

A: FIRE PREVENTION

We know that wildfire plays an important role in the natural ecosystem within Ventura County. We want to prevent human-caused wildfire and minimize risk to lives, property and infrastructure during the wildfire events that will inevitably occur.

Risk factors include:

- Areas with limited or inadequate infrastructure to accommodate access for fire protection equipment or safe evacuation of residents during a wildfire event
- Residential landscapes with dry and/or highly flammable vegetation located close to structures, and inadequate or non-existent defensible space
- Many older homes constructed with flammable building materials and inadequate vent coverings that will allow penetration of embers and flame
- Population with limited education and knowledge regarding fire-safe behaviors and practices
- Communities at risk that have expanded (homes, infrastructure and assets) to the edges of large areas of old-growth chaparral

This plan recommends the following strategies to mitigate these risks:

- Continue existing vegetation management efforts and initiate new projects as appropriate to reduce risks in WUI areas within and around the communities at risk.
- Develop and implement focused community meetings, programs and wildfire safety education efforts directed at structure and property owners in the WUI areas, including topics such as:
 - Prevention of accidental starts
 - Creation and maintenance of defensible space
 - Fire-safe landscaping
 - Reduction of structural ignitability, and
 - Strategies for safety in a wildfire incident, including emergency evacuation in areas with limited infrastructure.

- ENGINEERING & STRUCTURE IGNITABILITY

Causes of Structural Ignition

Structures in or near a wildfire event can ignite for a number of reasons, including direct exposure to flame, radiant heat, and impact from falling trees that are burning.

However, the most significant cause of structural ignition, by both direct and indirect effect, is burning embers. In the high winds accompanying and often precipitated by wildfires, embers can be flung up to two miles in advance of the flame front. These embers can ignite grass; brush, landscaping and firewood piles, and can accumulate on wooden decks or under eaves. Without proper screening, they can also penetrate into the attic and ignite homes long after the firefight seems to be over.

Creating Ignition-Resistant Structures

A multi-faceted approach is recommended to effectively protect structures from ignition during a wildfire event. A combination of defensible space, fire-resistant materials, and fire-resistant structural design can greatly increase the odds of survival in a wildfire event.

Recommendations to improve structure survivability in a wildfire are:

- **Roofing materials**

The roofing materials must be resistant to the heat from burning embers – a Class A rated roof, self-extinguishing if possible (this means that a burning ember will not burn through the roofing material and catch the wooden roof deck below it on fire). This is a key element of structural defense, without which the structure's risk increases dramatically.

- **Structural extensions and openings**

Awnings, decks and deck covers, patio covers, porches, eaves and open exterior stairways can provide a place where embers accumulate and ignite the extended structure, which can then ignite the main structure. Also, improperly screened attic or

crawlspace vents or soffits can allow embers to enter and ignite the structure.

Chimneys, open windows or single-pane windows that break easily when stressed by the heat of a wildfire can also allow embers to enter.

- Defensible space around the structure

Defensible space, when properly done, eliminates many of the causes of structural ignition. Essentially, it is the trimming and/or removal of potential sources of fuel for fire near the structure, including flammable landscaping, firewood, propane tanks, trees or overhanging limbs, wooden fences, trellises or other easily ignitable wood structures or objects. It should be understood, that “bare ground” landscaping is not the objective here -- rather, the landscape is carefully addressed to trim or remove “ladder fuels” that can carry fire from one shrub or tree to the next, and trees or shrubs that present direct risks due to their proximity to structures are trimmed or removed (with appropriate permits, if required).

- Firefighting equipment access to the structure

Roads, bridges and driveways leading to a structure must be adequate in width, overhead clearance and structural strength to accommodate firefighting equipment. Education is an important aspect of creating ignition-resistant homes and structures within the communities at risk. An outreach program to homeowners, as well as educational and reference materials for contractors, builders and architects are recommended.

