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 (urban) fires are the two types of fire hazards.

Non-wildland (Urban) 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 great threat to human life and property. As these fires occur predominantly in more urbanized 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.

Wildland Fires

Shasta County has a long and active wildfire history. There are many areas in the County with high wildland fire potential. The interface in the County between wildland areas and development exposes residents, businesses, and community facilities to wildland fire risks. In the last several decades, the combination of climate change, improved firefighting technology, fire suppression policy, environmental regulations, and development trends has led to increasing fuel loads, greater occupancy of remote wildlands, and greater potential for catastrophic wildfire.

Human activities such as smoking, debris burning, and equipment operation are a major cause of wildland fires. Lightning and other weather events including high winds leading to infrastructure damage are also potential causes of wildfires in Shasta County. Whatever the cause, wildland fires present a major safety hazard to rural development located in or near forest, brush, and grass-covered areas and to wildland urban interface areas transitioning from rural or unoccupied lands to developed areas. The majority of wildland fires occurred in the upland areas of the County, where fire hazards are extreme due to an abundance of highly flammable vegetation and long dry summers.

Federal Wildfire Regulations

National Fire Plan (NFP). The NFP was created to address fire protection strategies for rural communities. Together, the U.S. Department of Agriculture Forest Service and the Department of the Interior are working to successfully implement key points outlined in the NFP, including firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

FY 2001 Appropriations Act. Title IV of the Appropriations Act required the identification

of "Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire" by the U.S. Departments of the Interior and Agriculture.

Disaster Mitigation Act (2000). Section 104 of the Disaster Mitigation Act of 2000 (Public Law 106-390) enacted Section 322, Mitigation Planning of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, which created incentives for state and local entities to coordinate hazard mitigation planning and implementation efforts, and is an important source of funding for fuels mitigation efforts through hazard mitigation grants.

National Cohesive Wildland Fire Management Strategy. The Federal Wildland Fire Management Policy is intended to provide strategic consistency among federal agency fire management programs. The Guidance and Implementation of Federal Wildland Fire Management Policy (USFS et al., 2009) replaces the Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy (National Association of State Foresters et al., 2003) and clarifies changes that have occurred since 2003, while providing revised direction for consistent implementation of the Review and Update of the 1995 Federal Wildland Fire Management Policy.

Healthy Forest Initiative 2002/Healthy Forest Restoration Act (HFRA). In August 2002, the Healthy Forest Initiative was launched with the intent to reduce the severe wildfires risks that threaten people, communities, and the environment. Congress then passed the HFRA on December 3, 2003 to provide the additional administrative tools needed to implement the Healthy Forest Initiative. The HFRA strengthened efforts to restore healthy forest conditions near communities by authorizing measures such as expedited environmental assessments for hazardous fuels projects on federal land. The HFRA emphasized the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects and places priority on fuel treatments identified by communities themselves in their Community Wildfire Protection Plans.

Department of the Interior Department Manual Part 620. Wildland Fire Management. Part 620 of the Department of the Interior Departmental Manual pertains to wildland fire management policies, with the goal of providing an integrated approach to wildland fire management. The guiding principles of the plan emphasize the need for public health and safety considerations, risk management protocols, inter-agency collaboration, and economic feasibility of wildfire management practices, as well as the ecological role of wildfires.

North American Electric Reliability Corporation Standards. To improve the reliability of regional electric transmission systems, the North American Electric Reliability Corporation developed a transmission vegetation management program for all transmission lines operated at 200 kilovolts (kV) and above, and to lower voltage lines designated by the Regional Reliability Organization as critical to the reliability of the regional electrical system. Developed in 2006, requirements of the program govern clearances between vegetation and any overhead, ungrounded supply conductors must be identified and documented, while considering transmission line voltage; effects of ambient temperature on conductor sag under maximum design loading; fire risk; line terrain and elevation; and effects of wind velocity on conductor sway. The clearances identified must be no less than those set forth in Institute of Electrical and Electronics Engineers Standard 516-2003.

State Wildfire Regulations

California Strategic Fire Plan. This statewide plan is a strategic document, which guides fire policy for much of California. The plan is aimed at reducing wildfire risk through pre-fire mitigation efforts tailored to local areas through assessments of fuels, hazards, and risks.

California State Multi-Hazard Mitigation Plan. The purpose of the State Multi-Hazard Mitigation Plan (SHMP) is to significantly reduce deaths, injuries, and other losses attributed to natural- and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, state, and federal agencies as well as the private sector.

California Public Resource Code Section 4290-4296. The State's Fire Safe Regulations are set forth in Public Resources Code Section 4290, which include the establishment of State Responsibility Areas (SRAs). Public Resources Code Section 4291 sets forth defensible space requirements, which are applicable to anyone that …owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material (Section 4291(a)). Public Resources Code Sections 4292-4296 and 14 California Code of Regulations (CCR) 1256, Fire Prevention for Electrical Utilities, address the vegetation clearance standards for electrical utilities. These laws include the standards for clearing around energy lines and conductors such as power-line hardware and power poles. These regulations are critical to wildland fire safety because of the substantial number of power lines in wildlands, the historic source of fire ignitions associated with power lines, and the extensive damage that results from power line caused wildfires in severe wind conditions.

Public Resources Code Section 4119 authorizes the California Department of Forestry and Fire Protection (CAL FIRE) or its authorized agent to inspect properties to determine whether they comply with state forest and fire laws, regulations, or use permits. Section 4427 limits the use of any motor, engine, boiler, stationary equipment, welding equipment, cutting torches, tarpots, or grinding devices which may generate a spark or flame if the equipment is located on or near forested land or land covered in bush or grass. Section 4427 establishes requirements such as clearing flammable material within 10 feet of the area of operation, as well as carrying of fire response equipment such as a shovel, backpack pump water type fire extinguisher.

Public Resources Code Section 4428 limits industrial operations by requiring certain firefighting equipment to be used when operating internal combustion engines on or near land covered by forest bush or grass between April 1 and December 1 of any year, or other times when ground litter and vegetation could sustain combustion and facilitate the spread of fire. Section 4428 requires that such work provide and maintain the following tools:

- A sealed box of tools containing a backpack pump-type fire extinguisher filled with water, two axes, two McLeod fire tools, and a shovel for each worker onsite must be in near the operating area in a manner that would be accessible in the event of a fire.
- At least one serviceable chainsaw or timber felling tools must be provided and maintained.
- Each passenger vehicle must be equipped with a shovel and an ax, and every other vehicle or tractor must have a shovel.

Public Resources Code Section 4431 requires users of gasoline-fueled internal combustion-powered equipment located within 25 feet of forest, brush, or grass to keep firefighting tools at the immediate location of use. The Director of Forestry and Fire Protection administers and specifies the type and size of fire extinguisher necessary to provide at least minimum assurance of controlling fire caused by use of portable power tools under various climatic and fuel conditions. In addition, Section 4442 restricts the use and operation of any internal combustion engine that uses hydrocarbon fuels on any forest, brush, or grass areas unless the engine is equipped with a spark arrestor, as defined in Pub. Res. Code Section 4442(c) and pursuant to §4443.

California Government Code Section 51175. California Government Code Section 51175 defines Very High Fire Hazard Severity Zones (VHFHSZ) and designates lands considered by the State to be a very high fire hazard.

California Government Code Section 51189. California Government Code Section 51189 directs the Office of the State Fire Marshal to create building standards for wildland fire resistance. The code includes measures that increase the likelihood of a structure withstanding intrusion by fire (such as building design and construction requirements that use fire-resistant building materials) and provides protection of structure projections (such as porches, decks, balconies and eaves), and structure openings (such as attics, eave vents, and windows).

California Government Code Section 65302.5. California Government Code Section 65302.5 requires the State Board of Forestry and Fire Protection to provide recommendations for a local jurisdiction's General Plan fire safety element when the jurisdiction amends its general plan. While not a direct and binding fire prevention requirement for individuals, general plans that adopt the Board's recommendations will include goals and policies that provide for contemporary fire prevention standards for the jurisdiction. While the State Board of Forestry and Fire Protection has not specifically commented on the Proposed General Plan at the time that this EIR was written, the Proposed General Plan has been developed to include best practices to ensure contemporary fire prevention standards, as described in greater detail under the impact discussions below.

Assembly Bill 337. Per AB 337, local fire prevention authorities and CAL FIRE are required to identify VHFHSZs in Local Responsibility Areas (LRA). Standards related to brush clearance and the use of fire resistant materials in fire hazard severity zones (FHSZs) are also established.

CA Code of Regulations Title 8. In accordance with CCR, Title 8, §1270 and §6773 (Fire Prevention and Fire Protection and Fire Equipment), the Occupational Safety and Health Administration establishes fire suppression service standards. The standards range from fire hose size requirements to the design of emergency access roads.

California Public Utilities Commission General Orders. The California Public Utilities Commission (CPUC) regulates private investor-owned utilities in the state of California, including electric power companies like PG&E as well as natural gas, telecommunications, and water companies. Rules established by the CPUC are called "General Orders" or "GOs."

PG&E Fire Prevention Plan. PG&E prepared a Fire Prevention Plan in compliance with CPUC Decision 12-01-032 (Fire Safety Order), Standard 1.E of General Order 166, and

Senate Bill 1028. The Fire Prevention Plan summarizes PG&E's fire prevention and safety procedures and programs which include, but are not limited to: fire threat and risk area mapping, fire prevention pre-planning, enhanced fire detection efforts, building resiliency (including a wood pole test and treat program), operational practices to reduce the risk of fires, overhead inspections and patrols, fire prevention outreach and training programs, as well as pro-active responses to fire incidents.

CA Code of Regulations Title 14 (Natural Resources). Division 1.5 (Department of Forestry and Fire Protection), Title 14 of the CCR establishes a variety of wildfire preparedness, prevention, and response regulations.

