.

• Consider limiting the size and number of windows that face large areas of vegetation and nearby structures.

-Please Select-			
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What material was used when the deck/porch was constructed?

Surfaces within 10 feet of the building should be built with ignition-resistant\*, noncombustible, or other approved materials.

Ensure all combustible items are removed from underneath and next to your deck. Limit the number of combustible items on top of the deck.

-Please Select-

\*



#### Do you have a fence attached to the structure?

Consider using ignition-resistant\* or noncombustible fence materials within 5 feet of your bandsteapring the vegetation Marid firment

#### -Please Select-Is there a "fire-safe" plant?

While some plants are marketed and described as "fire-safe or fire-resistant", all plants will burn under the right conditions, regardless of how they are classified. The environment the fryou have a propane tank, how far away is the propane tank from your home? plant grows in and how it is maintained will generally have more influence on the flammability of the plant than how its characteristics. -Please Select-For example, a plant with a good water supply could have a greener growth and hold leaves longer, whereas a plant in a stressed or drought situation may have stunted growth and accumulated dead materials. This can create a situation where the same species may be fireresistant in one environment and flammable in another. Some plants, such as a lavender, may initially have lush growth and then several years later the growth may be woody and choked with dead materials. Other plants may develop a dead thatch layer, under a green surface, that is highly combustible.

For more information about fire-resistant landscaping please visit <u>readyforwildfire.org</u> or visit your local <u>UC Cooperative Extension</u>.

# **Characteristics and basic properties**

Landscaping practices (or the pruning, maintenance, and cleanup) can have a greater impact on whether a plant ignites than the type plant type alone. When bringing a fire-resistant perspective to plant selection, consider the following:

- Does the plant has a higher moisture content in the leaves (as these leaves will be less likely to ignite)
- Does the plant contain a lot of waxes, oils, and resins
- Does the plant have an open-growth structure
- How fast does the plant grow
- How tall will the plant grow
- Does the plant shed bark

Depending on where you want to locate the plant, a plant with more waxes, oils, and resins is likely to be more flammable and release more heat energy when it burns. A plant that is more densely structured can capture embers and may be more likely to ignite. A plant that sheds bark or branches is likely to need more regular maintenance-related cleanup to reduce fuel accumulations at its base. A plant that has a big leaf or needle drop will result in the need for more maintenance-related cleanup to manage in your defensible space and on your roof or in your gutters. A plant that grows quickly may exceed your expectations and challenge defensible space goals.

Native plants, pollinator friendly, or drought-tolerant plants can be good choices for those labelled qualities, but they may or may not be any more fire-resistant than other plants.

# Plant placement

As described in the defensible space section of this publication, placement is the most important criteria when it comes to fire-resistant plant selection. Keep in mind that vegetation that touches the exterior siding, is located in front of windows, under eaves and vents, and/or under or near a deck will increase the likelihood that a home will be destroyed during a wildfire.

By incorporating best management practices within 0-5 feet of a structure, thereby reducing combustible vegetation and eliminating other combustible materials that an ember can ignite the potential for direct flame contact to your house is reduced. By following the ideas in Zone 1, where landscaping is separated into islands of vegetation and the continuity of plants is

separated, the odds increase for home survival from direct flame exposure. Additionally, all selected plants should be noninvasive.

## **Vegetation maintenance**

From a fire resilience perspective, vegetation management consists of good water management practices, appropriate fertilization, and a regular practice of plant pruning and cleanup. With regular watering, plant health increases and plants that are green and lush, are more resistant to ignition. Drip irrigation can be helpful along with mulch for water conservation.

Unfortunately, combustible mulches near to the home create an additional fire risk (Quarles and Smith, 2008). Eliminate combustible mulches within 0-5 feet from the home and recognize that from 5-30 feet, combustible mulch can expose the home to greater flame and ember contact. Rock mulch will have greater fire resistance. Compost has a lower combustibility or low combustible rating and may be a better alternative than combustible mulches when working 5 feet from the house and in the 5-30 ft. zone. You may want to delete this from the survey.

## Defensible Space Self-Assessment Report

If you would like a copy of this report, enter your email address below:

Your email address will only be used to email you a copy of this report and will not be used or given to any other programs or departments.

Please rate this survey.

Please describe improvements we could make to this survey.

