

SECTION 11.3 WILDFIRE HAZARDS

Introduction

This section addresses the wildfire hazard (also referred to as fire hazard) conditions within Ventura County and the potential risk these conditions pose. Issues related to fire hazards include fire hazard management, emergency response, and high fire hazard areas. This section summarizes the fire hazard conditions in Ventura County based on information from the 2015 Ventura County Multi-Hazard Mitigation Plan (VCMHMP). Consistent with the VCMHMP, each section includes explanations of the nature, history, location, extent, and probability associated with fire hazards. A discussion of fire protection services is included in Section 7.6 of Chapter 9 of this Background Report.

Major Findings

- Within Ventura County, very high fire hazard severity zones (FHSZs) are located in mountainous or hillside areas (west of Lake Casitas, northeast of Ojai, north of Fillmore, and surrounding Thousand Oaks and Simi Valley), where the greatest fuel density exists; very high FHSZs are also located throughout much of the county's large agricultural and cattle-grazing areas. 81.9 square miles are in the high FHSZ and 504.4 square miles are in the very high FHSZ. The populations that live in the very high FHSZ are mainly located in the cities of Moorpark (44.0 percent), Simi Valley (27.7 percent), Thousand Oaks (43.1 percent), as well as the unincorporated area (37.1 percent).
- Vegetation that has dried during long, hot summers provides a living fuel for wildfires and the Santa Ana winds combine to contribute to the high incidence of wildfires in Ventura County. In the past, fires burning more than 1,000 acres have occurred about every one to three years.

Existing Conditions

A wildfire is an uncontrolled fire that spreads through vegetative fuels, exploding and possibly consuming structures. Wildfires often begin unnoticed, spread quickly, and are usually signaled by dense smoke that may be visible from miles around. Wildfires can be human-caused (e.g., by arson or campfires), or can be caused by natural events such as lightning. Wildfires can be categorized into four types:

- **Wildland fires** occur mainly in areas under federal control, such as national forests and parks, and are fueled primarily by natural vegetation.
- **Interface or intermix fires** occur in areas where both vegetation and structures provide fuel. These are also referred to as urban-wildland interface fires.
- **Firestorms** occur during extreme weather (typically high temperatures, low humidity, and high winds) with such intensity that fire suppression is virtually impossible. These events typically burn until the conditions change or the fuel is exhausted.
- **Prescribed fires and prescribed natural fires** are intentionally set or natural fires that are allowed to burn for beneficial purposes.

The following three factors contribute significantly to wildfire behavior; as described more fully below, these factors can be used to identify wildfire hazard areas:

- **Topography:** As slope increases, the rate of wildfire spread increases. South-facing slopes are also subject to greater solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridgetops may mark the end of wildfire spread because fire spreads more slowly or may even be unable to spread downhill.
- **Fuel:** The type and condition of vegetation play a significant role in the occurrence and spread of wildfires. Certain types of plants are more susceptible to burning or burn with greater intensity. Dense or overgrown vegetation increases the amount of combustible material available to fuel the fire (referred to as the “fuel load”); the ratio of living to dead plant matter is also important. The risk of fire is increased significantly during periods of prolonged drought as the moisture content of both living and dead plant matter decreases. The fuel’s continuity is also an important factor, both horizontally and vertically.
- **Weather:** The most variable factor affecting wildfire behavior is weather. Variables such as temperature, humidity, wind, and lightning can affect chances for ignition and spread of fire. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity. By contrast, cooling and higher humidity often signals reduced wildfire occurrence and easier containment. Years of precipitation followed by warmer years tend to encourage more widespread fires and longer burn periods. Also, since the mid-1980s, earlier snowmelt and associated warming due to global climate change has been associated with longer and more severe wildfire seasons in the western United States.

If not promptly controlled, wildfire may grow into an emergency or disaster. Even small fires can threaten lives and resources and destroy improved properties. It is also important to note that in addition to affecting people, wildfire may severely affect livestock and pets. Such events may require the emergency watering/feeding, shelter, evacuation, and even burying of animals.