CA Code of Regulations Title 19 (Public Safety). Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

CA Code of Regulations Title 24 (CA Building Standards Code). The California Fire Code is set forth in Title 24, Part 9 of the California Building Standards Code. The Fire Code contains fire-safety building standards referenced in other parts of Title 24.

CA Health and Safety Code Section 13000 et seq. State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which is divided into "Fires and Fire Protection" and "Buildings Used by the Public." The regulations provide for the enforcement of the California Fire Code and mandate the abatement of fire hazards. The code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

California Senate Bill No. 1241. California Senate Bill No. 1241 requires that the Safety Element component of city or county general plans to incorporate fire risk related to SRAs and VHFHSZs.

Defensible Space and the Fire Safe Regulations. State law requires a minimum clearance (defensible space) of 100-feet around structures (Public Resources Code Sections 4290, 4291). Implementing regulations (the "Fire Safe Regulations") provide related requirements to be implemented in a SRA including road standards for fire equipment access (14 CCR Section 1273 et seq.); standards for signs identifying streets, roads, and buildings (14 Cal. Code Regs. Section 1274 et seq.); requirements for minimum private water supply reserves for emergency fire use (14 Cal. Code Regs. Section 1275 et seq.); and requirements for fuel breaks such as defensible space and greenbelts (14 CCR Section 1272, 1276 et seq.).

Forest Practice Act and the Forest Practice Rules. The Z'Berg-Nejedly Forest Practice Act of 1973 (Pub. Res. Code §§4511–4360.2) and its implementing regulations, the Forest Practice Rules (14 Cal. Code Regs. §895 et seq.), govern the management of privately owned forestlands in California, including with respect to wildfire. For example, Rule 938.4 governs smoking and matches (14 Cal. Code Regs. §938.4) and Rule 938.7 governs blasting and welding (14 Cal. Code Regs. §938.7)

Local Wildfire Regulations

CAL FIRE Shasta Trinity Unit Strategic Plan. CAL FIRE addresses its services to the region in the Shasta Trinity Unit 2022 Strategic Fire Plan (SHU Strategic Plan). The SHU Strategic Plan is incorporated into the General Plan, including this element, by reference. The SHU Strategic Plan addresses fire history in the region, wildland fire hazards, geographic conditions, collaboration with local and regional agencies, fire response preparedness and firefighting capabilities, values and communities at risk of wildfire effects, pre-fire management strategies, and historic fires in the SHU.

Shasta County Communities Wildfire Protection Plan. In 2015, Shasta County updated the existing strategic fuel management plans and community wildfire protection plans and consolidate them into a single county-wide plan. The result was the adoption of the 2016 Shasta County Communities Wildfire Protection Plan (SCWPP). The SCWPP incorporated input from a multidisciplinary team of stakeholders and agencies from which a list of ten goals and objectives was developed. The overall intent included but was not limited to controlling of fuel inventories, conducting an asset/risk and prioritization assessment, development of a fuel reduction plan, development of maps to aid in planning, identification of fuel breaks, a priority list for fire safe projects, and encouraging ongoing maintenance.

Within the SCWPP, there are approximately 1,419,245 acres within 10 sub-watersheds within the County:

- Cottonwood Creek North
- Cow Creek
- French Gulch/Upper Clear Creek
- Keswick Basin
- Lakehead
- Lower Clear Creek
- Old Station/Hat Creek
- Shasta West
- Shingletown
- Stillwater-Churn Creek

The SCWPP identifies goals and objectives for the outcomes of the plan, identifies recommended actions, describes values at risk of wildfire, identifies supporting plans, organizations, and agencies, analyzes fuel modeling and fire conditions, identifies fuel treatments, addresses roads for access, identifies potential funding sources, and describes fuelbreak maintenance funding and legislation.

Community Wildfire Protection Plan – Burney Basin Fire Safe Council (CWPP-BB). In 2018, the CWPP-BB was developed by the Burney-Hat Creek Community Forest and Watershed Group to address wildfire prevention in the Burney Basin. Updates to the CWPP-BB were prepared in 2019 and 2021. The CWPP-BB establishes a base map and evacuation plan of the area, a community risk assessment and identification of prioritized fuel treatment projects, an action plan and assessment strategy, and an outreach strategy.

Shasta County and City of Anderson Multi-Jurisdictional Hazard Mitigation Plan. The Shasta County and City of Anderson Multi-Jurisdictional Hazard Mitigation Plan, also referred to as a local hazard mitigation plan (LHMP), adopted in November of 2017, developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's Local Hazard Mitigation Plan guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short and long-term strategies, involve planning,

policy changes, programs, projects, and other activities. The emphasis of the LHMP is on the assessment and avoidance of identified risks, implementing loss reduction measures for existing exposures, and insuring critical services and facilities survive a disaster. Hazard mitigation strategies and measures avoid losses by limiting new exposures in identified hazard areas, alter the hazard by eliminating or reducing the frequency of occurrence, avert the hazard by redirecting the impact by means of a structure or adapt to the hazard by modifying structures or standards. The LHMP is updated every 5 years. The current LHMP is located on the County's website at: https://www.shastacounty.gov/public-works/page/shasta-county-hazard-mitigation-plan.

County Code of Ordinances Title 16 – Buildings and Construction. The Chapters of the Shasta County Code under Title 16 - Building and Construction apply to all unincorporated areas; Chapter 16.04.130 addresses Fire Standards and Equipment, and Chapter 16.10.290 addresses Fire Safety Regulations for Limited Density-Owner Built Rural Dwellings in Rural areas of the County as defined in Chapter 16.10.040.D. Chapter 16.08.010 – Codes Adopted, notes that the building standards, rules and regulations contained in the most recent edition of the codes specified in the California Health and Safety Code (Sections 17922 and 18938), and in Chapter 1 of Title 24, Part 2, of the California Code of Regulations (CCR) are adopted by reference by the County. The purpose of these codes is to prescribe the minimum requirements necessary to establish a reasonable level of fire safety to protect life and property from hazards created by fire, explosion, and dangerous conditions.

County Code of Ordinances Chapter 8.08 – Fire Hazard Regulations. Chapter 8.08 establishes regulations for outdoor burning of waste, trash, dry grass, and other inflammable materials, addresses abatement of fire hazards, establishes the Fire Warden's responsibility for fire investigations, and establishes the Fire Warden's responsibility for fire and life safety inspection of buildings.

County Code of Ordinances Chapter 8.10 – Defensible Space for Fire Protection. Chapter 8.10 establishes defensible space, fuel, and grading requirements for urban lands in the unincorporated area of Shasta County. For the purposes of this chapter, urban lands consist of lands located in either a zoning district which permits the creation of parcels that are two acres or less in size or a Planned Development zoning district. This chapter requires responsible parties to maintain defensible space of up to 30 feet from the property line of the responsibly party's parcel when the accumulation of fuel on the parcel endangers or encroaches on a defensible space of 100 feet from the exterior perimeter of any improvement on an adjacent property that also lies entirely or partially within an Urban Lands area. The Fire Warden may require a distance greater than 30 feet but not to exceed 100 feet when it is determined that the greater distance is necessary to provide defensible space for improvements on an adjacent property.

Shasta County Development Standards Chapter 6 – Fire Safety Standards. Chapter 6 is inclusive of the "State Responsibility Area (SRA) Fire Safe Regulations" (California Public Resources Code Section 4290). The standards set forth in Chapter 6 enhance public and firefighter safety by establishing criteria for development and address public and emergency responder access requirements, fire protection water standards, building construction standards, and fuel modification standards. The standards described in Chapter 6 apply to subdivisions, parcel maps, use permits, administrative permits, building permits, mobile home installation permits, and any other developments which require the issuance of a permit by the County of Shasta.

Integrated and Referenced Plans

This Safety Element integrates and references information from the plans and programs described above. Plans specifically integrated and referenced include:
SHU Strategic Plan.

- LHMP
- FHSZ Maps
- SHU Strategic Plan
- SCWPP
- CWPP-BB

The most current version of these documents are available on the preparing agency websites and are also available on the County's website at:
https://www.shastacounty.gov/planning/page/general-plan
The Shasta County General Plan web page will be updated periodically to reflect the most recent version.

Wildfire Local Setting

Wildfire Behavior and Wildfire Fire Hazard Mapping is dependent on a number of biophysical (climate, topography, and vegetation) and anthropogenic (human-influenced) factors. The biophysical variables include fuels (vegetation composition, cover, and moisture content), climate (weather, wind velocity and humidity), topography (slope and aspect), and ignition sources (e.g., lightning). Anthropogenic variables consist of human activities (e.g., arson, smoking, and power lines) and management (wildfire prevention and suppression efforts). These factors are described below.

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 several factors including: 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. Vegetation type influences wildfire hazard levels as well. For example, landscapes dominated by chaparral are more flammable than other vegetation types. 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

Climate characteristics are an important factor influencing hazard levels. Weather characteristics such as wind, temperature, humidity and fuel moisture content affect the potential for fire. A fire typically burns faster and with more intensity when air temperature is high, relative humidity and fuel moisture content is low, and winds are strong. The Shasta County Hazard Mitigation Plan describes the County's climate as Mediterranean, with hot, dry summers and cool, wet winters, and average temperatures ranging from 36 to 55 degrees in January to temperatures ranging from 65 to 99 degrees in July, with an average of 45 days in the summer that exceed 100 degrees. Annual rainfall averages 33 inches, most of which falls between November and March.

Topography

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

Hazard Classifications

The combination of weather and climate, highly flammable vegetation, steep inaccessible wildlands, and human activity can result in wildfire risk and hazards.

