

## 5.4 FIRE SAFETY AND SHERIFF PROTECTION

### 5.4.1 Introduction

This element discusses conditions and issues relevant to the protection of public health and safety from fire damage. It also addresses sheriff protection in Shasta County. These topics are required under the State mandated safety element which reads:

"A safety element for the protection of the community from fires...wildland and urban fires."  
(Government Code Section 65302(g)).

### 5.4.2 Findings

Wildland and non-wildland fires are the two types of fire hazards.

#### **Wildland Fires**

Wildland fires burn natural or wild vegetation located on undeveloped lands. Human activities such as smoking, debris burning, and equipment operation are the major causes (90%) of wildland fires. Lightning causes the remaining 10% of the wildland fires in Shasta County. Whatever the cause, wildland fires present a major safety hazard to rural development located in forest, brush, and grass-covered areas. Between 1992 and 2003, there was an average of 333 wildland fires per year in Shasta County. The majority of these wildland fires occurred in the upland areas of Shasta County, where fire hazards are extreme due to an abundance of highly flammable vegetation and long, dry summers.

The California Department of Forestry and Fire Protection has devised a fire hazard severity classification system for California's wildlands which assesses the fire potential for wildlands based on three factors: fuel load, climate, and topography. Each of these factors is discussed below.

#### Fuel Load

Vegetation is the major source of fire fuel. The quantity of available vegetative fuel determines the intensity of a wildland fire. Types of fuel loads are classified into three categories:

**LIGHT (GRASS).** Includes areas dominated by grasses, annual herbs, and barren land. This is the lightest fuel load; it burns easily, but is the easiest to control.

**MEDIUM (SHRUB).** Includes areas in which brush, shrubs, and other perennial vegetation less than six feet in height are dominant.

**HEAVY (WOODS - BRUSHWOOD).** Includes areas in which vegetation six feet or more in height is dominant. This is the hardest vegetative type to start burning but, due to the heavy fuel load, it is the hardest to control once burning.

## Climate

Critical to fire control is the weather. The combination of wind, low relative humidity, and seasonal lack of precipitation provides the basis for critical fire weather. The long, dry, hot summers that are representative of California reduce the moisture in vegetation, thereby increasing its susceptibility to fire. Once burning, low humidity and winds cause a fire to spread rapidly. All wildlands in California experience critical fire weather to some degree, which is the primary reason for the State's notorious fire problem. Critical fire weather is broken into three classes depending on frequency of critical fire weather. Class I areas are least susceptible, Class II more susceptible, and Class III are most susceptible to critical fire weather.

## Topography

The influence of topography on fire hazard increases with slope, as steep slopes cause fires to burn faster and increase travel time for emergency equipment. Thus, as slope increases, the ability to control fire decreases.

## Hazard Classifications

These factors are combined in matrix form to derive three wildfire hazard classifications: moderate, high, and extreme, as shown in Figure FS-1. Wildland fire hazard classifications have been mapped for each of the ten Shasta County planning areas.

Wildland fires in developed areas are difficult to control even when adequate equipment and personnel are available, as residential intrusion requires the deployment of fire fighting techniques and equipment normally not used in fighting wildland fires. Structural fires must be extinguished with large amounts of water, whereas wildland fires are controlled by containing the blaze and allowing the flames to die out. In order to protect vulnerable buildings from wildland fires, fire fighting resources are usually spent protecting the structures rather than controlling the fire. This frequently results in larger, more costly fires with greater destructive potential.

As a general rule, wildland fire hazards do not preclude development; yet they do require that development meet special standards commensurate with the degree of risk. The State of California has adopted minimum fire safety standards per Section 4290 of the Public Resources Code. The California Department of Forestry and Fire Protection (CDF) is responsible for administering these standards. Shasta County has adopted into its development standards Fire Safety Standards for Parcel Maps and Subdivisions in Shasta County which meet or exceed the State's standards. These development standards address access, road widths, bridges, building construction, and hydrant and water systems. A section on mitigation measures is also included. The standards are particularly helpful in that they directly relate to fire hazard severity classifications.