Wildfires can have serious effects on the local environment. In addition to stripping the land of vegetation and destroying forest resources, including the wildlife that lives in these areas, large, intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capacity to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, thereby enhancing flood potential, harming aquatic life, and degrading water quality. Lands stripped of vegetation are also subject to increased debris flow hazards, as described above. Wildfires can also greatly affect the air quality of the surrounding area.

History

Wildfires are a common occurrence in Ventura County. In the last 50 years (1965 through 2015), 23 wildfires, with an extent greater than 10,000 acres, have occurred. Table 11-4 illustrates the 10 largest fires over the last 50 years and Figure 11-10 shows the location of these and other fires between 1965 and 2015. In May 2013, the Springs fire burned 24,251 acres; 10 structures were destroyed and 12 were damaged, and 10 injuries were recorded.

TABLE 11-4 TEN LARGEST VENTURA COUNTY FIRES, 1965 THROUGH 2015		
Name	Date	Acres Affected*
Day	September 2006	162,702
Simi Valley	October 2003	108,204
Piru	October 2003	63,991
Ranch**	October 2007	58,401
Ferndale	October 1985	47,064
Green Meadow	October 1993	38,477
Creek Road	September 1979	32,000
Steckel	October 1993	27,088
Parker Ranch	October 1967	25,000
Hopper	August 1997	24,793

Source: Cal FIRE 2015

*Acres affected = total acreage.

** Fire occurred in both Ventura and Los Angeles counties.

Location and Extent of Fire Hazard Severity Zones

Public Resources Code 4201-4204 and Government Code 51175-89 directed the California Department of Forestry and Fire Protection (Cal FIRE) to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZs), are represented as very high, high, or moderate. Specifically, the maps were created using data and models describing development patterns, potential fuels over a 30- to 50-year time horizon, expected fire behavior, and expected burn probabilities. The maps are divided into local responsibility areas and state responsibility areas. Local responsibility areas generally include cities, cultivated agriculture lands, and portions of the desert. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, counties, and by Cal FIRE under contract to the local government. State responsibility area is a legal term defining the area where the state has financial responsibility for wildfire protection. Incorporated cities and federal ownership are not included. The prevention and suppression of fires in all areas that are not state responsibility areas are primarily the responsibility of federal or local agencies.

Figure 11-11 displays the areas of Ventura County most susceptible to wildfires. Within the unincorporated county, very high FHSZs are located in mountainous or hillside areas (west of Lake Casitas, northeast of Ojai, north of Fillmore, and surrounding Thousand Oaks and Simi Valley), where the greatest fuel density exists; as well as throughout much of the county’s large agricultural and cattle-grazing areas. Although these areas are not heavily populated, they are near populated communities. Approximately 37.1 percent of the unincorporated area population is exposed to very high FHSZs. Population exposure in cities is highest in Moorpark (44.0 percent), Simi Valley (27.7 percent), and Thousand Oaks (43.1 percent)

As shown on Figure 11-11, in Ventura County there are 81.9 square miles in the high FHSZ and 504.4 square miles in the very high FHSZ.