California State law (Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189) requires the identification of FHSZs. FHSZs evaluate "hazard," not "risk". "Hazard" is based on the physical conditions that create a likelihood and expected fire behavior over a 30 to 50-year period without considering short-term modifications such as fuel reduction efforts. "Risk" is the potential damage a fire can bring to an area under existing biophysical and anthropogenic conditions, including any modifications such as fuel reduction projects, defensible space, and ignition resistant building construction.

Fire prevention areas under state jurisdiction are referred to as state responsibility areas (SRAs). In SRAs, CAL FIRE is required to delineate three hazard ranges: moderate, high, and very high. In local responsibility areas (LRAs), which are under the jurisdiction of local entities (e.g., cities, counties, and special districts), only VHFHSZs are required to be identified. The current FHSZ maps are used by the State Fire Marshal as a basis for the adoption of applicable building code standards.

Classification of a zone as moderate, high, or very high fire hazard is a combination of how a fire will behave and the probability of flames and embers threatening buildings. Each area of a fire hazard severity zone map gets a score for flame length, embers, and the likelihood of the area burning. Scores are then averaged over the zone areas which vary in size from relatively small – 20-acre urban areas to larger wildland zones that have minimum size of 200 ac. Final zone class (moderate, high and very high) is based on the averaged scores for the zone.

CAL FIRE has assigned a VHFHSZ rating throughout portions of unincorporated Shasta County. Figure FS-1 identifies the FHSZs for Shasta County and Figure FS-1A identifies the FHSZs and General Plan land use designations for Shasta County; note that the most current FHSZ maps are provided at the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program website: https://frap.fire.ca.gov/. The majority of lands within very high fire hazard severity zones are not designated for primarily residential use or for development with regularly occupied structures (commercial, public facilities, etc.). A total of 1,259,556 acres (52%)

RPC 2(b)(i)(b)

of land within the County are designated within a VHFHSZ.

Table 5.4-1 identifies planned land uses, based on the General Plan land use designations, for lands within moderate, high, and very high FHSZs. As shown in Table 5.4-1, 52.2% of lands within the County are designated within a VHFSZ, while 103,716.7 acres (4.3%) are in Moderate or High FHSZs, and 1,051,065.5 (44%) acres are not rated. . Lands with residential land use designations include 240,594.9 acres (85%) in the VHFHSZ and 427,947.4 acres (10%) in the Moderate FHSZ or High FHSZ, and 13,138.5 acres (5%) not in a designated FHSZ. Lands with commercial, industrial, mixed use, and public facility land use designations include 6,031.6 acres (54%) in the VHFHSZ and 1,379.9 acres (12%) in the Moderate FHSZ or High FHSZ, and 3,827.6 acres (34%) not in a designated FHSZ. Lands with resources, tribal lands, public lands, and open space land use designations include 1,005,959.4 acres (48%) in the VHFHSZ and 74,332.9 acres (4%) in the Moderate FHSZ or High FHSZ, and 1,033,785.0 acres (48%) not in a designated FHSZ. Figure FS-1 identifies planned land uses within very high fire hazards severity zones in Shasta County.

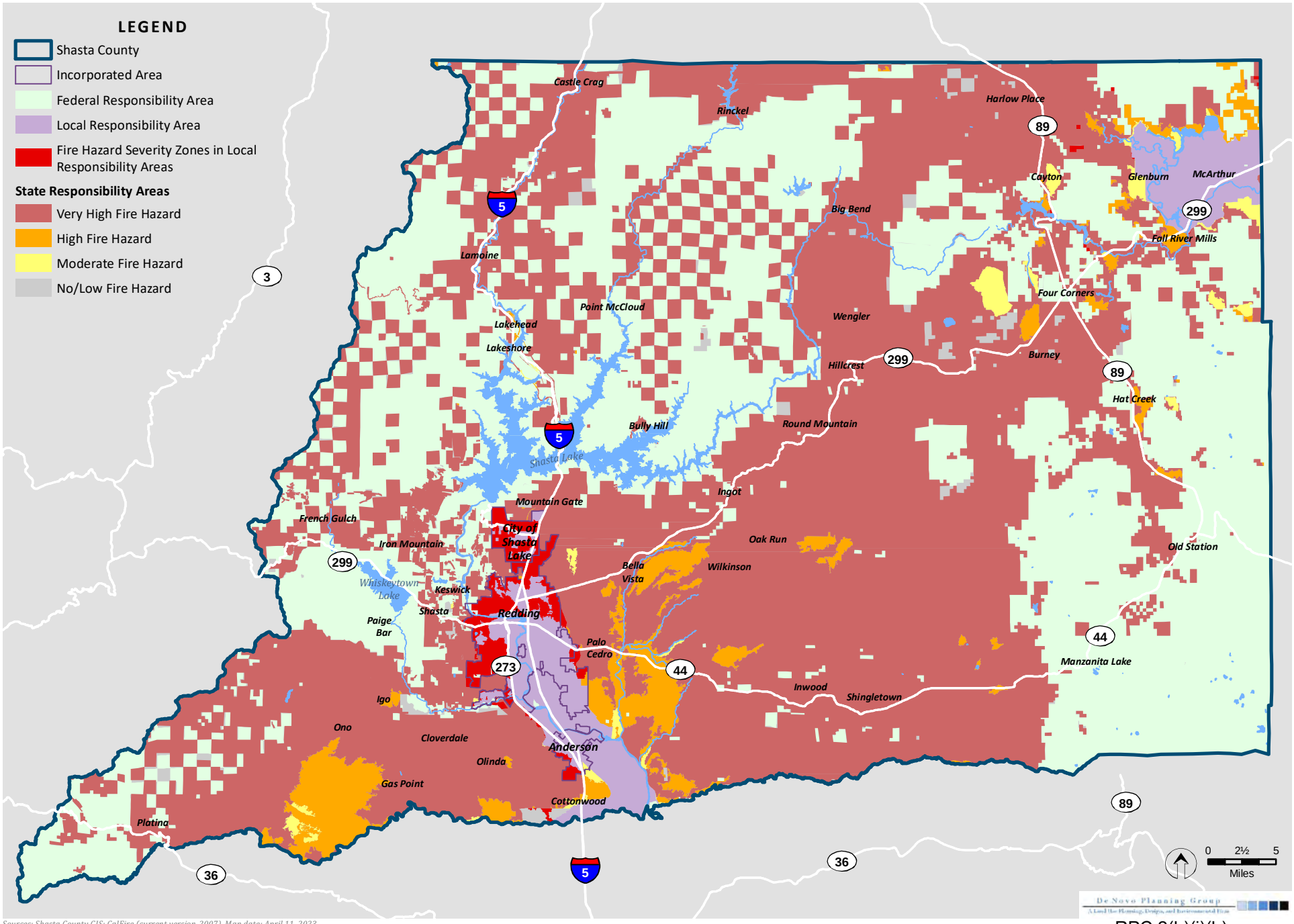
Table 5.4-1: Land Uses by High Fire Hazards Severity Zone in Shasta County

Land Use	Very High FHSZ	High FHSZ	Moderate FHSZ	No Rating	Total
Commercial, Industrial, Mixed Use, and Public Facilities					
Commercial	**672.8**	**157.1**	**28.7**	**837.8**	**1,696.3**
Commercial	627.7	157.1	28.7	757.5	1,570.9
Commercial Highway	-	-	-	40.2	40.2
Retail Commercial	23.7	-	-	0.8	24.4
Service / Commercial	21.5	-	-	39.3	60.8
Industrial	**2,291.0**	**382.6**	**487.5**	**2,475.0**	**5,636.1**
Industrial	2,291.0	382.6	487.5	2,475.0	5,636.1
Mixed Use	**1,504.6**	**224.5**	**28.7**	**69.4**	**1,827.2**
Mixed Use	1,504.6	224.5	28.7	69.4	1,827.2
Public Facility	**1,563.3**	**70.8**	**-**	**445.5**	**2,079.6**
Public Facility	1,563.3	70.8	-	445.5	2,079.6
Subtotal	***6,031.6***	***834.9***	***545.0***	***3,827.6***	***11,239.2***
Residential					
Rural Residential	**233,685.4**	**25,585.9**	**1,243.5**	**8,279.7**	**268,794.5**
Rural Residential A	79,698.5	8,868.4	775.0	6,230.1	95,571.9
Rural Residential A-600 acre density	623.6	-	-	-	623.6
Rural Residential B	153,304.7	15,769.3	468.5	2,049.7	171,592.2
Rural Residential B 20 acre density	58.6	467.8	-	-	526.5
Rural Residential B 40 acre density	-	480.4	-	-	480.4
Suburban Residential	**6,095.3**	**909.0**	**136.4**	**4,332.0**	**11,472.6**
Suburban Residential	5,761.6	751.7	0.7	3,640.8	10,154.8
Suburban Residential-1units/acre	265.3	48.5	-	290.5	604.2
Suburban Residential-2units/acre	4.8	26.9	80.6	93.0	205.3
Suburban Residential-3units/acre	63.6	81.9	55.1	307.6	508.2
Urban Residential	**814.2**	**58.9**	**13.9**	**526.8**	**1,413.7**
Urban Residential	646.7	18.6	-	264.8	930.1
Urban Residential-12units/acre	-	-	-	22.6	22.6
Urban Residential-16units/acre	-	-	-	2.8	2.8
Urban Residential-4units/acre	11.4	-	-	-	11.4
Urban Residential-5units/acre	-	-	-	211.3	211.3

RPC 2(b)(i)(b)

