Public Health & Safety

Vision

The major themes of this Element are based on the County's General Plan Update Vision, Goals, and Strategies, a document that was approved by the Board of Supervisors prior to preparation of the General Plan. Following are highlights of the County's General Plan Update Vision, Goals, and Strategies document that are related to the Public Health & Safety Element:

- *Have schools, parks, and public gathering places that provide a safe enjoyable environment and promote active, healthy lifestyles.*
- *Provide the highest level of flood protection possible for our residents.*
- *Ensure that existing and future communities are healthy places to live by promoting a physically active lifestyle with clean air to breathe and safe facilities to meet the community's needs.*
- *Ensure that existing residences and resources are protected from hazardous conditions, such as wildfires, flooding, and soil erosion, in the process of evaluating future subdivisions.*
- *Protect our air and water quality by implementing responsible and realistic policies that protect these precious resources.*
- *Provide public services, such as law enforcement, fire protection, public transportation, and civic facilities, at appropriate levels for urban and rural communities.*
- *Ensure that existing residences and resources are protected from hazardous conditions, such as wildfires, flooding, and soil erosion, in the process of evaluating future subdivisions.*

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Introduction

The Public Health & Safety Element describes the County of Yuba's (County's) goals, policies, and actions to minimize the hazards to public health and safety in and around Yuba County. It identifies the natural and human-caused hazards that affect existing and future development and provides guidelines for protecting residents, employees, visitors, and other community members from injury and death. It describes present and expected future conditions and sets policies and standards for improved public safety. The Public Health & Safety Element also seeks to minimize physical harm to the buildings and infrastructure in and around Yuba County and to reduce damage to local economic systems, community services, and ecosystems. The goals, policies, and actions in this Element ensure that public health and safety are considered in the County's decisions related to the provision of services, proposed plans, development projects, and public investments. This Element also informs changes to County codes and ordinances, such as the Zoning Ordinance, and the County's grading, building, and construction standards.

Some degree of risk is inevitable—the exact timing, location, and intensity of many hazardous events and disasters cannot be predicted with absolute accuracy. The goal of the Public Health & Safety Element is to reduce the risk of injury, death, property loss, and other hardships to acceptable levels.

This Element addresses issues required under state law as mandatory for the safety element of a general plan.[1] Following are the County's goals, policies, and actions addressing:

- Flooding and dam inundation,
- Fire risk,
- Water quality,[2]
- Airport operations,
- Air quality and greenhouse gases,
- Hazardous materials,
- Geologic and soils stability hazards, including seismic issues,
- Emergency preparedness, response, and evacuation,
- Noise,
- Healthy communities,
- Severe weather,
- Drought, and
- Agricultural and forestry pests and diseases

State law requires that the Public Health and Safety Element include goals, policies, and implementation actions to increase community resilience to climate change and related hazards. These items are integrated into the sections listed above as appropriate.

The General Plan establishes the overall policy framework to guide various implementation actions. One of the most pertinent implementation actions for this Element is the Multi-Jurisdictional Local-Hazard Mitigation Plan. Yuba County was a participant in the development of the Multi-Jurisdictional Local Hazard Mitigation Plan, and this plan is hereby incorporated by reference.

[1] Please refer to Government Code Section 65302 (g) (1) for more details.

[2] Water quality is addressed in this Element both relative to public health and environmental health.

Regulatory Framework

All counties and incorporated communities in California must prepare a General Plan that must address several topics, one of which is to protect the community against natural and human-caused hazards. The Public Health & Safety Element meets these requirements, which are laid out in California law, particularly Section 65302(g) of the California Government Code. State law requires that the Public Health & Safety Element address the following:

- Protect the community from risks associated with a variety of hazards, including seismic activity, landslides, flooding, and wildfire, as required by the California Government Code Section 65302(g)(1).
- Map and assess the risk associated with flood hazards, develop policies to minimize the flood risk to new development and essential public facilities, and establish effective working relationships among agencies with flood protection responsibilities, as required by California Government Code Section 65302(g)(2).
- Map and assess the risk associated with wildfire hazards, develop policies to reduce the wildfire risk to new land uses and essential facilities, ensure there is adequate road and water infrastructure to respond to wildfire emergencies, and establish cooperative relationships between wildfire protection agencies, as required by California Government Code Section 65302(g)(3).
- Assess the risks associated with climate change on local assets, populations, and resources. Note existing and planned development in at-risk areas and identify agencies responsible for providing public health and safety and environmental protection. Develop goals, policies, and objectives to reduce the risks associated with climate change impacts, including locating new public facilities outside of at-risk areas, providing adequate infrastructure in at-risk areas, and supporting natural infrastructure for climate adaptation, as required by California Government Code Section 65302(g)(4).
- Identify residential developments in any hazard area identified that do not have at least two emergency evacuation routes, as required by California Government Code Section 65302(g)(5).

Relationship to the Office of Emergency Services

The Yuba County Office of Emergency Services (OES), part of the County Executive Administrator's Office, is responsible for providing emergency management services. Working with local cities, fire and law enforcement agencies, and special districts, OES helps to support and implement emergency mitigation and preparation activities across Yuba County, secures resources for first responders, and coordinates with state and federal emergency agencies. Yuba County OES coordinates all emergency management between public safety and service providers.

The Yuba County OES has an Emergency Operations Plan (EOP), updated most recently in 2015. The EOP describes the roles and responsibilities of Yuba County's emergency management organization and lays out a framework for how the organization should function during emergency response and recovery events. Emergency management activities are coordinated from the Yuba County Emergency Operations Center, located at 915 8th Street in Marysville.

Relationship to Other General Plan Elements

Public health and safety issues and the County's policy response to these issues are embodied not only in this Element, but also in the Community Development and Natural Resources Elements. The issues addressed in this Element feed into the County's land use strategy, which is designed, in part, to avoid development in areas prone to natural hazards. The Circulation section of the Community Development Element is also closely tied to public health and safety issues. A highly connected circulation network

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allows for multiple routes to a given location for emergency services personnel and evacuation in the event of a disaster. The Circulation section of the Community Development Element and implementing standards also address road width, turning radii, and other aspects of the circulation network that are related to emergency access. With approximately 40,000 traffic fatalities per year nationally, vehicular transportation is a major public health and safety issue. Since transportation corridors are a major source of noise, there is a strong relationship between the noise section of this Element and the circulation section of the Community Development Element as well.

Air quality and climate change are addressed in this Element, but most policies that would address air quality issues are in the Community Development Element. The transportation sector is the largest source of greenhouse gas emissions in Yuba County and in California, and mobile sources (vehicles) are the source of the majority of overall air pollution within the Feather River Air Quality Management District. The Community Development Element describes the development of land use patterns and transportation facilities that will reduce dependence on automobile travel and reduce the length of vehicle trips, which has major implications for improvements to air quality and greenhouse gas emissions. Achieving air quality goals requires supportive land use patterns, community design, and transportation systems and evaluating how the location of highways, railroads, industries, and other sources of air emissions affect houses, schools, and other sensitive land uses. The Natural Resources Element policies on energy efficiency also have the potential to reduce indirect air pollutant emissions. The Housing Element includes policies and programs to address housing conditions, which can have health and safety repercussions for County residents.