- INFORMATION AND EDUCATION

Wildfires are now a year-round reality in Ventura County. This means that both firefighters and residents have to be prepared against the threat from brush fires at all times. Firefighters train hard and make countless preparations to be ready for a wildfire. Residents need to do the same. Successfully preparing for a wildfire requires you to

take personal responsibility for protecting yourself, your family and your property.

The Ventura County Fire Department takes every precaution to help protect you and your property from a wildfire. But the reality is, during a major wildfire, there will simply not be enough fire engines or firefighters to defend every home, especially during the first hours of a major wildfire, so you must become part of the solution.

If your home borders a natural area, what firefighters call the Wildland Urban Interface, you are directly at risk from a wildfire. And, if you live within one mile of a natural area, you live in the Ember Zone. Homes in the Ember Zone are at risk from wind-driven embers from a wildfire. Recent fires have resulted in entire neighborhoods being destroyed by fires started by embers, not the wildfire itself.

Through our program of “**Ready, Set, Go!**” you will learn about the Ember Zone and how to retrofit your home or ranch with features that protect it from embers. We’ll show you the importance of having defensible space around your home and the preparations you need to make so you can leave early, evacuating before the fire reaches you.

Since agriculture is a key component in the economy of Ventura County. We have designed a “Ready Set Go!” program for the agricultural community. The crops and livestock grown by the county’s farmers, ranchers and growers have an annual value of almost \$2 billion. The farms and ranches employ thousands of people and the industries that support them – packing houses, trucking companies and others – employ thousands more. Protecting the county’s agricultural assets is a key goal of the Ventura County Fire Department. Wildfire is a major threat to agriculture in Ventura County. Most of our agricultural properties are located either immediately adjacent to

natural vegetation or within a mile of it, an area we refer to as the Ember Zone. These properties are all at risk from the flaming front of an advancing wildfire or the embers it produces.

Fire is, and always has been, a natural part of the beautiful area where we've chosen to live. Wildfires, fueled by a build-up of dry vegetation and driven by hot, dry winds, are extremely dangerous and almost impossible to control. Many residents have built their homes and landscaped without fully understanding the impact a fire could have on them. This publication will help you prepare your home so you can leave early, confident that you've done everything you can reasonably do to protect your home.

It's not a question of if, but when, the next wildfire will occur. That's why the most important person protecting your life and property is not a firefighter, but you. With advance planning and preparation, you can dramatically increase your safety and the survivability of your property.

Defensible space is the required space between a structure and the wildland area that, under normal conditions, creates a sufficient buffer to slow or halt the spread of wildfire to a structure. It protects the home from igniting due to direct flame or radiant heat. Defensible space is essential for structure survivability during wildfire conditions.

This can be broken down into 2 zones:

Zone One extends 30 feet out from buildings, structures, decks, etc.

- Remove all dead or dying vegetation.
- Trim tree canopies regularly to keep their branches a minimum of 10 feet from structures and other trees.
- Remove leaf litter (dry leaves/pine needles) from yard, roof and rain gutters.
- Relocate woodpiles or other combustible materials into Zone Two.
- Remove combustible material and vegetation from around and under decks.
- Remove or prune vegetation near windows.

- Remove “ladder fuels” (low-level vegetation that allows the fire to spread from the ground to the tree canopy). Create a separation between low-level vegetation and tree branches. This can be done by reducing the height of low-level vegetation and/or trimming low tree branches.

Zone Two extends 30 to 100 feet out from buildings, structures and decks.

You can minimize the chance of fire jumping from plant to plant by removing dead material and removing and/or thinning vegetation. The minimum spacing between vegetation is three times the dimension of the plant.

- Remove “ladder fuels.”
- Cut or mow annual grass down to a maximum height of 4 inches.
- Trim tree canopies regularly to keep their branches a minimum of 10 feet away from other trees.

Informational Websites and Documents

<http://fire.countyofventura.org/LinkClick.aspx?fileticket=F16UdBq8SxM%3d&tabid=231> “Ready Set Go!”