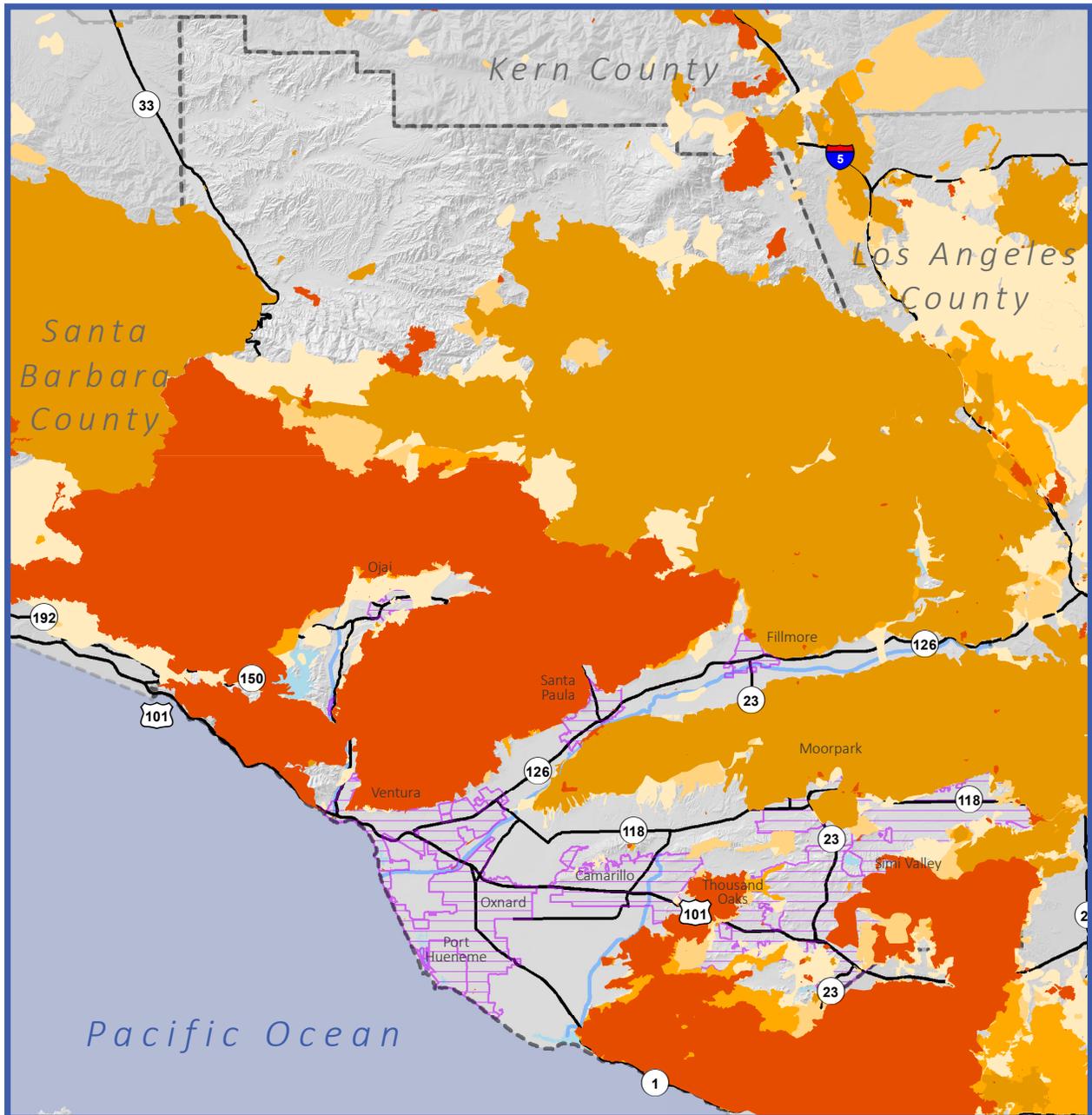
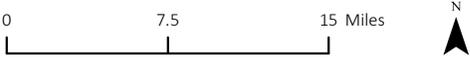