These are just a few examples of the many important relationships between public health and safety issues and those policy topics addressed in other General Plan Elements. The County is aware of complementary policies in other Elements and has developed an internally consistent General Plan with these important connections in mind.

Relationship to the Multi-Jurisdictional Local Hazard Mitigation Plan

Yuba County's Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) is a plan to identify and profile hazard conditions, analyze risk to people and facilities, and develop mitigation actions to reduce or eliminate hazard risks in Yuba County and in incorporated jurisdictions in the county. It was developed in accordance with the Disaster Mitigation Act of 2000 and followed the Federal Emergency Management Agency's Local Hazard Mitigation Plan guidance. The mitigation actions in the LHMP include both short-term and long-term strategies and involve planning, policy changes, programs, projects, and other activities. The LHMP and the Public Health & Safety Element address similar issues, but the Public Health & Safety Element provides a higher-level framework and set of policies, and the LHMP focuses on more specific mitigation actions. The LHMP, as its name implies, focuses on mitigation-related actions; the Public Health & Safety Element also includes policies related to emergency response, recovery, and preparation activities.

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 most recent version of Yuba County's LHMP can be found online at: https://www.yuba.org/departments/emergency_services/multi-hazard_mitigation.php.

Relationship to the Community Wildfire Protection Plan

The Yuba County Foothills Community Wildfire Protection Plan (CWPP) was published in 2014 and was developed for the Yuba County Watershed Protection and Fire Safe Council in collaboration with interested local parties and land management agencies. It provides a snapshot of current wildfire protection challenges and capabilities, identifies and prioritizes areas for hazardous fuel reduction, and recommends types and methods of vegetation management that may help protect the affiliated communities from wildfire losses.

Relationship to the CAL FIRE Nevada-Yuba-Placer Unit Strategic Fire Plan

Yuba County is part of the Nevada-Yuba-Placer Unit of the California Department of Forestry and Fire Protection (CAL FIRE), which provides fire protection services to large sections of the unincorporated area. The unit's Strategic Fire Plan, prepared in 2020, lays out how CAL FIRE staff in the region plan to implement the State Fire Plan in the region to reduce the threat posed by wildfires. It includes strategies such as public information and outreach, fuel reduction, maintenance of fire protection roads, and coordination with local agencies. The Safety Element incorporates many of the fire protection strategies in the Strategic Fire Plan, helping to ensure a consistent approach to wildfire mitigation between CAL FIRE and local agencies in Yuba County.

Climate Change in Yuba County

Changes to the global climate system are expected to affect future occurrences of natural hazards in and around Yuba County. Many hazards that already affect Yuba County—including high heat, extreme storms, wildfire, drought, and flooding—are projected to become more frequent and more intense in coming years and decades. In some cases, these trends have already begun. This section discusses some of the anticipated effects of climate change in Yuba County. More information on these effects and the harm they may pose to the community is given below in the discussion of individual public health and safety issues. Warmer temperatures are projected to cause an increase in extreme heat events. Depending on future greenhouse gas emission levels, the countywide number of extreme heat days is expected to rise from a historical average of 4 annually to between 22 and 42 by the middle of the century, and to between 45 and 76 by the end of the century. In addition to increases in extreme heat events, all of Yuba County is also expected to see an increase in average daily high temperatures.

Both droughts and floods are expected to become more frequent as periods of very high and very low precipitation become more common. Warmer temperatures are expected to increase the rate of snowmelt in the Sierra during spring, which may also contribute to greater flooding at that time of year. This shift in snowmelt timing, coupled with the fact that precipitation will become more likely to fall as rain instead of snow, may reduce water availability later in the year, increasing the risk of drought in the late summer and autumn.

Hotter, drier weather is expected to lead to an increase in wildfires in Yuba County. Average annual acres burned by wildfires in Yuba County are projected to increase from 2,830 acres to 3,720 acres by midcentury and 5,540 acres by the end of the century. Across the region, more frequent and intense wildfires may also create poor air quality.

Climate change is expected to cause an increase in intense rainfall, which is usually associated with strong storm systems. Heavy rainfall may also contribute to an increased risk of landslides in the hillside regions

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of Yuba County. Compared to their historical average, the average number of extreme precipitation events is projected to approximately double by the end of this century. Severe winter weather, such as heavy snowfall, ice storms, or extreme cold may become more frequent and intense due to climate change.

Climate change is associated with several threats to human and ecosystem health. Changes in temperatures and precipitation patterns may cause pests and diseases that have historically not been present in Yuba County to expand their ranges into the area. Climate change can increase the rates of infection for various diseases because many of the animals that carry them are more active during warmer weather. There are a number of diseases that are linked to climate change and can be harmful to the health of Yuba County community members, such as hantavirus pulmonary syndrome, Lyme disease, West Nile fever, and influenza. Many of these diseases are carried by animals such as mice and rats, ticks, and mosquitos. Warmer temperatures earlier in the spring and later in the winter can cause these animals to be active for longer periods, increasing the time that these diseases can be transmitted.

Vulnerability Assessment

In 2021, Yuba County completed a Climate Change Vulnerability Assessment consistent with Government Code Section 65302(g)(4) as part of the update to the Health & Safety Element. This analysis assesses the extent to which the diverse populations and assets in Yuba County are vulnerable to different emergencies and hazardous conditions that may be created or made worse by climate change. The primary categories of populations and assets assessed include populations, buildings and infrastructure, important economic assets, natural systems, and key community services. The assessment follows the recommended process in the updated *California Adaptation Planning Guide*, which is the state's guidance for how local communities should conduct climate adaptation planning efforts, including vulnerability assessments. As defined by the *California Adaptation Planning Guide*, climate change vulnerability is considered the degree to which natural, built, and human systems are susceptible to harm from exposure or stresses associated with climate change and from the absence of adaptive capacity to adapt.

Vulnerability Assessment Results

The Climate Change Vulnerability Assessment indicates that Yuba's County's populations and assets are most vulnerable to extreme heat, flooding, severe weather, and wildfire.

While many aspects of climate change are expected to affect community health and well-being in Yuba County, countywide, populations are most vulnerable to extreme heat, flooding, severe weather, human health hazards, severe weather, wildfire, and declines in air quality. Due to financial limitations, mobility challenges, and lack of access to medical care and associated community services, the most sensitive populations are households in poverty, immigrants and refugees, outdoor workers, persons experiencing homelessness, and seniors living alone. The homes that vulnerable populations live in, especially those in fire hazard, landslide, or flood zones, are highly vulnerable to direct damage from wildfires, landslides, and severe weather and flooding as well as indirect damage from forestry pests and diseases that can weaken trees and cause them to fall on properties.