Land Use	Very High FHSZ	High FHSZ	Moderate FHSZ	No Rating	Total
Urban Residential-6units/acre	148.4	19.3	-	-	167.6
Urban Residential-8units/acre	-	21.0	13.9	21.4	56.3
Urban Residential-9units/acre	7.8	-	-	3.8	11.6
Subtotal	***240,594.9***	***26,553.7***	***1,393.8***	***13,138.5***	***281,680.8***
Resource Lands, Tribal Land, and Open Space					
Croplands/Grazing	**128,663.8**	**41,216.3**	**14,793.0**	**45,618.3**	**230,291.5**
Agricultural Croplands	14,278.4	7,155.9	12,439.2	34,367.5	68,240.9
Agricultural Grazing	108,008.6	31,913.4	1,740.5	219.6	141,882.2
Agricultural Small Scale Cropland / Grazing	5,963.0	2,116.4	613.3	11,025.7	19,718.4
Agricultural Small Scale Cropland / Grazing 10 acre density	49.2	28.6	-	5.6	83.4
Agricultural Small Scale Cropland / Grazing-20 acre density	364.6	1.9	-	-	366.6
Habitat Resource	**101,329.7**	**6,365.1**	**0.1**	**3,638.1**	**111,332.9**
Habitat Resource 40 acre density	57,389.5	1,283.5	0.1	3,117.7	61,790.8
Habitat Resource 80 acre density	43,856.5	4,101.1	-	481.6	48,439.3
Habitat Resource-Rural Residential B-Commercial	83.7	980.5	-	38.7	1,102.9
Mineral Resource	**12,723.2**	**62.0**	**50.1**	**1,342.8**	**14,178.1**
Mineral Resource	12,723.2	62.0	50.1	1,342.8	14,178.1
Recreation Resource	**6,970.2**	**28.9**	**27.6**	**314.4**	**7,341.0**
Recreation Resource	6,970.2	28.9	27.6	314.4	7,341.0
Timber	**690,474.0**	**3,534.0**	**2,505.6**	**18,608.1**	**715,121.7**
Timber	690,474.0	3,534.0	2,505.6	18,608.1	715,121.7
Tribal Land	**34.9**	**-**	**-**	**68.8**	**103.7**
Tribal Land	34.9	-	-	68.8	103.7
Open Space	**18,759.0**	**1,365.7**	**473.0**	**6,009.1**	**26,606.9**
Open Space	18,759.0	1,365.7	473.0	6,009.1	26,606.9
Public Land	**53,974.8**	**2,575.8**	**1,392.3**	**958,499.8**	**1,016,442.6**
Public Land	53,974.8	2,575.8	1,392.3	958,499.8	1,016,442.6
Subtotal	***1,005,959.4***	***55,118.9***	***19,214.1***	***1,033,785.0***	***2,114,077.3***
Grand Total	**1,259,556.0**	**82,536.3**	**21,180.4**	**1,051,065.5**	**2,414,338.2**

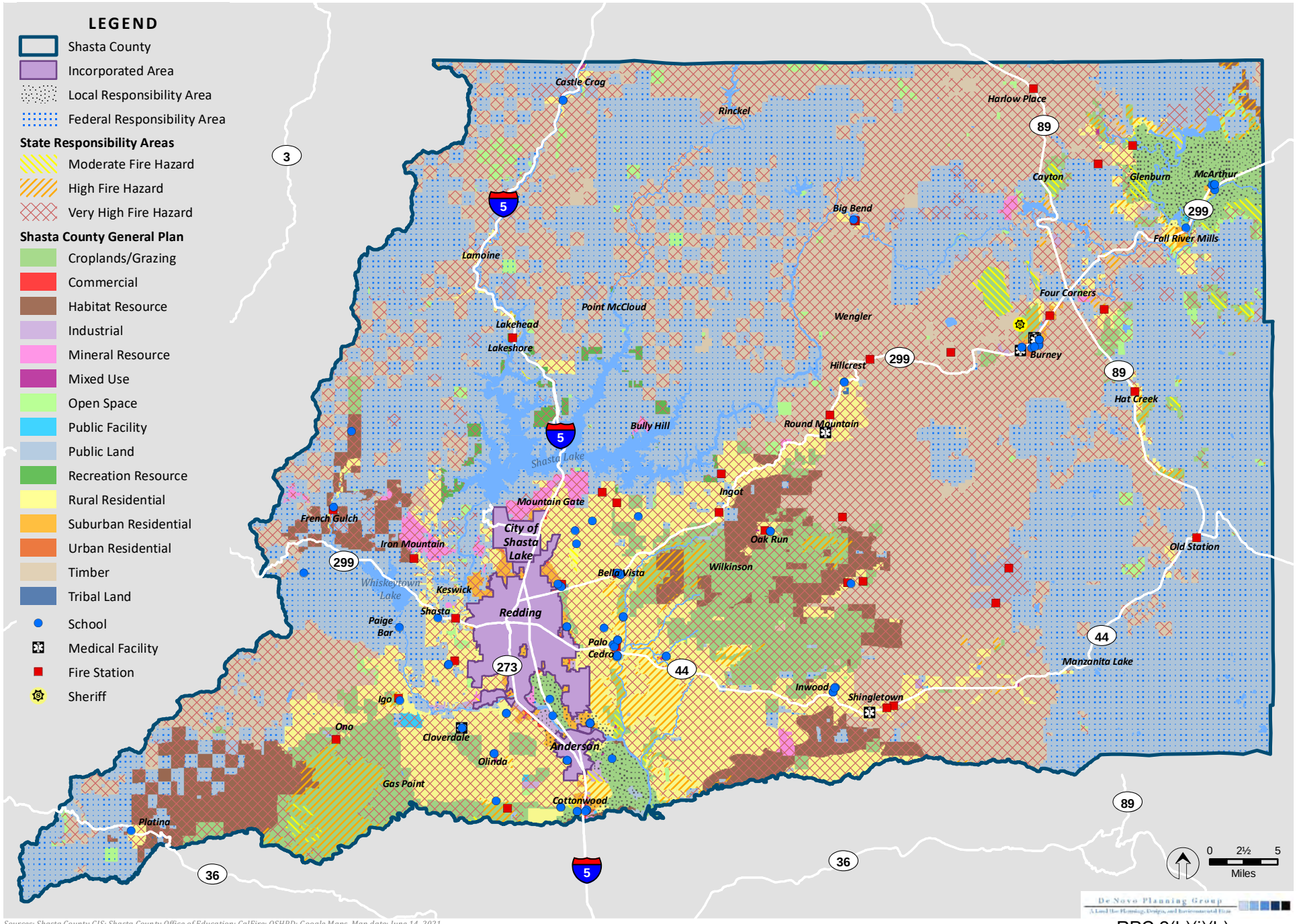
FS 1 - FIRE HAZARD SEVERITY ZONES



Sources: Shasta County GIS; CalFire (current version-2007). Map date: April 11, 2023.

RPC 2(b)(i)(b)

FS 1A -FIRE HAZARD SEVERITY ZONES



Sources: Shasta County GIS; Shasta County Office of Education; CalFire; OSHPD; Google Maps. Map date: June 14, 2021.

De Novo Planning Group

RPC 2(b)(i)(b)

Fire Threats

Fire Threat analysis provides a measure of fuel conditions and fire potential in the ecosystem, representing the relative likelihood of "damaging" or difficult to control wildfire occurring for a given area. Fire Threat is not a risk assessment by itself but can be used to assess the potential for impacts on various assets and values susceptible to fire. Impacts are more likely to occur and/or be of increased severity for the higher threat classes.

Fire Threat is a combination of two factors:

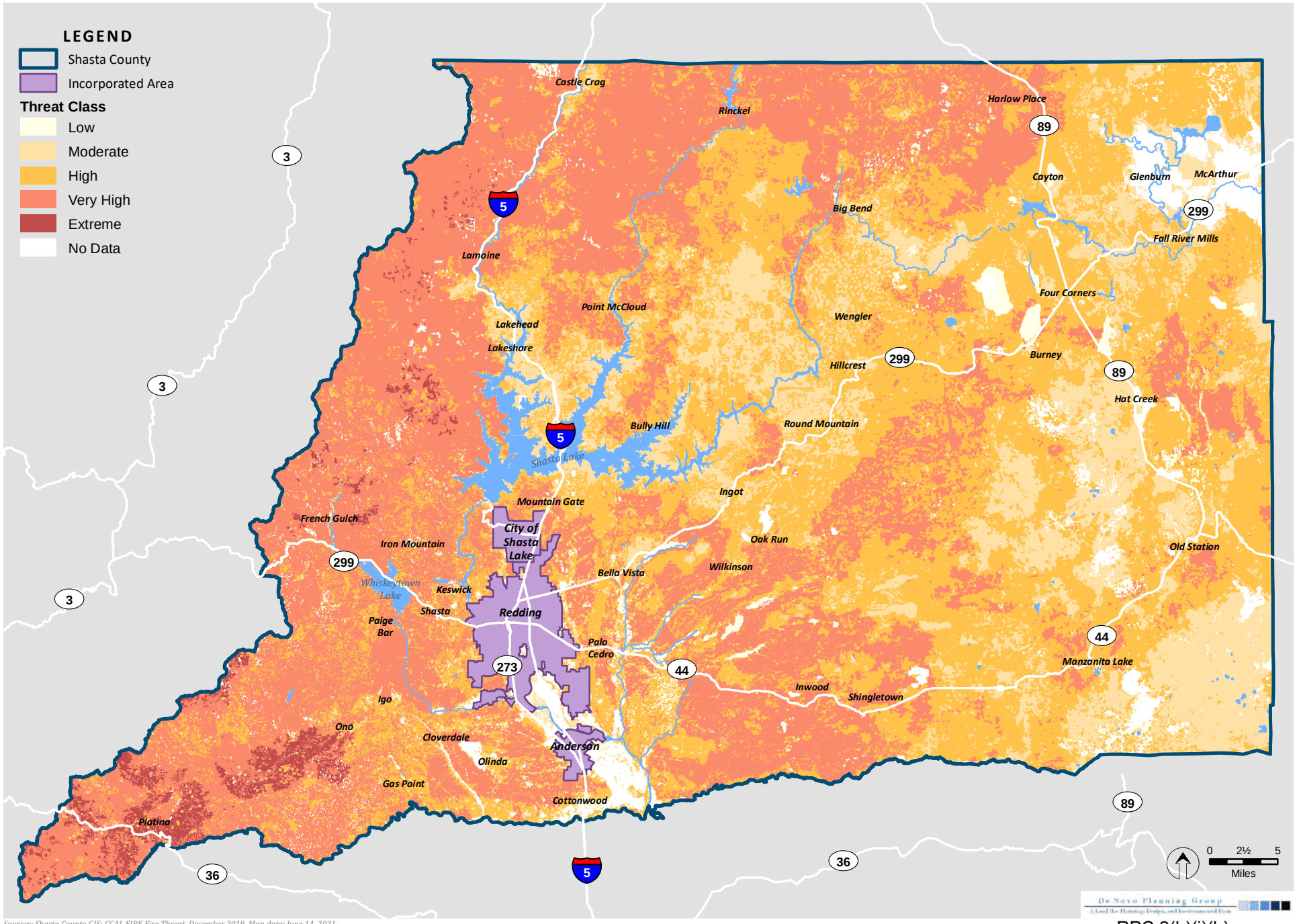
1) fire probability, or the likelihood of a given area burning, and