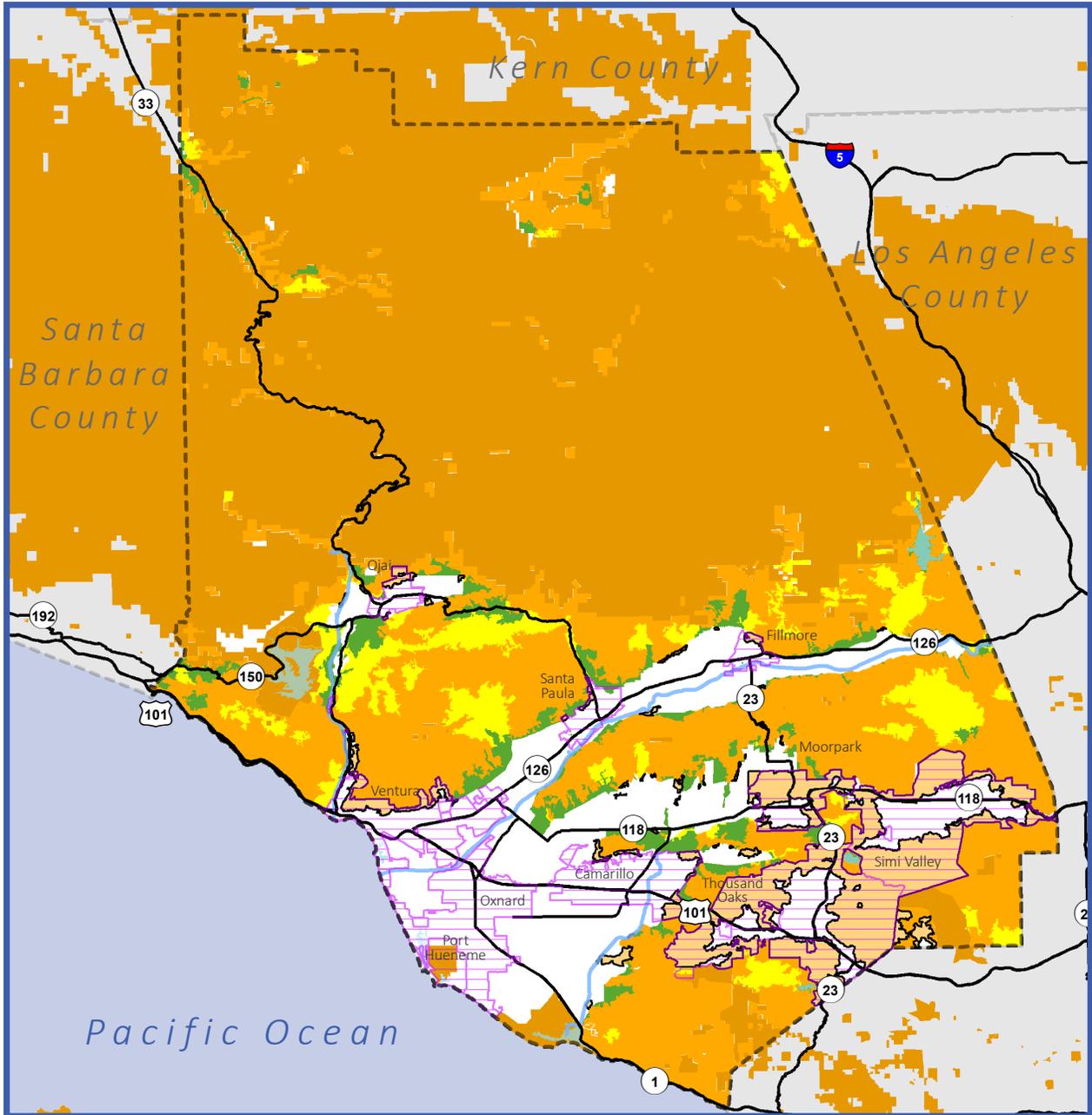