Countywide, the electricity transmission system is vulnerable to multiple hazards, including high winds and other forms of severe weather that can trigger public safety power shutoff (PSPS) events, extreme heat that reduces the capacity and strains the system, and wildfires that damage the system and can disrupt energy service. Extreme heat can lead to power outages by causing mechanical failure of grid equipment, by causing heat damage to power lines, and by creating a high demand for electricity to power air conditioners, all of which places stress on the network and may lead to service disruptions. Severe weather conditions can also damage communication infrastructure, decreasing network capacity. There may be a higher demand for communication services during severe weather, potentially putting stress on the network and increasing the risk of service interruptions.

PSPS events can also create vulnerabilities for Yuba County community members. The vast majority of homes and businesses do not have backup power supplies, so a loss of electricity can cause a loss of refrigeration for food and medical supplies, limited cooking, limited or no heating or cooling (particularly dangerous during extreme heat or cold events), no lighting, and limited or no access to the Internet or other information systems. Many businesses are forced to close during a PSPS event, causing economic hardships and depriving community members of important services, such as grocery stores, gas stations, and banks/ATMs. PSPS events may also be harmful to people who depend on electrically powered medical devices. Some property owners have purchased backup power generators; however, these produce high levels of noise, pollution, and odors.

Yuba County's local hydroelectric power plants are also threatened by drought, which can reduce the amount of water available for producing hydropower. The County's water and wastewater treatment services may be impacted by flood events, which may damage water infrastructure and interrupt service.

Yuba County's agricultural industry is vulnerable to drought, flooding, extreme heat, and severe weather. Floods and severe weather can heavily harm or kill crops or livestock and damage infrastructure, reducing agricultural yields and necessitating costly repairs. Drought can reduce the amount of water available and raise water prices, reducing agricultural profits and/or requiring that farmers change their irrigation methods. Extreme heat can damage a number of different crops and can result in widespread animal illnesses or even death of livestock. As a result, agricultural yields and the cost of operations will likely be affected and impact local economies.

An increase in forestry pests and diseases, droughts, extreme heat, and wildfire create higher vulnerability for the county's natural environments, including forest, woodland, and aquatic ecosystems. Drought and extreme heat can stress trees, weakening or killing them. Weakened trees are more susceptible to forestry pests, creating a risk of further damage. Droughts may imperil aquatic ecosystems. These changes can also affect local economic activities in Yuba County, such as outdoor recreation and visiting the county's national forests.

Public Health & Safety Issues

These sections discuss the hazardous conditions and potential hazard events present in Yuba County, past examples of the hazard in and around Yuba County, the expected frequency of future events, and how climate change may affect future events. This summary of hazardous conditions is followed by goals, policies, and implementation actions to improve community resilience to these hazard events. When discussing the possibility for future hazards, the following scale is used:

- Highly Likely – Near 100 percent chance of occurrence in the next year or happens every year.
- Likely – Between 10 and 100 percent chance of occurrence in the next year or has a recurrence interval of 10 years or less.
- Occasional – Between 1 and 10 percent chance of occurrence in the next year or has a recurrence interval of 11 to 100 years.
- Unlikely – Less than 1 percent of chance of occurrence in the next 100 years or has a recurrence interval of greater than every 100 years.

The anticipated frequencies of hazard events are based on past records of these hazards. Climate change and other factors may change these frequencies, including making some hazard events occur more often.

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Funding Source:	General Fund
Time Frame:	Ongoing, takes immediate effect upon adoption of this plan

Fire Risk

Existing Conditions

Wildfire is an ongoing concern for communities in Yuba County. Generally, the fire season extends from early spring through late fall of each year during the hotter, dryer months. Fire hazard is greatest in the foothill and mountain areas of the county. Three types of fires are of concern to Yuba County: (1) wildfires, (2) wildland-urban interface fires, and (3) structural fires.

Wildfires

Wildland fire is an ongoing concern for Yuba County. Conditions for wildfire hazards arise from a combination of high temperatures, low-moisture content in the air and plant matter, accumulation of vegetation, and high winds. The geographic extent of land susceptible to wildland fire is significant. While all of California is subject to some degree of fire hazard, there are specific features that make some areas more hazardous. The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, called fire hazard severity zones (FHSZ), influence how people construct buildings and protect property to reduce risk associated with wildland fires.

According to CAL FIRE, which is the agency responsible for fighting wildland fires in Yuba County, about 48 percent of the county is classified as "Very High" FHSZ, 15 percent is "High" FHSZ, and 7 percent is "Moderate" FHSZ. The eastern areas of the county, with their limited access, steep terrain, fire-prone vegetation, and remote location, face the greatest risk from wildland fire hazard. In other areas, large concentrations of highly flammable brush in flat open spaces are also quite susceptible to wildland fire. Also at risk are the "river bottoms," or the areas along the Yuba, Feather, and Bear Rivers within the levee system. Much of the area inside these levees are left in a natural state, allowing combustible fuels to accumulate over long periods of time. **Table 1** identifies the acreages by zoning district in the different fire hazard severity zones. See **Figure 4** for the location of Moderate, High, and Very High FHSZs within Yuba County.

Table Public Health & Safety-1
Acres in Fire Hazard Severity Zones by Zoning District

Zoning District	Very High		High		Moderate	
	Acres	Percent	Acres	Percent	Acres	Percent
AE (Exclusive Agriculture)	33,874	23%	3,386	16%	12,461	27%
AI (Agricultural/Industrial)	199	Less than 1%	0	0%	0	0%

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AR (Agricultural/ Rural Residential)	24,724	17%	2,935	14%	3,709	8%
EX (Extractive)	567	Less than 1%	27	Less than 1%	7,107	16%
NMX (Neighborhood Mixed Use)	1	Less than 1%	19	Less than 1%	0	0%
PD (Planned Development)	1,222	1%	0	0%	0	0%
PF (Public Facilities)	199	Less than 1%	71	Less than 1%	1,657	4%
RC (Rural Commercial)	967	1%	163	1%	254	1%
RE (Residential Estate)	984	1%	29	Less than 1%	50	Less than 1%
RPR (Resource Preservation and Recreation)	22,577	15%	1,877	9%	12,105	27%
RR (Rural Residential)	34,480	23%	11,960	58%	8,148	18%
SE (Sports and Entertainment)	0	0%	0	0%	0	0%
TP (Timberland Preservation)	28,620	19%	172	1%	0	0%
Total	**148,414**	**100%**	**20,639**	**100%**	**45,491**	**100%**

Land in the Federal Responsibility Areas (predominately RPR and PF zoning designations) are not included.
Zoning districts not included in this table do not cover any land in the fire hazard severity zones.