2) potential fire behavior (hazard). These two factors are combined to create 5 threat classes ranging from low to extreme.

The Fire Threat Map for Shasta County is shown on Figure FS-2 CAL FIRE Fire Threat Map.

General Order (GO) 95 of the California Public Utilities Commission (CPUC) regulates all aspects of design, construction, and O&M of overhead electrical power lines and fire safety hazards for utilities subject to its jurisdiction. In addition to its regulatory role pursuant to GO 95, the CPUC has created a High Fire-Threat District (HFTD) map identifying zones of high hazard, elevated risk and extreme risk for destructive utility-associated wildfires. As described in the CPUC's HFTD maps, Shasta County is within Tier 2 – Elevated, and Tier 3 – Extreme risk for destructive utility-associated wildfires. The majority of the County is included within Tier 2-Elevated. Several areas within the county are included within Tier 3 - Extreme risk for destructive utility-associated wildfires. Tier 3 areas are generally west of Redding, south of Round Mountain, and in the Shingletown area. Figure FS-3, CPUC Fire Threat Map, shows the corresponding fire threat tiers identifying areas where there is an increased risk for utility associated wildfires.

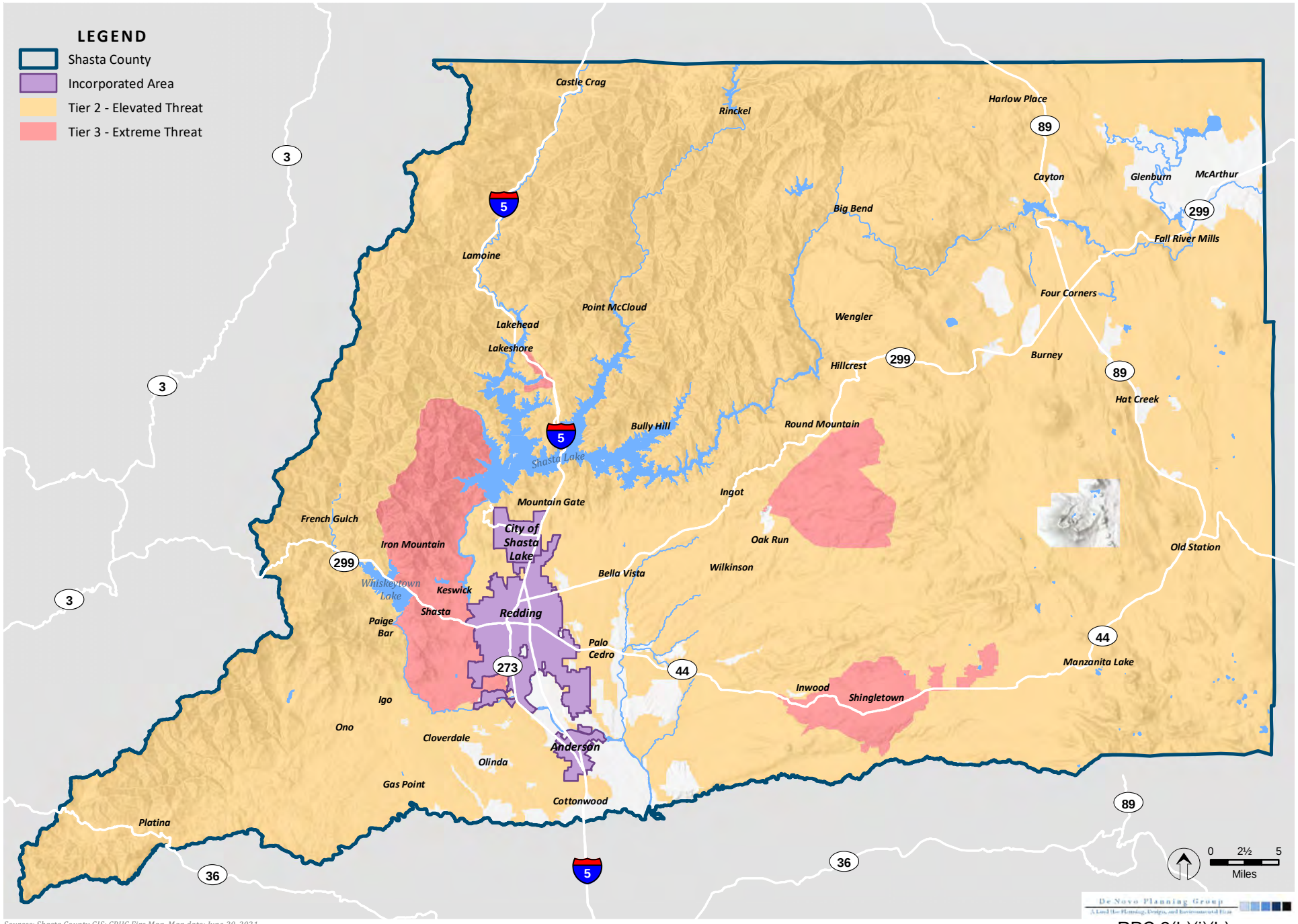
FS 2 - CalFire FIRE THREAT



Sources: Shasta County GIS; CCAL FIRE Fire Threat, December 2019. Map date: June 14, 2021.

RPC 2(b)(i)(b)

FS 3 - CPUC FIRE-THREAT MAP



Sources: Shasta County GIS; CPUC Fire Map. Map date: June 30, 2021.

De Novo Planning Group

RPC 2(b)(i)(b)

Historical Wildfires

The majority of fires which have been documented since 1900 within Shasta County are shown on Figure FS-4 - Fire History Map.

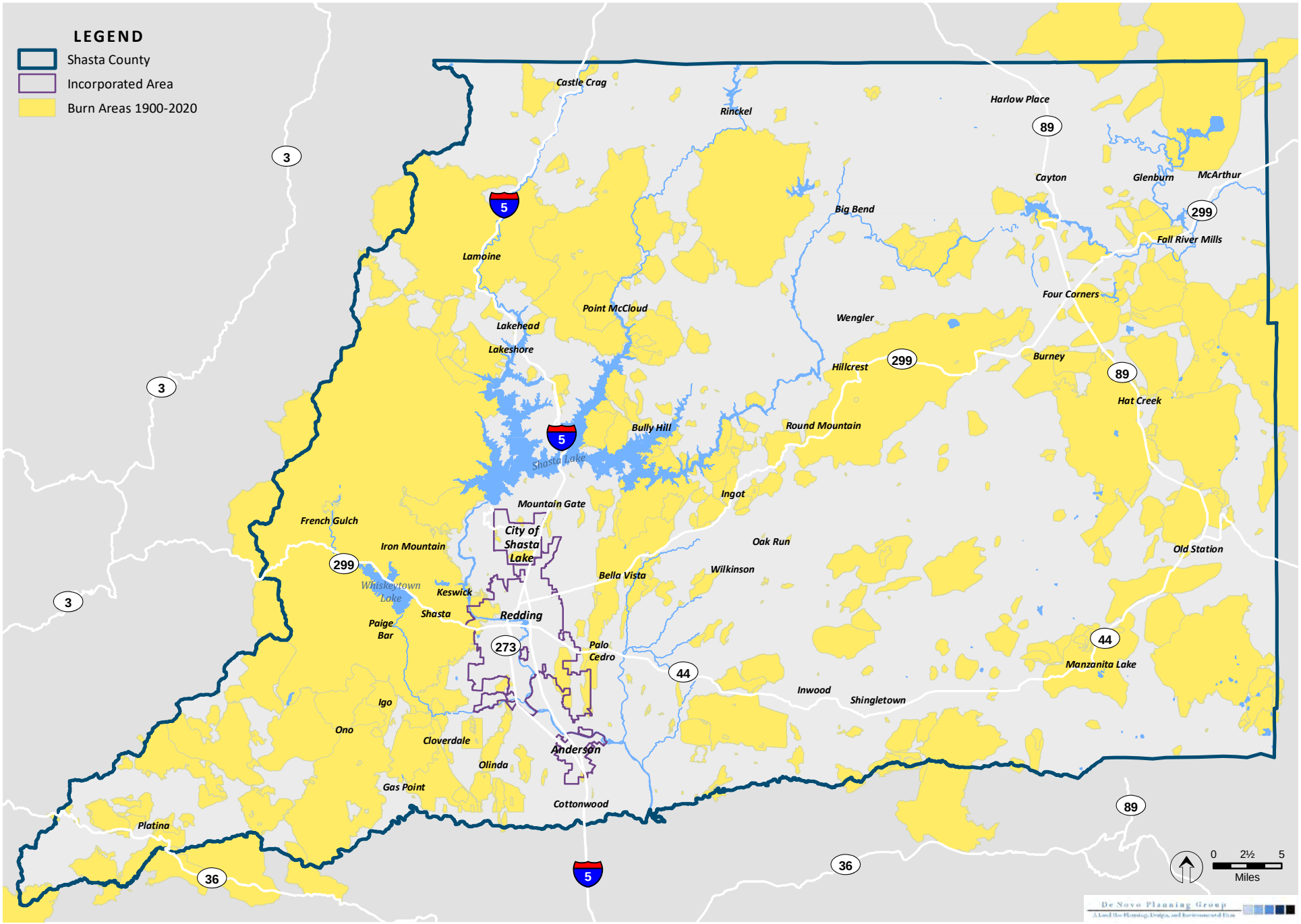
Shasta County has experienced many major fires in the last 30 years. The largest and most recent fire that occurred primarily within Shasta County was the Carr Fire in 2018, which burned a total of 229,651 acres west of Redding. Table 5.4-2 and Figure FS-5 shows historical fires greater than 5,000 acres within Shasta County over that past 30.