Figure 11-10:
Wildfires History Map

Map Date: September 08, 2020
Source: Ventura County, 2020

- 2010-Present
- 2000-2010
- 1990-1999
- 1980-1989
- Prior to 1989
- Ventura County Boundary
- Cities
- Major Roadways
- Major Waterways
- Water Bodies





Ventura County 2040 GENERAL PLAN

Figure 11-11: Fire Hazard Areas by Responsibility Area Federal, State, and Local

Map Date: January 09, 2017

Source: Ventura County, 2016; CAL FIRE 2007 (State), 2008 (Local), and 2016 (Federal); USGS, 2013.

0 7.5 15 Miles

Ventura County Boundary	Responsibility Areas:
Cities	LRA - Very High
Major Roadways	SRA - High
Major Waterways	SRA - Moderate
Water Bodies	SRA - Very High
	FRA

Probability of Future Events

The climate in Ventura County is characterized as Mediterranean dry-summer featuring cool, wet winters and warm, dry summers. High moisture levels during the winter rainy season significantly increase the growth of plants. However, the vegetation is dried during the long, hot summers, decreasing plant moisture content and increasing the ratio of dead fuel to living fuel. As a result, fire susceptibility increases dramatically, particularly in late summer and early autumn. In addition, the presence of chaparral, a drought-resistant variety of vegetation that is dependent on occasional wildfires, is expected in Mediterranean dry-summer climates. Also, the history of plant succession in Ventura County is important in predicting fire susceptibility. For several years after a fire has occurred, easily flammable herbaceous species predominate and increase the likelihood of new fires. When woody species become reestablished, they contribute to a lower overall level of fire susceptibility for approximately 10 years. However, after this period, the slow aging plant community becomes ever more likely to burn because of increased levels of dead plant material and lowered plant moisture levels (Ventura County Multi-Hazard Mitigation Plan, September 2015).

In addition, the local meteorological phenomenon known as the Santa Ana winds contributes to the high incidence of wildfires in Ventura County. These winds originate during the autumn months in the hot, dry interior deserts to the north and east of Ventura County. They often sweep west into the county, bringing extremely dry air and high wind speeds that further desiccate plant communities during the period of the year when the constituent species have very low moisture content. The effect of these winds on existing fires is particularly dangerous, as the winds can greatly increase the rate at which fires spread.

Based on the conditions described above and the history of occurrence in the past, future events are very likely to occur. In the past, fires burning more than 1,000 acres have occurred about every one to three years. The extent of future events will depend on specific conditions at the time of the fire.

Regulatory Setting

Federal

Federal Land Assistance, Management, and Enhancement (FLAME) Act

In 2009, Congress passed the Federal Land Assistance, Management, and Enhancement (FLAME) Act (FLAME) as the basis for the U.S. Department of Agriculture (USDA) and the Department of the Interior (DOI) to develop a national cohesive wildland fire management strategy. In response to the FLAME Act, USDA and DOI published the National Cohesive Wildland Fire Management Strategy, which includes the National Strategy and the National Action Plan, both completed in April 2014. Together, these documents address elements requested by Congress after the passage of the FLAME Act and represent an approach wildland fire management based on the goal of achieving safer, more efficient, cost-effective public, and resource protection goals and more resilient landscapes.

Healthy Forest Restoration Act (HFRA)

The Healthy Forest Restoration Act (HFRA), enacted by the U.S. Congress on January 7, 2003, established a protocol for the creation of a type of document that articulated a wildfire safety plan for communities at risk from wildland fires- a Community Wildfire Protection Plan (CWPP). The Ventura County Fire Department has prepared a CWPP for all of Ventura County. As specified by the HFRA, the

Ventura County CWPP was developed in collaboration with local, county, state, and federal agencies as well as various community organizations within the County. The CWPP identifies wildfire risks and clarifies priorities for funding and programs to reduce impacts of wildfire on the communities at risk within Ventura County.

State

Strategic Fire Plan for California

Public Resources Code §4114 and §4130 authorize the State Board of Forestry and Fire Protection (Board) to establish a fire plan which, among other things, establishes the levels of statewide fire protection services for State Responsibility Area (SRA) lands. These levels of service recognize other fire protection resources at the federal and local level that collectively provide a regional and statewide emergency response capability. In addition, California's integrated mutual aid fire protection system provides fire protection services through automatic and mutual aid agreements for fire incidents across all ownerships. In 2010 the Board of Forestry and Fire Protection adopted the Strategic Fire Plan for California. This statewide fire plan was developed in concert between the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection (CAL FIRE), in consultation with a group of outside experts to complete a needs assessment and to form the Fire Plan Steering Committee. This Committee worked for over a year preparing the 2010 Strategic Fire Plan. The Strategic Fire Plan seeks to protect lives, residential property, and natural resources. It is the basis for assessing California's complex and dynamic natural and man-made environment, and identifying a variety of actions to minimize the negative effects of wildland fire. Implementation of the 2010 Strategic Fire Plan for California is intended to occur at all levels of CAL FIRE, as well as through partnerships with local, state and federal agencies, private organizations (Fire Safe Councils, homeowners associations, industry, etc.) and citizens.