A number of important developments and infrastructures are within or adjacent to High or Very High FHSZs, including the communities of Loma Rica, Smartsville, Dobbins, and Challenge-Brownsville as well as several fire stations, electrical substations, major roadways, and transmission lines. The FHSZs identify fire hazard, not fire risk. "Hazard" is based on the physical conditions that give a likelihood that an area will burn over a 30- to 50-year period without considering modifications such as fuel reduction efforts. "Risk" is the potential damage a fire can do to the area under existing conditions, including any modifications such as defensible space, irrigation and sprinklers, and ignition-resistant building construction that can reduce fire risk. Risk considers the susceptibility of what is being protected. Susceptibility to wildfires is considered in the Vulnerability Assessment included as an appendix to this Element.

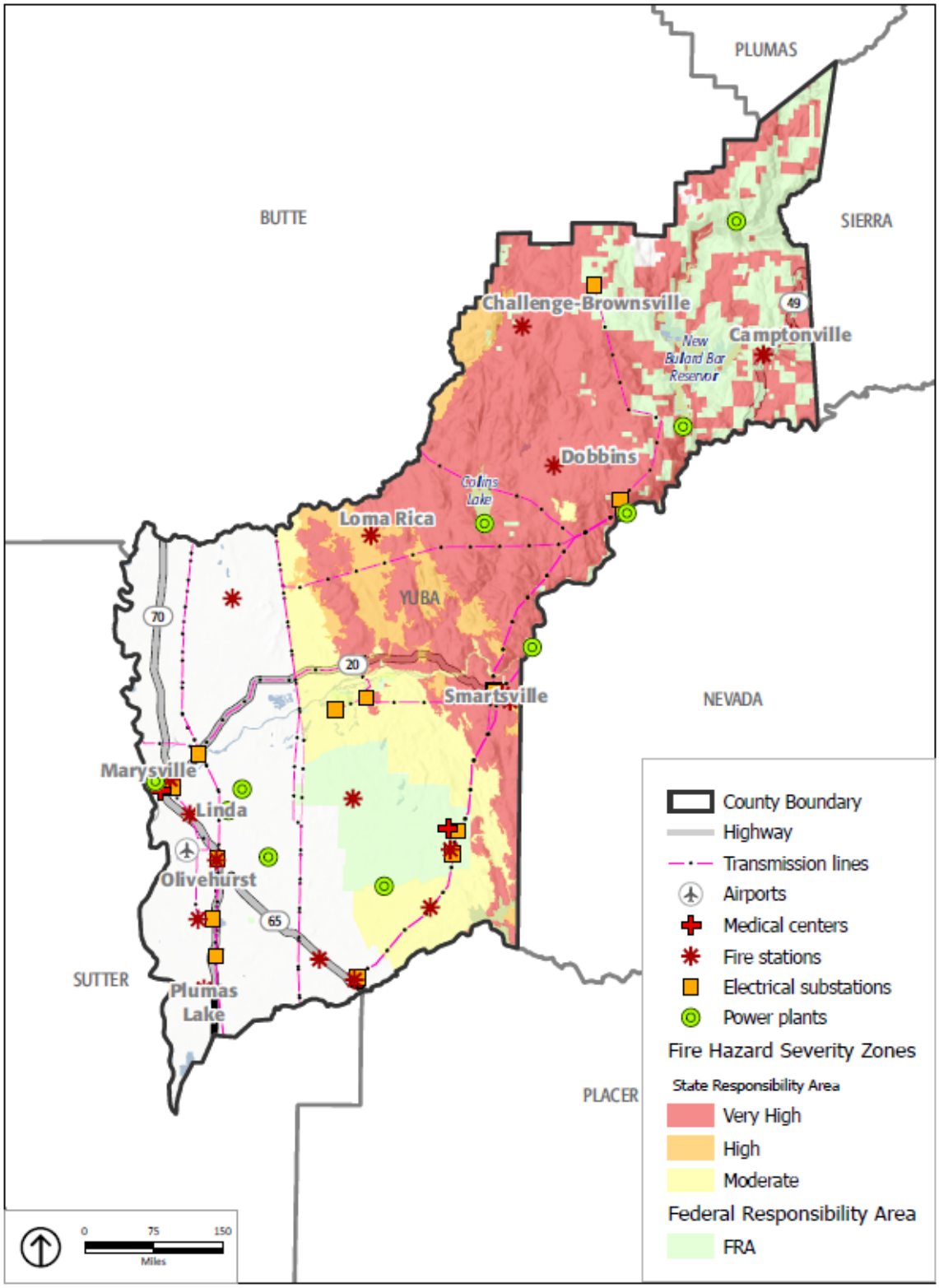

Figure 4: Wildfire Severity Zones

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Wildland-Urban Interface Fires

The Wildland-Urban Interface (WUI) is an area where buildings and infrastructure (e.g., cell towers, schools, water supply facilities) mix with areas of flammable wildland vegetation, typically in low-density residential development along foothill regions. The WUI for Yuba County consists of communities at risk as well as the area around the communities that pose a fire threat.

There are two types of WUI environments. The first is the urban interface where development abruptly meets wildland. The second WUI environment is referred to as the wildland urban intermix. Wildland urban intermix communities are rural, low density communities where homes are intermixed in wildland areas. Wildland urban intermix communities are difficult to defend because they sprawl over a large geographical area, with wild fuels interspersed throughout. These conditions makes access, structure protection, and fire control difficult as fire can freely run through the community. Consequently, WUI fires are typically the most damaging. Even relatively small acreage fires may result in significant damages, such as infrastructure damage, damage to homes and businesses, and loss of life, wildlife, and injury.

In the wildland-urban interface, efforts to prevent ignitions and limit wildfire losses hinge on hardening structures and creating defensible space through a multifaceted approach, which includes engineering, enforcement, education, emergency response, and economic incentive.

Figure 5 illustrates the location of the WUI within Yuba County. This area is primary scattered across the central portion of the county, with smaller areas scattered to the north and south as well. Loma Rica, Smartsville, Dobbins, and Challenge-Brownsville fall primarily or entirely within the WUI, as do several fire stations, electrical substations, major roadways, and transmission lines.

Fire Responsibility Areas

In and around Yuba County, different organizations all have some responsibility for wildfire protection in different areas. These responsibility areas are codified under the state law into three categories: local responsibility areas (LRA), state responsibility areas (SRA), and federal responsibility areas (FRA).

- LRAs are areas protected by local agencies, including city and county fire departments, local fire protection districts, and CAL FIRE when under contract to local governments.
- SRAs are areas where CAL FIRE has responsibility for wildfire protection. SRAs are generally unincorporated areas that are not federally owned, are undeveloped, and are covered by wildland vegetation or rangeland.
- FRAs are areas that are managed by a federal agency, including the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the Bureau of Land Management.