## **Non-wildland Fire**

Non-wildland fires include structural, chemical, petroleum, electrical, vehicle and other man-made material fires. Non-wildland fires, as opposed to wildland fires, also pose the greatest threat to human life and property. As these fires occur predominantly in urban areas, future urban development in Shasta County will undoubtedly increase the need for fire protection services. In recent years, however, local governments in California have been confronted both with significant increases in the cost of providing fire protection services and a diminished ability to meet these costs due to Constitutionally-imposed constraints on their ability to tax.

## **Fire Protection**

Fire control agencies in Shasta County operate at all three levels of government.

### Federal -

The U.S. Forest Service (USFS) is responsible for wildland fire control on Forest Service administered lands. The USFS also protects approximately 200,000 acres of private lands adjacent to or within U.S. Forest Service boundaries through an agreement with the CDF.

National Park Service (NPS). The NPS provides protection for Lassen National Park and Whiskeytown National Recreation Area.

### State -

California Department of Forestry and Fire Protection (CDF). The CDF is responsible for wildland fire control outside of Forest Service or city boundaries on approximately 1.1 million acres of private wildlands. CDF protects an additional 250,000 acres of USFS and BLM lands through an agreement with those agencies. There are five CDF Battalions in Shasta County which support fire fighting equipment and personnel with eight seasonal fire stations, two year-round Amador stations, and one Battalion with three additional stations which serve the County, although located outside its boundaries.