Table 5.4-2 History of Major Shasta County Fires

Fire Name	Acres
1990 - 1999	
Fountain	**63,960**
Jones	**26,200**
Sheep #1	**12,400**
Bohemotash	**5,705**
Jackass	**5,478**
Sugar	**5,110**
2000 - 2009	
SHU Lightning - Moon	**35,312**
SHU Lightning - Motion	**28,330**
Noble*	**12,985**
SHU Lightning - Deerlick	**12,977**
Bear	**10,442**
French	**12,675**
Sugarloaf	**9,354**
Peterson*	**8,022**
Chalk	**6,847**
Cassel	**6,098**
2010 - 2017	
Bagley	**46,040**
Bald*	**39,752**
Eiler	**31,995**
Reading	**28,073**
Ponderosa*	**27,670**
Bully	**12,659**
Clover	**8,076)**
2018 - 2020	
August Complex*	**1,032,700**
Carr*	**229,651**
Delta*	**63,506**
Zogg*	**56,338**
Hirz	**40,608**
Moore	**5,574**
Salt Fire	**TBD**

***Fires occurred across multiple Counties**

FS 4 - HISTORICAL FIRES

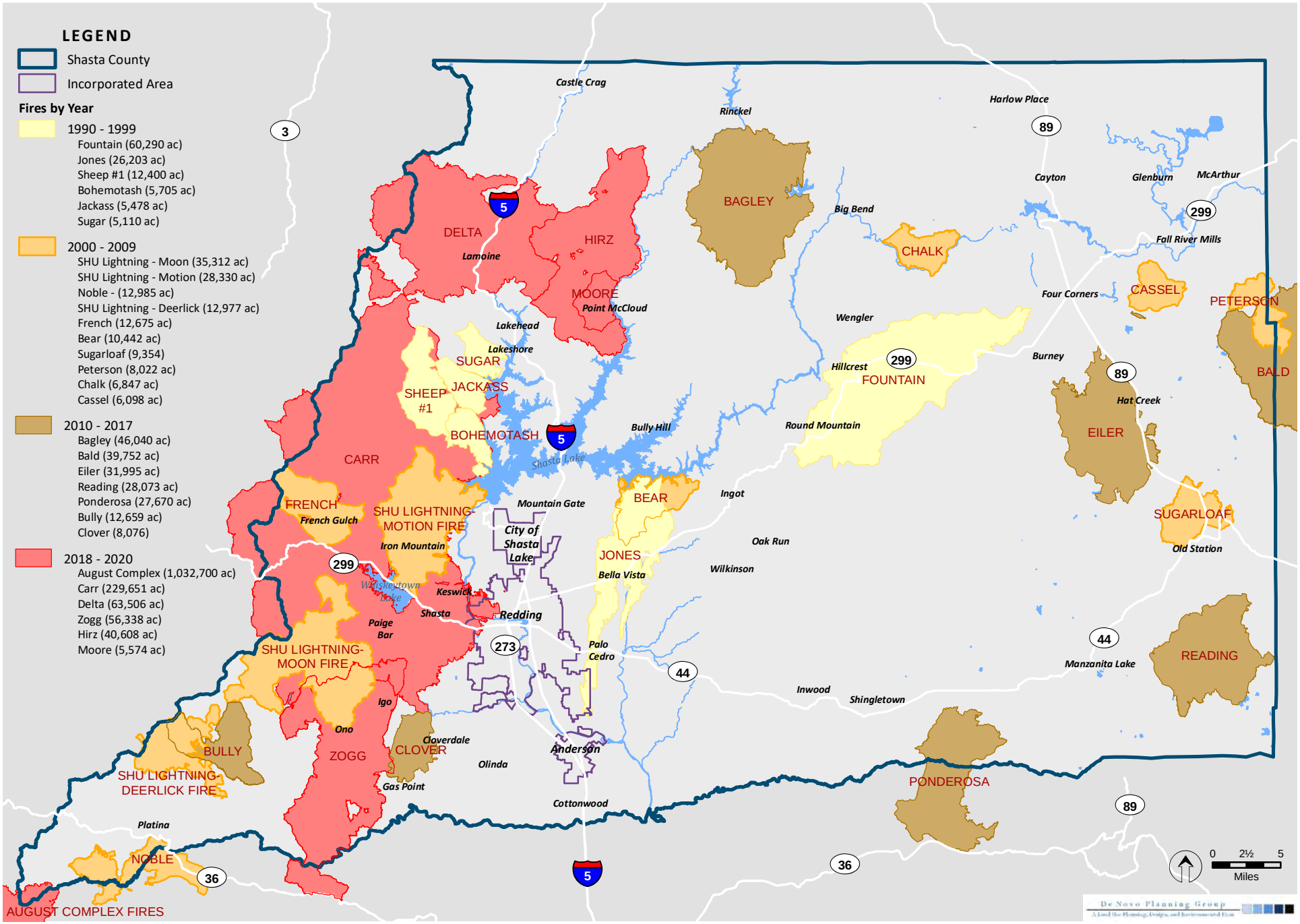


Sources: Shasta County GIS; CalFire. Map date: June 14, 2021. Revised July 16, 2021.

De Novo Planning Group

RPC 2(b)(i)(b)

FS 5 - HISTORICAL FIRES GREATER THAN 5,000 ACRES SINCE 1990



Sources: Shasta County GIS; CalFire. Map date: June 14, 2021. Revised July 16, 2021.

De Novo Planning Group

RPC 2(b)(i)(b)

Fire Protection

Fire districts and stations within Shasta County are shown on Figure FS-6. Fire control agencies in Shasta County operate at all three levels of government. As shown on Figure FS-6, all areas within Shasta County are served by federal, state, and/or local fire protection agencies and there are no areas known to be lacking service by a fire protection agency.

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

State

CAL FIRE is responsible for wildland fire control outside of USFS, City boundaries, and other fire protection district boundaries on approximately 1.1 million acres of private wildlands. CAL FIRE protects an additional 250,000 acres of USFS and BLM lands through an agreement with those agencies. There are five CAL FIRE Battalions in Shasta County which support firefighting 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

Local fire protection services include the Shasta County Fire Department, community fire districts, and volunteer fire companies.

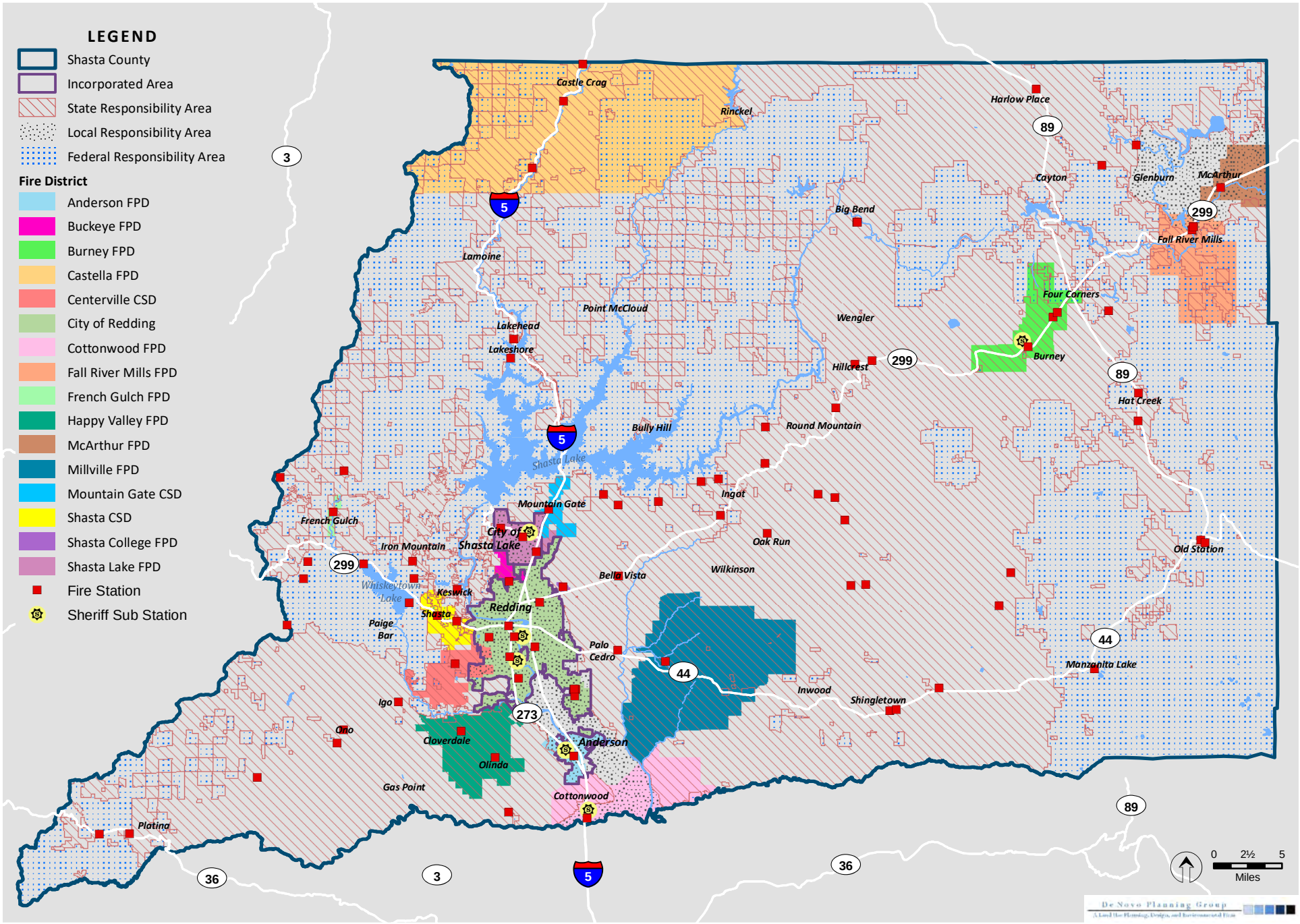
The Shasta County Fire Department contracts with CAL FIRE for full-service fire protection through a cooperative fire protection agreement. CAL FIRE responds to wildland fires, structure fires, floods, hazardous material spills, swift water rescues, civil disturbances, earthquakes, and medical emergencies of all kinds.