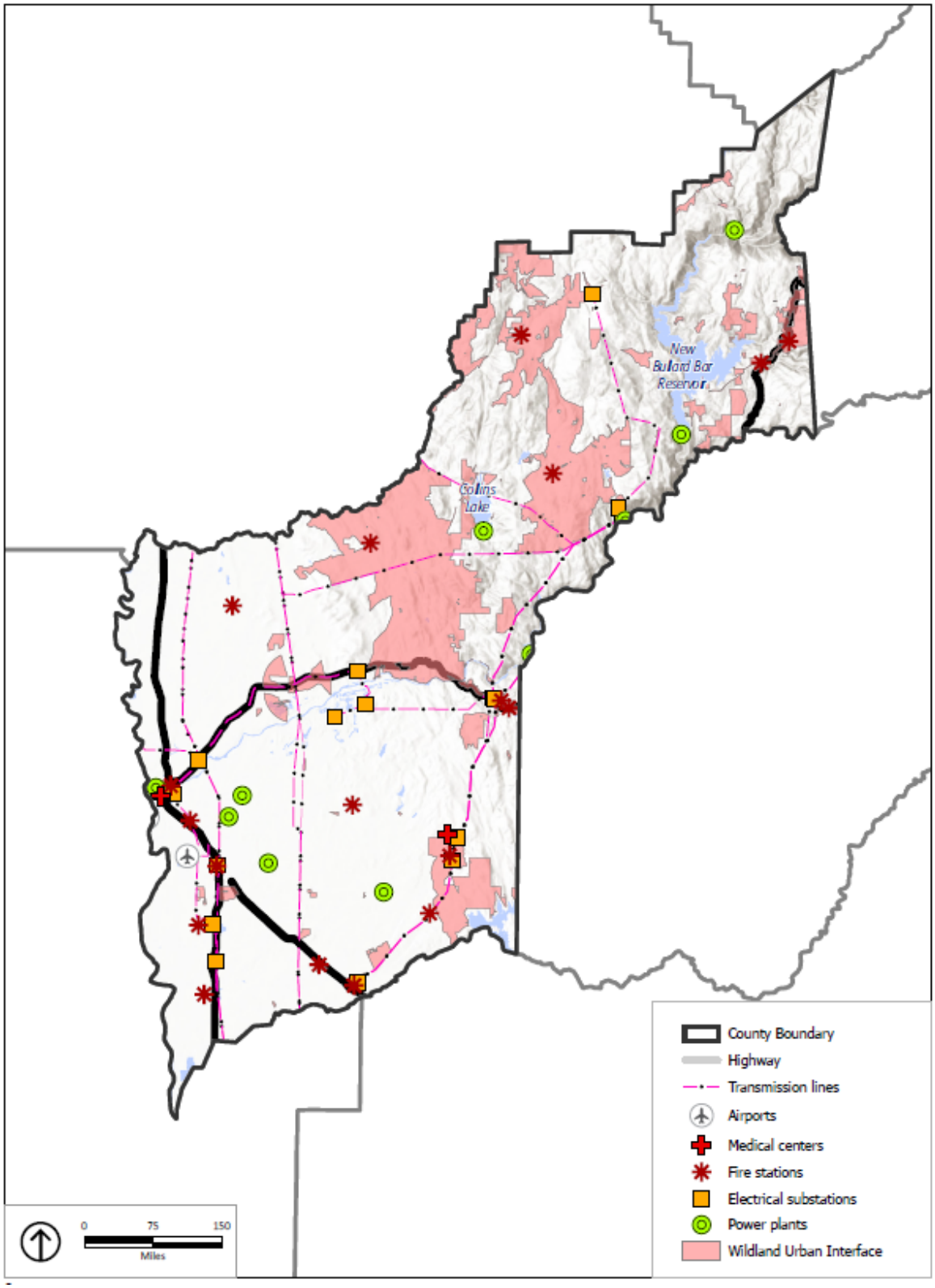

Figure 5: Wildland-Urban Interface Zones

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Fire Protection

In the unincorporated county, fire protection services are provided by CAL FIRE, the US Forest Service, and several local agencies—including the Camptonville Community Services District (CSD), Dobbins-Oregon House Fire Protection District (FPD), Foothill FPD, District 10-Hallwood CSD, Linda FPD, Loma Rica/Browns Valley CSD, Olivehurst Public Utilities District (OPUD), Plumas-Brophy FPD, Smartsville FDP, the Plumas and Tahoe National Fire Service, and the Beale Air Force Base Fire Department.

Fire protection services for Beale Air Force Base (AFB) are provided internally by the U.S. Air Force. Several fire protection districts contract with CAL FIRE and other fire agencies for services. For example, District 10 Hallwood CSD contracts with the Marysville Fire Department (MFD) for fire protection services, but owns and operates its own equipment and has two on-call firefighters in addition to MFD firefighters. The Plumas-Brophy FPD entered into a joint powers agreement with the City of Wheatland to create the Wheatland Fire Authority (WFA), in which the District owns the equipment, but services are provided by WFA. The Loma Rica/Browns Valley CSD contracts with CAL FIRE for fire protection services.

The rural fire protection agencies are primarily volunteer departments. Camptonville CSD, Dobbins-Oregon House FPD, Foothill FPD, and Smartsville FPD are all volunteer departments, and the Valley fire protection agencies employ paid firefighters. The Linda FPD, OPUD, and WFA have both paid and volunteer firefighters.

Although CAL FIRE and the US Forest Service's service areas are generally limited to SRAs and FRAs, respectively, they will provide assistance to the other fire protection agencies during a major incident, particularly wildfires.

The Yuba Watershed Protection & Fire Safe Council has targeted fuel reduction along roads as a focus of activity in the foothills of Yuba County. The Council has partnered with Yuba County Public Works Department to reduce fuels along public roadways and thus prevent or slow the spread of vehicle fires into adjacent wildlands.

The Yuba County Code of Ordinances Chapter 10.05 contains requirements intended to improve structures' resistance to fire. As of January 1, 2020, all construction plans are required to be in compliance with the 2019 California Fire Code, which specifies standards on minimum building clearances, minimum road widths, and water supplies required for fire-fighting operations.

Past Occurrences

The County of Yuba has documented over 100 wildland fires since 1909. Eight of these fires were considered major, including the three most recent wildland fires, the Williams Fire in 1997, the Pendola Fire in 1999, and the Cascade Fire of 2017.

- The Williams Fire was in the community of Dobbins-Oregon House, burned over 5,743 acres, destroyed over 417 building structures and hundreds of vehicles, and caused damages totaling nearly $20 million dollars.
- The Pendola Fire burned over 11,725 acres, destroyed 123 buildings and vehicles, and caused nearly $3 million in damages.
- The Cascade Fire started in October 2017, burned 9,989 acres, destroyed 250 structures, and caused the death of four civilians. The fire was triggered by a high wind event which disrupted local electricity infrastructure.

Many of Yuba County's residential communities—Smartsville, Dobbins, Oregon House, Collins Lake, Browns Valley, Loma Rica, Rackerby, Camptonville, Log Cabin, Brownville, and Challenge—are in High or Very High FHSZs and have been subject to past fires. The Dobbins-Oregon House area has been affected by several wildfires, including the Cascade Fire (2017), Bullards Fire (2010), Yuba Fire (2009), Marysville Road Fire (2006), Pendola Fire (1999), and Willams Fire (1997).