Senate Bill 1704 (Vegetation Management Program)

Senate Bill 1704 established the basic processes and procedures needed to manage chaparral-covered and associated lands within California. The Vegetation Management Program allows private landowners to enter into a contract with the California Department of Forestry and Fire Protection to use prescribed fire to accomplish a combination of fire protection and resource management goals. The main goals of the program are the reduction of conflagration fires, the optimization of soil and water productivity, and the protection and improvement of intrinsic floral and faunal values.

Public Resources Code Section 4291/Government Code Section 51182

Public Resources Code Section 4291 and Government Code Section 51182 require property owners in mountainous areas, forest-covered, lands, or any land that is covered with flammable material to create, at minimum, a 100-foot defensible space (or to the property line) around their homes and other structures. Under the law, property owners or those who control property must establish a 30-foot clean zone and a 70-foot reduced fuel zone.

Local

2005 Ventura County General Plan

The General Plan covers wildfire hazards in Chapter 1, Resources. Section 2.13 includes goals, policies, and programs related to wildfire hazards. The following Area Plans also contain applicable goals and policies related to wildfire hazards:

- Coastal Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for rural and wildland areas of the County. These can be found in Section 18. Fire Hazards,

2016 Coastal Zoning Ordinance

The Coastal Zoning Ordinance regulates wildfire hazards through Section 8178-4 Mitigation of Potential Hazards

Unit Strategic Fire Plan, Ventura County Fire Protection District

Ventura County maintains a contractual relationship with Cal Fire. A Unit Plan that is part of the California Strategic Fire Plan is used within the Ventura County Unit. The Unit Fire Plan also serves as the Community Wildfire Protection Plan (CWPP) for the County. The CWPP identifies wildfire risks and clarifies priorities for funding and programs to reduce impacts of wildfire on the communities at risk within Ventura County. Building on the proven and highly effective Weed Abatement Program implemented by Ventura County Fire Department under the authority of the Healthy Forests Restoration Act (HFRA), the County's CWPP documents and prioritizes the projects that stakeholders within communities at risk have identified.

Ventura County Fire Protection District Fire Hazard Reduction Program

The Ventura County Fire Protection District adopted a local ordinance that, among other things, requires mandatory 100-foot of brush clearance around structures located in or adjacent to Hazardous Fire Areas. The Fire Hazard Reduction unit manages this requirement throughout the VCFPD jurisdiction. Failure to comply with the program by the annual June 1st deadline can result in the Fire District completing the work and assessing a fee to the homeowner through a tax lien on their property. The role of individual property owners in responding to fire hazards is probably the most critical. Because of the large size of

the county and the preference of many homeowners to build within or adjacent to Hazardous Fire Areas, these individuals must assume responsibility for the prevention of conditions, that may result in property damage during the fire season. Measures that may be taken by property owners, include the planting of fire-resistant landscaping, landscape maintenance, mandatory clearance of brush around structures, and site design.

Key Terms

Conflagration. An extensive fire that destroys a great deal of land or property.

Herbaceous. Of, denoting, or relating to herbs (in the botanical sense).

Prescribed Fire. The knowledgeable and controlled application of fire to a specific land area to accomplish planned resource management objectives and weather conditions.

References

Reports/Publications

Ventura, County of. Ventura County Hazard Mitigation Plan. Adopted by the Ventura County Board of Supervisors September 2015.

Websites

N/A

Persons Consulted

N/A