Defensible Space

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The wildfire threat

• 1991 Oakland Hills Fire (24 Deaths, 150 injuries, 2,886 structures lost, 1.5 billion dollars in damage)
• 1994 South Canyon Fire (14 firefighters killed)
• 1995 MARIN COUNTY – PT. REYES VISION FIRE
  – 45 HOMES LOST IN 8 HOURS
• 2003 Southern California Fire Siege (24 deaths, 3,710 structures lost)
• 2005-2006 Oklahoma / Texas Fires (12 deaths, 1292 structures lost)
Structure Fire
Mill Valley, California  2006

These fires can transition into urban interface fires
Start of the 1991 Oakland Hills Fire
23 Civilians, One firefighter and One Police Officer Perished
Wildfire transitions from brush to tree canopy
Contra Costa, California
This home, just off of Highway 116 in Cotati, survived a fast moving grass fire with very little defensible space. The residents fled this home as the fire rapidly approached.
Looking at the same home from the driveway. Minimal damage to their fences only. This home had only mowed grass around the home. GOOD Defensible Space.
This is how far the residents got before driving off the road due to thick smoke conditions.
Rapidly spreading brush fire.

1989 Blucher Valley, California

*** Same fuel types as in Southern Marin ***
• 8 Hours
• 300 acres
• 12 structures lost
• Eucalyptus trees was the leading cause of fire spread
• Fire brands landed ½ mile in advance of the main fire igniting roofs and vegetation

Fires destroy nine homes
Hessel battle strains residents, fire crews

Eucalyptus trees was the leading cause of fire spread.
**Wildfire Movement**

- Only thing in nature that moves faster uphill than down!
- Moves from small easily ignited materials to larger vegetation such as brush.
- Then it will move into the tree canopy
- This process is called laddering up
- The fuels that allow this process to occur are known as ladder fuels
- In the Wildland Urban Interface setting the small vegetation fires can and will transition to house to house ignitions.
- This process is mostly due to large pieces of burning structure getting carried aloft and then landing on ignitable roofs.

*The following picture is of a small surface fire that is not laddering up into the canopy*
Defensible Space Defined

It is the manicured area around your home that helps to protect your home from wildfire.
Features of a defensible space

- Manicures the landscape to resist fire brands
- Up to 100 feet in diameter (as seen below)
- The first 10 feet around the home is key
- Transitions big flames down to smaller ones
- Keeps direct flames away from home
Defensible Space Goals

Primary Goal:
To protect your family from a fast moving fire in the event that you cannot evacuate in time.

Secondary Goal:
To “harden” your home against flames and fire brands.
Urban Defensible Space

Guide

1. Small parcels should treat entire property
2. Manage the vegetation in that area:
   a. Limb up trees to 1/3 their height
   b. Remove all leaves and pine needles w/in 10 feet of home
   c. Firewood piles no closer than 30 feet to home
   d. Mow all seasonal grass to less than 3 inches
   e. Rake up and remove all cut grass w/in 10 feet of the home
   f. Remove any dead brush or piles of limbs
3. Examine your home’s roof:
   a. Wood shingles are extremely hazardous – Replace them!
   b. Remove leaves or needle cast from roof and gutters
   c. Remove dead branches within 15 feet
   d. Remove branches within 10 feet of chimney
   e. Replace missing or broken attic screens
Final Steps

4. Now examine the exterior of your home:
   a. Replace shake siding
   b. Replace missing or broken vent screens
   c. Replace single pane windows to dual pane
   d. Remove vegetation from under the windows
   e. Remove vegetation away from crawl space vents
   f. Cut back vegetation from the sides of your home
   g. Relocate plastic trash and recycling cans to at least ten feet away
Step One: Determine Recommended Defensible Space Distance

Step Two: Remove Dead Vegetation

Step Three: Break-up Continuous Vegetation

Steps One, Two, and Three
Test your knowledge!

The following slides are of homes in the Southern Marin area.

Ask yourself if the home is Wildfire Ready.
This home is not Wildfire Ready

- The pine trees are too close together.
  - Remove the number of trees
- The pine trees are loaded with dead limbs.
  - Prune the trees to eliminate dead limbs
- The home has wood shingle siding
  - Replace the shingles with non-combustible siding as soon as possible
The walkway to the home is impeded

Make sure your escape route / evacuation route is not impeded with combustible vegetation.
This home is Wildfire Ready

- All of the trees and brush are limbed up to 1/3 their total height
- All of the seasonal grass has been cut and raked up
- Overall the home has an excellent defensible space
- The roof is clear and free of any combustible debris
- You can't see it but the address is clearly marked with at least 3” high reflective numbers.
These homes may or may not be Wildfire Ready

1. This picture illustrates how most of our communities are built.
   a. Close proximity with lots of vegetation in the neighborhood
   b. Lack of good defensible space due to small parcels

2. In this picture you can see how all of us rely on each other to do our best to secure our small properties as defensible.

3. Once a vegetation fire starts to ignite multiple homes the fire turns into and behaves like an Urban conflagration.
Please talk to your neighbors and friends about the importance of vegetation management and having a good defensible space.

Your life may depend on it!

Thank you for taking an interest in helping us save your home.
To request a wildfire hazard risk assessment please go to:

www.smfd.org