Figure 6 illustrates the locations of past major fires within the county.

The federal government issued a disaster declaration in August 2020 for the Bear Fire, which ultimately merged with other fires to create the North Complex Fire, one of the largest and deadliest in California's history. Although it did not directly threaten Yuba County, the fire did cause significant harm in nearby counties and created extremely high levels of air pollution in Yuba County.

As development occurs in the rural foothill regions, wildfire will continue to be a significant hazard due to limited resources and remote access to areas served by rural fire agencies providing service to the foothill regions of the county.

Potential Changes to Fire Hazards in Future Years

Likely – Between 10 percent and 100 percent chance of occurrence in the next year or has a recurrence interval of 10 years or less. Although fire season has historically occurred from June to October of each year, Yuba County now faces a year-round wildfire threat. The threat of wildfire and potential losses increase as human development and population increase in the county's WUI.

Climate Change and Wildfire

Changing climate conditions are expected to increase wildfire risk in and around Yuba County. Warmer temperatures triggered by climate change can exacerbate drought conditions, which can kill or dry out plants, creating more fuel for wildfires. Warmer temperatures are also expected to increase the number of pest outbreaks, such as the western pine beetle, killing and weakening trees and increasing fuel load. These effects are likely to result in a fire season that begins earlier and lasts longer than it has historically.

According to Cal-Adapt, the average area burned by wildfires per year is expected to increase from approximately 2,800 to 3,700 acres by midcentury, and to 5,500 acres per year by the end of this century.[4]

Figure 7 illustrates how fire regimes within the county are projected to change between the years 2070 and 2099 under a climate change scenario where greenhouse gas emissions continue to increase through the end of the century. As shown in this map, the highest-intensity wildfires are projected in the northeast portion of the county. However, wildfires are still projected in the central and western portions of the county, even in areas around Marysville, Linda, and Olivehurst, which have not experienced significant wildfire risk in the past.

[4] These estimates were generated by averaging the midcentury (2035–2064) and end-of-century (2070–2099) projections for average annual hectares burned by wildfires generated by four climate models: CanESM2, CNRM-CM5, HadGEM2-ES, and MIROC5. RCP Scenario 8.5 was used, corresponding to increasing levels of greenhouse gas emissions through the end of the century.

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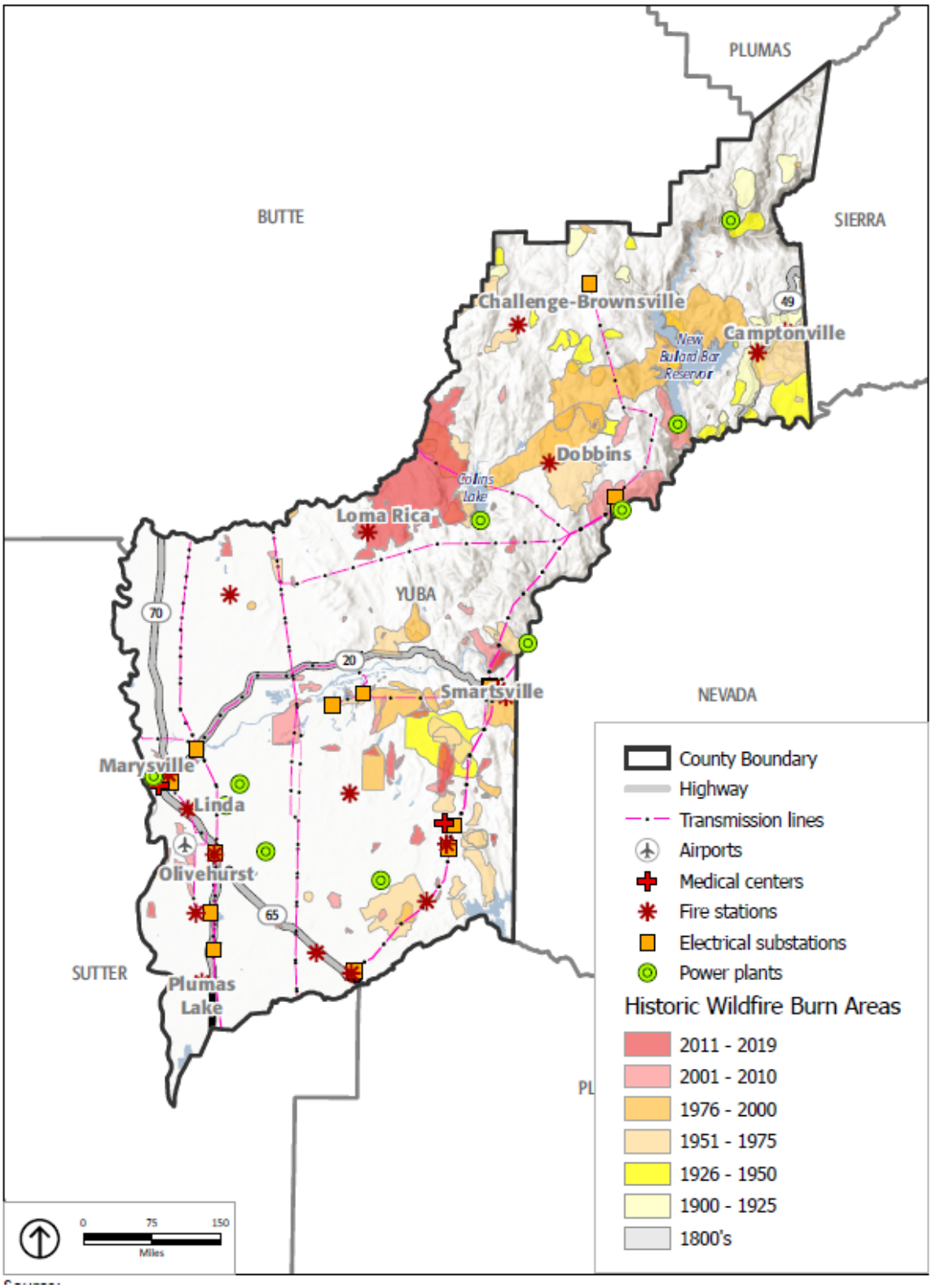