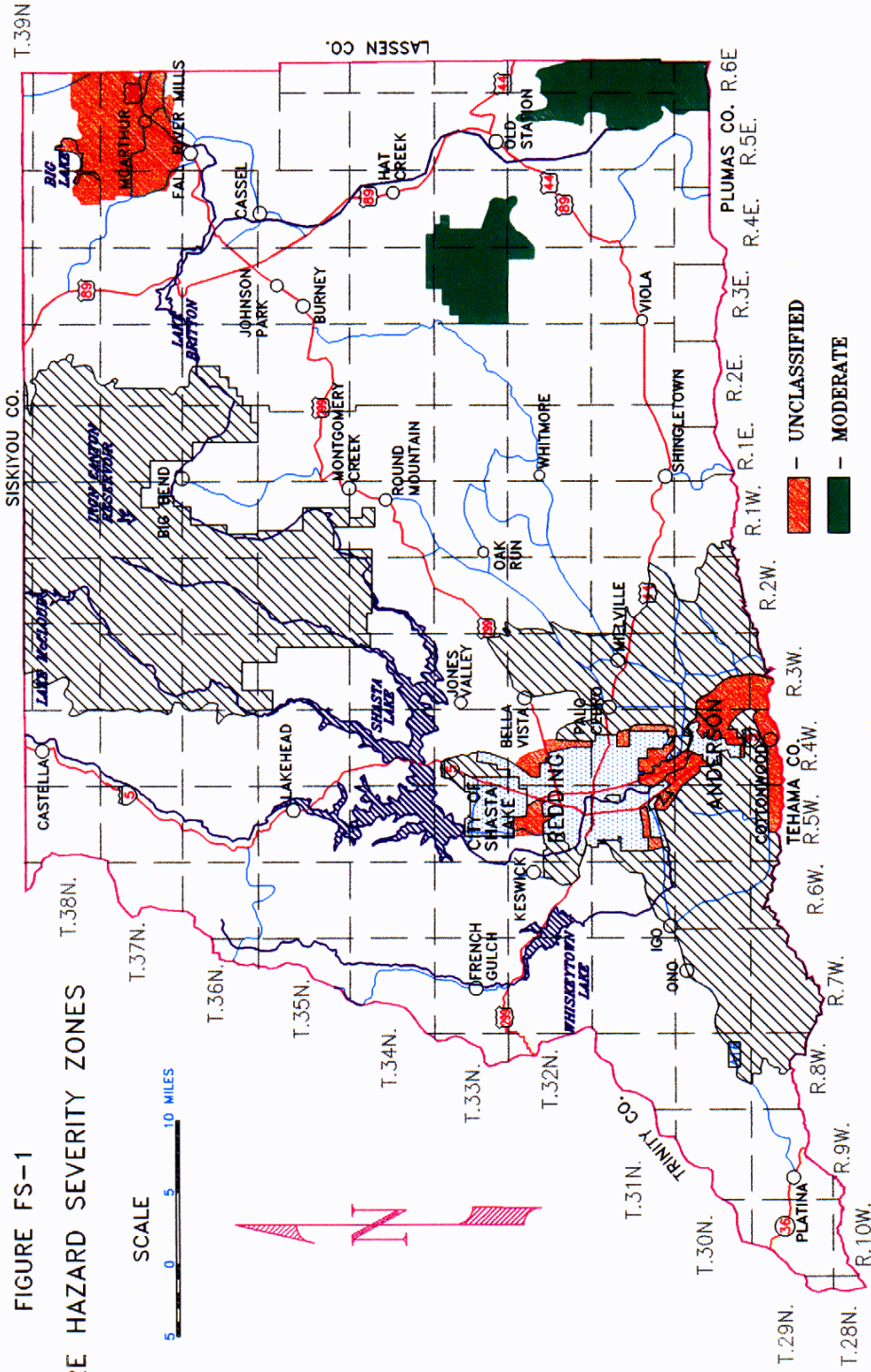
### Local -

Fire agencies serving the unincorporated areas of Shasta County include twelve community fire districts, nineteen volunteer fire companies, two Amador fire stations (Station 58 and Station 74), and one Shasta County Fire District station at the Redding Station 43. The nineteen volunteer fire companies are operated under the jurisdiction of the Shasta County Fire Department, as are the Amador stations and the County Fire District station. The community fire districts on the other hand are separate legal entities with legally drawn boundaries. Community fire districts have boards of directors and budgets separate from that of the Shasta County Fire Department. A listing of County fire districts and departments is provided in Table FS-1.

Many of the local fire agencies overlap with CDF and Forest Service jurisdictions. Local agencies are thus responsible primarily for non-wildland fires, while State and Federal agencies respond primarily to wildland fires. In practice, however, all agencies work together and overlap duties when the need is present. For the Cities of Anderson and Shasta Lake, the fire protection extends outside of the city boundaries.

FIGURE FS-1

FIRE HAZARD SEVERITY ZONES



General Plan Revision Program: SHASTA COUNTY, CALIFORNIA

**TABLE FS-1**

<b>SHASTA COUNTY FIRE DEPARTMENTS AND FIRE DISTRICTS</b>	
<b>19 VOLUNTEER FIRE COMPANIES</b>	<b>12 FIRE DISTRICTS</b>
Bella Vista	Anderson (unincorporated areas)
Big Bend	Burney
Cassel	Castella
Centerville	Cottonwood
French Gulch	Fall River Mills
Hat Creek	Happy Valley
Igo-Ono	McArthur
Jones Valley	Millville
Keswick	Mountain Gate
Montgomery Creek	Shasta
Oak Run	Shasta College
Old Station	Shasta Lake (unincorporated area) (formerly Central Valley & Summit City)
Palo Cedro	
Platina	
Shasta Lake (Lakehead)	
Shingletown	
Soldier Mountain	
West Valley	
Whitmore	

## **Sheriff Protection**

The unincorporated areas of Shasta County receive general public safety and law enforcement services from the Shasta County Sheriff's Office. General public safety and law enforcement services for the City of Shasta Lake are contracted with the Sheriff's Office.

The areas are covered by three geographic patrol areas with stations in the City of Shasta Lake (9 deputies assigned), Anderson (19 deputies assigned) and Burney (11 deputies assigned). Each area has responsibility for several beats. Approximately thirteen deputies report to each station. In addition, Lakehead has two resident deputies and Shingletown has three resident deputies.<sup>1</sup>

The Sheriff's Office has a total of 147 sworn deputy positions and 119 non-sworn positions. This includes the Sheriff's Civil Unit and Animal Control Unit. Approximately thirty-eight percent are assigned to the Custody Division (County Jail). The 2003 annual cost of a sworn officer is approximately \$74,000 exclusive of equipment costs.<sup>2</sup>

The future growth of Shasta County will undoubtedly require expansion of the Sheriff's Office to adequately serve the needs of new residents of unincorporated areas. The service requirements generated by the tourist industry will also continue to be significant. Coordination between the Sheriff's Office and Planning Division will be useful in identifying future service needs and areas where development could occur without generating demands for significantly expanded levels of sheriff protection. New developments in the unincorporated, urban areas of the County will need to employ physical design concepts that contribute to and reinforce a sense of community identity and promote a strategy to prevent or deter crime.