Fire agencies serving the unincorporated areas of Shasta County include thirteen community fire districts. The community fire districts 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. Community fire districts are shown on Figure FS-6.

Volunteer fire companies serve the communities of Bella Vista, Big Bend, Cassel, Centerville, French Gulch, Hat Creek, Igo-Ono, Jones Valley, Keswick, Lakehead, Montgomery Creek, Oak Run, Old Station, Palo Cedro, Shingletown, Soldier Mountain, West Valley, and Whitmore. Volunteer fire companies operate under the jurisdiction of the Shasta County Fire Department.

Many of the local fire agencies overlap with CAL FIRE and USFS jurisdictional areas. 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, their fire protection extends outside of the city boundaries.

FS 6 - FIRE DISTRICTS



Sources: Shasta County GIS; CalFire. Map date: June 14, 2021. Revised July 16, 2021.

De Novo Planning Group

RPC 2(b)(i)(b)

Essential Public Facilities

Essential public facilities include hospitals and health care facilities, emergency shelter, emergency command centers, and emergency communications facilities. Figure FS-6 identifies hospitals and health care facilities, school sites (which are potential emergency shelter locations), and sheriff stations and fire stations, which serve as potential emergency command centers and emergency communications locations. Telephone, cellular, electric, and natural gas infrastructure, which are necessary for operating emergency command centers and emergency communications locations, are located Countywide and are too numerous to show on the map.

Evacuation Access and Evacuation Routes

The County has prepared an analysis consistent with Senate Bill 99 to identify residential developments in hazard areas that do not have at least two emergency evacuation routes. The analysis identified areas throughout Shasta County that are in high or very high fire hazard severity zones or in the 100-year flood hazard zone that may have limited evacuation routes. This analysis identifies residential areas of potential concern, but it is noted that a project-level analysis will be required to determine the adequacy of evacuation routes on a case-by-case basis. Areas of potentially limited evacuation access and routes throughout the County that are located within identified hazard areas are shown on Figure FS-7. Shasta County does not have adopted evacuation routes. For the purposes of the General Plan, all roads are considered to have a potential role in evacuations. Closer proximity to higher capacity roads and outbound roads reduces evacuation vulnerability.

Integrated and Referenced Plans

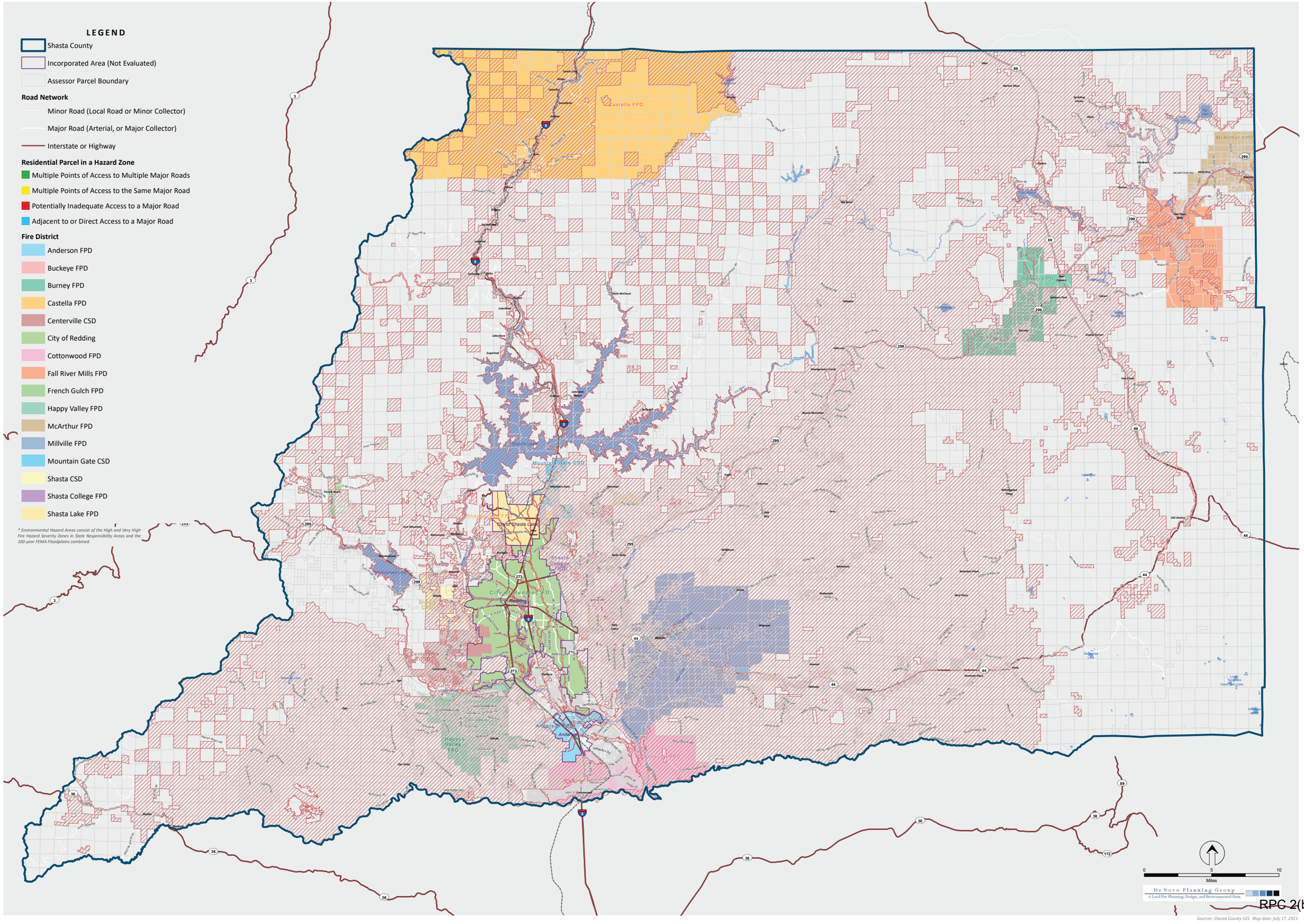
This Element integrates and references information from the plans and programs described above. Plans specifically integrated and referenced include:

- LHMP
- FHSZ Maps
- SHU Strategic Plan
- SCWPP
- CWPP-BB

These most current version of these documents are available on the preparing agency websites and are also available on the County's website at: https://www.shastacounty.gov/planning/page/general-plan which will be updated periodically to reflect the most recent version.

RPC 2(b)(i)(b)

FS 7 - MAJOR ROAD ACCESS IN RESIDENTIAL AREAS WITHIN ENVIRONMENTAL HAZARD ZONES



RPC 2(b)(i)(b)

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. [1]

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.[2]

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 FBI's UCR Program 2019 Annual Report provides ashort summary of crime statistics for the County.

SHASTA COUNTY CRIME STATISTICS 2019	
Crime	**2019**
Violent crime	**386**
Murder and non-negligent manslaughter	4
Rape	41
Robbery	34
Aggravated assault	307
Property crime	**824**
Burglary	415
Larceny - theft	332
Vehicle theft	77
Arson	12
Source: FBI's UCR Program: Offenses Known to Law Enforcement, by State by Metropolitan and Nonmetropolitan Counties, 2019	

Crime Prevention

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 or what has been popularized and commonly referred to as crime prevention through environmental design (CPTED).

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 Effectively manage development, conservation of forests and watersheds, and provision of fire safety services to protect people, homes, businesses, and critical facilities from fire and wildfire and minimize potential losses of life and property.

FS-2 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 threat presented by locating development within a VHFHSZ and by otherwise discouraging, minimizing, mitigating, avoiding, and/or preventing development from locating in CAL FIRE VHFHSZs.

FS-3 Protection of life and property from crime by encouraging new development projects to incorporate effective crime prevention through environmental design (CPTED) techniques.