Figure 6: Past Wildfire Locations

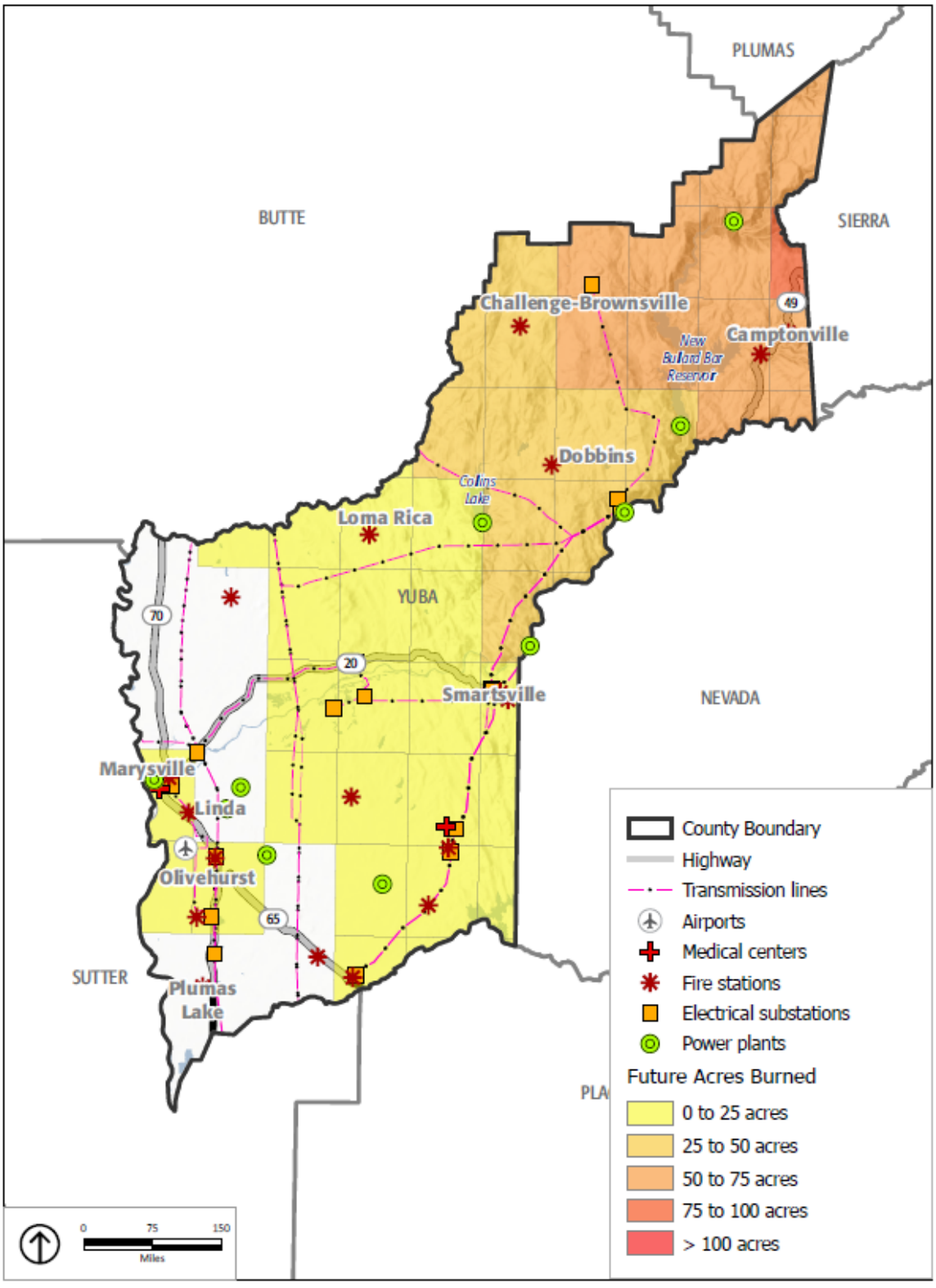

Figure 7: Future Acres Burned, 2070 to 2099

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Goals, Policies, and Actions

Goal HS2. Fire Risk

Protect people and property from wildland and urban fire risk and create more fire-resilient communities.

Policy HS2.1 *Prior to approval, new developments proposed in areas of very high, high, or moderate fire hazard, as designated on maps maintained by CAL FIRE, shall demonstrate compliance with Fire Safety Regulations and local regulations for defensible space, ignition-resistant construction materials, property maintenance to reduce fuels, natural hazards disclosure requirements, emergency access and multiple access points, availability of water for fire suppression, and other relevant building and development standards.*

Policy HS2.2 *The County will communicate with appropriate local, state, and federal fire protection personnel during the development review process and will condition projects considering input from these agencies to require defensible space, fire-wise landscaping, fuel breaks, emergency access, fire flow, hydrants, sprinkler systems, fire stations, and other improvements and conditions, as appropriate.*

Policy HS2.3 *New development projects shall pay on a fair-share basis for fire stations, equipment, and other fire suppression improvements necessary to provide adequate fire protection services.*

Policy HS2.4 *All community water systems serving new development projects are required to meet or exceed County minimum standards for provision of water for fire flows.*

Policy HS2.5 *Road and building construction on slopes of more than 10 percent are strongly discouraged and will only be approved if consistent with County standards and the Yuba County Community Wildfire Protection Plan.*

Policy HS2.6 *The County will seek funding for and cooperate with efforts to protect watersheds, reforest areas, and restore ecosystems affected by wildfire.*

Policy HS2.7 *The County will use the best available science to evaluate and protect people and property from changes in fire risk attributable to climate change, insects, and disease.*

Policy HS2.8 *Communication and electricity infrastructure and any essential public facilities shall be located outside of identified hazard zones, particularly areas of elevated fire hazard severity. When this is not feasible, these facilities and sets of infrastructure should be designed to withstand the impacts of fire hazard events to avoid interruptions and continue meeting community needs during periods of fire activity.*

Policy HS2.9 *Public trails and unimproved roads shall be maintained, where feasible, to provide emergency access, including evacuation and wildfire response. These rights-of-way are not considered primary evacuation or emergency access routes, and vehicles that cannot successfully navigate these routes shall not make use of them.*

Policy HS2.10 *New developments shall provide access that will allow safe evacuation and movement of firefighting equipment during a wildfire—specifically, each new development shall not receive planning approval without having a minimum of two entry/exit points.*

Evacuation routes shall have the capacity to accommodate traffic in relation to the population served.