## **County Crime Statistics**

The following data from the Shasta County Sheriff's 2003 Department Annual Report provides a short summary of crime statistics for the County.

<b>SHASTA COUNTY CRIME STATISTICS 2003 VS. 2002</b>			
<b>Crime</b>	<b>2002</b>	<b>2003</b>	<b>Per Cent Increase (- Decrease)</b>
Aggravated Assault	294	255	- 13
Automobile Theft	49	61	24
Burglary	546	566	4
Homicide	5	2	- 40
Larceny	700	698	- 1
Rape	44	26	- 41
Robbery	16	15	- 6
<b>Total Crimes</b>	<b>2,501</b>	<b>2,431</b>	<b>- 2.8</b>
Source: <u>Record Searchlight</u> , April 20, 2004			

## **Defensible Space**

Crime prevention and protection are especially important to the public's safety. Because crime is a tremendously complex social phenomena, it cannot be given proper consideration in the General Plan. Instead, the discussion of crime must be limited to that which is related to land use -- the idea of "defensible space." This concept focuses on making our daily living environment safe and secure by incorporating effective crime prevention measures in site planning and structural design.

As Shasta County continues to grow, the County will likely experience an increase in its crime rate proportional to population increases. The unincorporated communities may likely be impacted by additional subdivisions of varying densities and size, including a variety of multiple family and/or mixed use projects. All of these developments will need adequate crime protection. One method to ensure safer and more secure residential communities is to require proven crime prevention measures in site planning and structural design.

Since humans display territorial behavior, the limits of one's territory and that of others should be well-defined. This includes the area outside a dwelling, perceived by residents as outdoor extensions of their dwelling - their defensible space. This may be the entire area inside one's property lines or it may be a patio adjacent to an apartment. All other areas are generally considered to be semi-private or public.

Numerous design techniques, many of which are quite subtle and only symbolic, can be used to create defensible spaces. This involves the use of various mechanisms which: (1) promote a sense of territoriality; (2) provide physical and psychological barriers; (3) improve both public and private surveillance opportunities; and (4) strategically locate community activity areas.

Another measure includes provisions for well-lighted and visible common areas and travel ways. This approach can reduce the number of unlighted common areas such as corridors and hallways where crime is more likely to occur. Windows should be designed to provide entrance ways that are visible from inside a residence. Walkways and entrances should be visible to the neighbors or from the street and these entrances should be well-lighted. This permits a resident to be under natural observation from other residents. Also, designing neighborhoods with through, interior streets (as compared to dead-end roads) facilitates police patrolling, which in itself is a crime deterrent. By employing a combination of these and other similar techniques, safer living areas may be assured.

### **5.4.3 Objectives**

- FS-1 Protect development from wildland and non-wildland fires by requiring new development projects to incorporate effective site and building design measures commensurate with level of potential risk presented by such a hazard and by discouraging and/or preventing development from locating in high risk fire hazard areas.
- FS-2 Protection of life and property from crime by encouraging new development projects to incorporate effective defensible space design techniques .

### **5.4.4 Policies**

- FS-a All new land use projects shall conform to the County Fire Safety Standards.
- FS-b Known fire hazard information should be reported as part of every General Plan amendment, zone change, use permit, variance, building site approval, and all other land development applications subject to the requirements of the California Environmental Quality Act (CEQA)

- FS-c Fire Hazard Maps shall be kept on file by the County and used in conjunction with the adopted County Fire Safety Standards and other County development standards.
- FS-d New development in areas designated Urban Residential and Suburban Residential should be encouraged to incorporate effective site planning and structural design features designed to prevent and deter crime.
- FS-e Development in areas requiring expanded levels of police and fire services shall participate in adopted County programs designed to offset the added costs for providing the expanded level of services.
- FS-f The Sheriff's Office and Shasta County Fire Department should annually review the County's standard development conditions as they relate to the provision of police and fire services created as a result of new land use projects and recommend to the Planning Commission appropriate changes including the need to implement equitable property tax assessments to help defray the costs of providing new and/or expanded services.

Footnotes:

- <sup>1</sup> Memorandum from the Sheriff's Office, dated April 21, 2004.
- <sup>2</sup> Ibid., Sheriff's Office.