FS-4 Participate in safety planning efforts, including evacuation planning, and seek consistency between this General Plan and State, regional, and local safety planning documents, including the LHMP.

5.4.4 Policies

FS-a All new development, infrastructure, and facilities projects shall be consistent with the all applicable development standards and requirements, including:

- Comply with local, state, and federal regulatory standards such as the California Building and Fire Codes, as well as other applicable fire safety standards;
- Meet or exceed fire safe design requirements, including title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures Regulations) for SRAs and/or VHFHSZs;
- Demonstrate adequate fire flow, water source, and supply system (including location of water supply) prior to approvals for projects in Very High FHSZs or in very high or high hazard wildland/urban interface areas;
- Provide adequate infrastructure, including safe and adequate access to properties and structures for vehicles, including emergency response vehicles, and ensuring visible home address and street signs, when located in a SRA, a Very High or High FHSZ, or very high or high hazard wildland/urban interface areas, with access (ingress/egress) meeting or exceeding the requirements of the SRA Fire Safe Regulations; and
- Modify and reduce fuels around homes, subdivisions, and critical facilities in wildland urban interface areas and in VHFSZs ensure that defensible space meets or exceeds the requirements of Public Resources Code Section 4291.

FS-b Ensure that new essential public facilities and critical facilities are located in areas that minimize exposure to potential natural hazards including wildfire events associated with VHFHSZs, to the extent feasible, and ensure facilities are designed to be fire-safe when necessary to locate such facilities within a high fire risk area. Critical facilities should be planned to accommodate evacuees from hazard events requiring evacuations.

FS-c To the extent feasible and appropriate, protect essential public facilities and critical facilities from the unreasonable risk of wildfire.

RPC 2(b)(i)(b)

FS-d Prioritize maintaining adequate water supplies to provide reasonable protection of residents, critical facilities, County assets, and critical infrastructure from wildfire without disruption to community water supplies. This effort shall include maintaining water supplies and facilities to ensure long-term integrity and identifying future water supply to address fire suppression needs.

FS-e 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-f 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. Fire hazard maps shall be consistent with the most current hazard designation maps by CAL FIRE Fire and Resource Assessment Program on its website at: https://frap.fire.ca.gov/.

FS-g In the event of a significant wildfire, the Shasta County Office of Emergency Services shall coordinate with relevant federal, state, and local agencies, including but not limited to the USDA, USFS, CAL FIRE, and the Community Fire Districts to establish and implement, as feasible, a risk assessment and monitoring program. The intent of the program shall be to assess the likelihood of debris flow, and other relative related hazards.

FS-h Support management and conservation activities to reduce fire hazards, including fire hazard reduction, fuel management, and long-term maintenance strategies, establishment and maintenance of community fire breaks, public and private road maintenance and vegetation clearance activities that meet or exceed Public Resources Code Section 4291 requirements, home hardening, and coordinate with fire districts/departments, Fire Safe Councils, and property owners to implement management and conservation activities on an on-going basis.

FS-i Ensure that new development will have adequate fire protection, including requiring new development to demonstrate that it can be serviced by fire protection agencies, including location within the service area of fire stations that can be served within fire department response time and standards.

FS-j Require new development and facilities to work with fire service providers to maintain an ongoing fire inspection program to reduce fire hazards associated with multifamily development, critical facilities, public assembly facilities, industrial buildings, and nonresidential buildings. This can be implemented as a condition of approval, ordinance outlining fire hazards inspection, or integrated into existing inspection programs.

FS-k Development projects within and adjacent to significant wildland, forest, or open space areas or that are included within a high or very high FHSZs shall prepare and implement wildland fire management/fire protection plans that includes the following components:

1.) Risk Analysis
2.) Fire Response Capabilities
3.) Fire Safety Requirements – Defensible Space, Infrastructure, and Building Ignition Resistance
4.) Mitigation Measures and Design Considerations for Non-Conforming Fuel Modification
5.) Wildfire Education
6.) Ongoing Maintenance and Limitations

FS-l As part of the development review process, consult with the local fire department/district in order to ensure that the project provides adequate emergency access (ingress, egress), evacuation routes, fire flow, water supply, defensible space pursuant to Public Resources Code Section 4291 and other regulations if applicable, fuel modification, fire-safe measures, and vegetation clearance including for public and private roads. All residential developments within hazard areas shall be evaluated at that time to see if they have at least two emergency evacuation routes. It is noted that Shasta County has not established emergency evacuation routes; for the purposes of this analysis, outbound roads from an area are anticipated to provide the potential for evacuation, recognizing that Shasta County has a broad range of road types, from rural roads to highways.

FS-m Ensure adequate evacuation routes for new and existing development, including roadways that that meet or exceed requirements of the Fire Safe Regulations (including but not limited to road widths, type of road, grade, etc.) for areas in VHFHSZs and ensuring a minimum of two evacuation routes for residential development located in high hazard areas, including the 100-year floodplain and high and very high fire hazard severity zones.

FS-n Regularly review and update the Fire Safety objectives, policies, and programs in this element to meet the requirements of State law and, upon each update to the LHMP for Shasta County, ensure that the County participates in the LHMP update and that the LHMP is consistent with this objectives, policies, and programs of this element and the requirements of State law.

FS-o Create public outreach and awareness programs to promote fire safety awareness, including identification of closest evacuation routes and methods to reduce fire hazards, including maintenance of "defensible space" around structures using areas free of fuel loads and fire resistant landscaping and the use of fire resistant building materials. Public outreach programs should include targeted efforts to reach at-risk populations, including disadvantaged areas and areas at highest risk of disaster (e.g., developments within the High and Very High FHSZs, 100-year floodplain, etc.)

FS-p Encourage residents and community leaders to participate in disaster training programs, and develop educational programs that will increase public awareness of fire safety and emergency response planning.

FS-q 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-r Support programs and plans, such as Strategic Fire Plans consistent with State law, that require fuel management/modification within established defensible space boundaries, including for development projects.

FS-s Coordinate with local, state, and federal agencies to update emergency, evacuation, and hazard mitigation plans, as necessary, to support inter-agency preparedness coordination, and establish and maintain mutual aid agreements where feasible.

FS-t Development in areas requiring expanded levels of police and fire services shall participate offset the added costs for providing the expanded level of services through payment of fees that address their fair-share of demand for services, contribution to infrastructure and facilities necessary to serve the development, participating in adopted County programs, or other methods to address the cost of expanded services.

FS-u Designate VHFHSZ areas for non-residential development to the extent feasible and minimize the potential for residential development in such areas.

5.4.5 Actions

FSA-1: Review new development, infrastructure, and facilities projects for conformance with all applicable policies listed above, State and County code requirements, and other applicable fire and safety standards, including ensuring that development meets or exceeds fire safe design requirements, including the SRA Fire Safe Regulations and Fire Hazard Reduction Around Buildings and Structures Regulations.

FSA-2: Review the Shasta County and City of Anderson Multi-Jurisdictional Hazard Mitigation Plan every five years, or as required by State law, and update as necessary to address available and relevant hazards data and information.

FSA-3: Coordinate with CAL FIRE, federal fire agencies, local fire districts, volunteer fire companies, and Fire Safe Councils to conduct awareness campaigns and training for disaster preparedness, including providing online materials and holding community events to educate residents and community members regarding planning for evacuations, including identification of potential evacuation routes, and fire prevention and reduction measures, including maintenance of defensible space, use of fire-resistant and fire-hardened materials, and measures to improve home hardening. Ensure public awareness campaigns include outreach to at-risk populations.

FSA-4 Coordinate between the Planning Division, Sheriff's Office, and Shasta County Fire Department to establish standard development conditions as they relate to the provision of police and fire services created as a result of new land use projects. Once established, the standards shall be reviewed as needed (at least every 5 years) and the Sheriff's Office and Shasta County Fire Department shall recommend appropriate changes including the need to implement equitable property tax assessments, establishment of impact fees, or other mechanisms to help defray the costs of providing new and/or expanded services.

FSA-5 Establish standards for evacuation routes and review and update Figure FS-7 to identify evacuation routes, their capacity, safety, and viability under a range of emergency scenarios. As part of this effort, review existing developments within VHFHSZs and other hazard areas, including areas identified on Figure FS-7 as having potentially inadequate access or that does not conform to contemporary fire safe standards, including those for vegetative maintenance and home hardening, and identify: 1) development that does not meet or exceed Fire Safe Regulations and local requirements and ordinances, 2) areas that have limited emergency access and do not contain two evacuation routes, and 3) areas with vegetative or other hazards that do not meet defensible space requirements of Public Resources Code Section 4291. These areas should be prioritized (as feasible) for improvements as part of improvement plans, such as the CIP and RTP to enhance access in emergency situations.

FSA-6 After a large fire or other disaster, evaluate re-development, including measures to reduce future risks of any replacement structures or redevelopment associated with wildfire and other hazards.

FSA-7 Continue to evaluate and assess projected emergency service needs to address growth and changes that occur in Shasta County.

FSA-8 As part of the next update to the LHMP, participate in the LHMP update process and ensure that the LHMP update identifies evacuation routes and their capacity, safety, and viability under a range of emergency scenarios.

FSA-9 Coordinate with the Shasta County Fire Safe Council, Burney Basin Fire Safe Council, and other local fire safety organizations to promote implementation of the projects and

programs identified in the SCWPP and CWPP-BB and to support regular updates to the SCWPP and CWPP-BB.

FSA-10 Review and update the County Code of Ordinances as necessary to ensure that regulations and development standards meet or exceed State requirements, including SRA Fire Safe Regulations and Fire Hazard Reduction Around Buildings and Structures Regulations.

FSA-11 Review General Plan Land Use Map amendments and rezones to ensure that land use designations and zoning in the VHFHSZ is either non-residential or minimizes residential development potential.