Policy HS2.11 *Property owners may manage fuel load on County road easements and rights-of-way adjacent to their properties with prior approval of the County and in compliance with applicable County standards.*

Policy HS2.12 *Clustered developments in Rural Community portions of the foothills and/or occurring in any of CAL FIRE's Fire Hazard Severity Zones shall take advantage, whenever possible, of natural and man-made fire breaks; provide defensible space for clusters of buildings (rather than individual buildings); locate and orient buildings and pervious areas to reduce fire risk; avoid areas of steep topography and dense vegetation; and otherwise use a site plan review process in coordination with County staff to ensure that wildfire risk is minimized.*

Policy HS2.13 *The County will encourage the retrofitting of older buildings to meet current safety standards, including those in the County's current Building Standards and Construction Code, CAL FIRE's Low Cost Retrofit List, or others as appropriate, in coordination with proposed major remodeling or additions.*

Policy HS2.14 *Developments in the Valley Growth Boundary shall be planned and constructed to resist the encroachment of uncontrolled fire.*

Policy HS2.15 *The County shall ensure that its infrastructure, services, and critical assets are hardened against fire hazards and that governance and public services continue to function during and after a fire hazard event.*

Policy HS2.16 *The County will adopt fire hazard landscaping design standards as prescribed by CAL FIRE for all of its new facilities and will make appropriate retrofits to existing facilities to reduce wildfire risks, where feasible.*

Policy HS2.17 *The County will ensure that minimum requisite firefighting services and infrastructure are ubiquitous throughout its jurisdiction, including but not limited to: high-visibility street signage and house numbers, appropriate street widths and building clearances for firefighting equipment and vehicles, high water pressure at all fire hydrants, and driving signage indicating rights-of-way with no outlets. The County shall assess existing developments to ensure that these requirements are met.*

Policy HS2.18 *The County will encourage and support work to regularly remove fuels from public and private lands in order to protect and maintain defensible spaces.*

Policy HS2.19 *The County will discourage all new residential development within a Very High fire hazard severity zone or in the wildland-urban interface areas. The County shall require all new residential developments in these areas to demonstrate that the proposed development has incorporated sufficient fire hazard mitigation features, as outlined in Policy HS2.1, before the issuance of any permits.*

Policy HS 2.20 *The County will require all new development occurring within the State Responsibility Area to prepare and submit a fire protection plan to assess and mitigate fire risks in these areas. The plan should include 1) risk analysis; 2) fire response capabilities assessment; 3) fire safety requirements (i.e., defensible space, infrastructure, and building ignition resistance); 4) mitigation measures and design considerations for nonconforming fuel modification; 5) wildfire education strategies; and 6) plan maintenance and limitations.*

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Policy HS2.21 *The County will require absent owners of housing units and owners of seasonal or vacation rental housing units to modify and clear fuel loads throughout their properties pursuant to "firescaping" standards as established by CAL FIRE and that they shall conduct these clearance exercises on a regular basis.*

Policy HS2.22 *The County, pursuant to Policy HS2.15, will reduce wildfire risks to its transportation network by regularly clearing vegetation adjacent to public roadways and to private roadways when responsibility has not been delegated to private land owners, as described by Policy HS2.11.*

Policy HS2.23 *The County will maintain and keep in a state of good repair all existing fuel breaks and new fuel breaks that the County establishes in the future.*

Policy HS2.24 *The County will refer to the current CAL FIRE State Fire Plan and the Nevada-Yuba-Placer Unit Strategic Fire Plan, as needed, for guidance on long-term fire hazard reduction projects and efforts.*

Policy HS2.25 *The County will facilitate planning exercises for communities in both Very High fire hazard severity zones and State Responsibility Areas that will identify the most effective methods to evacuate people in these areas in the event of a fire hazard.*

Policy HS2.26 *The County will make available and share relevant educational and outreach materials with the public to help residents understand appropriate fire mitigation activities, such as defensible space, and emergency evacuation procedures during a fire hazard.*

Policy HS2.27 *The County will regularly assess communities in Very High fire hazard severity zones and State Responsibility Areas that may be underserved by existing emergency/first-responder facilities, and will conduct projections of where new fire emergency services needs may be emerging as a result of newly planned uses or developments.*

Policy HS2.28 *Following a large and/or destructive fire in Yuba County or the region, the County shall reassess standards and other requirements for new development and redevelopment, and revise these requirements to ensure a high level of community resilience to fire events.*

Policy HS2.29 *The County, in coordination with local water providers, shall work to ensure the long-term sustainability of water supplies to meet current and anticipated future firefighting needs.*

Action HS2.1 Fire Standards

The County will maintain a planning and entitlement review process that documents compliance with state and local standards for fire safety. The County will update zoning, development, improvement standards, and building standards, as necessary, to maintain compliance with relevant fire codes, including those maintained by CAL FIRE. County codes would be anticipated to address such topics as landscaping standards and fire-resistant plant materials, fire-resistant building materials for exterior walls and other exterior features of structures, defensible space standards for different topographic conditions, sprinklers, emergency access, water supply and pressure for firefighting, building and road construction in areas prone to fire risk and greater slopes, and other relevant topics. Additionally, the County will conduct a review of its roadways within identified Very High Fire Hazard Severity Zones as well as in State Responsibility Areas and identify which ones are not compliant with California Code of Regulations, Division 1.5, Chapter 7,

Subchapter 2, Articles 2 and 3, and/or certified local roadway standards, and undertake actions to address these roadways and bring them into compliance.

Related Goals:	Goal HS2
Agency/Department:	Community Development and Services Agency; Office of Emergency Services; Yuba Watershed Protection and Fire Safe Council
Funding Source:	Grants, development fees, and other funding sources, and if necessary, General Fund
Time Frame:	Ongoing, as necessary to maintain consistency with relevant fire codes

Action HS2.2 Yuba County Wildfire Safety Plan Implementation and Maintenance

The County will continue implementing the Yuba Foothills Community Wildfire Protection Plan and facilitate requisite update efforts. This plan focuses on reducing fuel loads, ensuring emergency access and evacuation routes, and providing incentives for property owners to improve properties in order to reduce wildfire risk and improve fire resiliency for existing developed areas.

As a part of this planned maintenance effort, the County will continue collaborating with other public agencies and nonprofits to implement fire breaks and fuel reduction projects in areas of high and very high fire risk, including removal of invasive species that increase understory fuel loads. Areas of particular focus could include County roads, ridges surrounding rural communities, and defensible space around existing structures. The County will seek funding from sources such as the Bureau of Land Management and the U.S. Department of Agriculture for fire fuel reduction projects.

The County will continue to collaborate with landowners in fire-prone areas without adequate secondary access to improve access, add water tanks, or otherwise improve fire safety conditions. The County will seek funding to provide incentives for property owners to retrofit existing structures in High and Very High fire hazard areas to reduce combustibility.

Planning for emergency access and evacuation routes will take into account records of historical fire activities affecting foothills portions of the county. Emergency access and evacuation will also take into account fire behavior modeling, including consideration of wildfire driven by winds that could limit the use of existing evacuation routes. The County will analyze and consider planning and fair-share funding of improvements needed to provide for emergency access and evacuation routes generally leading away from the head of a wildfire that has the characteristics of the worst-case predicted wildfire and secondary access allowing egress oriented in a direction of approximately 180 degrees from the previously described route.

The County would examine fair-share funding approaches and grant funding approaches for improvements needed to provide adequate emergency access and evacuation. Grant funding for fire mitigation activities is regularly available from CAL FIRE, and may also be available from other agencies and private sources in some instances.

Related Goals:	Goal HS2

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Agency/Department:	Community Development and Services Agency; Office of Emergency Services; Yuba Watershed Protection and Fire Safe Council
Funding Source:	State and federal grants, other State or federal funding, and private funding from landowners of affected properties
Time Frame:	As funding is available