<http://fire.countyofventura.org/LinkClick.aspx?fileticket=xDCkAK3DngE%3d&tabid=231> “Wildfire Preparedness for Farmers, Ranchers and Growers -

<http://fire.countyofventura.org/LinkClick.aspx?fileticket=C0KWSbjIDLm%3d&tabid=231> “Ready, Set, Go for Trail Users -

B: VEGETATION MANAGEMENT

Vegetation Management Methods

When necessary, removal and/or modification of vegetation that, if ignited, would present risks to homes, infrastructure and assets within the communities at risk can be accomplished in several ways, including hand crews, mechanized equipment, grazing, herbicides and prescribed burns. Vegetation management projects are oftentimes accomplished using a combination of these techniques.



Regardless of the techniques used, the nature of the vegetation in Ventura County assures that unlike the forests in northern areas, the chaparral prevalent here will quickly grow back. As a result, in addition to the treatments themselves, successful vegetation management projects include planning, oversight and ongoing maintenance.

Proper planning of vegetation management projects includes careful consideration of all environmental, cultural and historical preservation aspects. Each of these areas needs to be addressed, and proper permits, approvals and permissions acquired before any work is done on the ground. This process is engaged on a project by project basis, taking into consideration the project's activities, geographic location and seasonal timeline.

Wildfire Safety Project Priorities

While any wildfire protection project is important, the realities of funding constraints require priorities to be established among types of projects. Given the information within this document that is specific to Ventura County, the types of projects that are determined to be of highest priority, in priority order, are:

1. Vegetation management projects where a potential wildfire threatens life, property, agricultural assets, critical infrastructure and/or emergency ingress/egress in and around the communities at risk and unincorporated areas of the county.
2. Vegetation management projects where a potential wildfire threatens watersheds, riparian areas or other sensitive ecosystems; or high-traffic recreation areas.
3. Wildfire Safety Education Programs that provide homeowners, farmers, ranchers and other community members with information on defensible space, fire-resistant landscaping, emergency procedures, home defense and related topics; and Planning or Preparedness Projects that improve citizen and/or firefighter safety in the event of a wildfire.

Brush Clearance Guide

Landscape (Ornamental)

- Remove all flammable vegetation and other combustible growth within 100 feet of any structure. Single trees, ornamental shrubbery or cultivated ground covers may be permitted provided they are maintained in a manner that they do not readily transmit fire from native vegetation to the structure.
- Special Attention should be given to the use and maintenance of ornamental plants known or thought to be high hazard combustible plants when used in close proximity to structures. Some of these known plants are, but not limited to Acacia, Cedar, Cypress, Eucalyptus, Juniper, Pine, and Pampas Grass. Planting of ornamentals should be properly maintained and should not be planted in mass plantings and groups. They should not be planted in such a manner that they could transmit fire from the native brush to the structure.
- The Ventura County Fire Department is strongly recommending an increase in brush clearance from 100' to 200' if any of the following apply to your property: House located on/or at the top of a slope, old brush not recently burned, east or south facing aspect, wood shake roof, limited access for Fire Department, ornamental shrubbery next to house, older construction, historical fire pattern in

your area, heavy chaparral fuels, limited or private water supply, or more than 5 miles from a Fire Station.

- Space tree canopies and shrubs a minimum of 15' from other shrubs or trees. All trees and shrubs need to be trimmed up off the ground 2 feet or 1/3 the height of the tree which ever is less. Maintain all plants by regularly removing all dead fall and litter.

Yard Maintenance

- Stack wood at least 30 feet from structures; remove flammable vegetation within 10 feet of woodpile.
- Remove all stacks of construction materials, pine needles, leaves and debris.
- Locate fixed butane/propane tanks at least 10 feet from any structure and give them 10 feet of brush clearance.

Roof Maintenance

- Remove dead branches overhanging your roof.
- Clean all dead leaves from your roof and rain gutters.
- Cover your chimney outlet with a spark arrestor consisting of a metal or non-flammable screen of ½ inch or smaller.