1 INTRODUCTION

The State of California requires a Safety Element and a Noise Element as part of all city and county general plans (Government Code Section 65302.1). The Safety Element must be updated following adoption of an update to a general plan's Housing Element; the City adopted an updated General Plan Housing Element in 2021. This Safety and Noise Element is also being updated to address recent changes in State law. Government Code Section 65302 requires amendment of the safety element to include analysis and policies for the protection of the community from unreasonable risks associated with the effects of flooding and wildland fires, and to address evacuation routes. The safety element must also assess the risks associated with climate change and develop resiliency and adaptation measures to reduce the risks associated with climate change impacts (Government Code Section 65302[g][4]).

The Safety and Noise Elements for the City's General Plan have been combined since noise is commonly cited as a health and safety issue.

This Safety and Noise Element contain a summary of conditions relevant to the city of Placerville, followed by goals, policies, and implementation programs as related to the following topics mandated by State law:

- Public Safety
  - Wildland and Urban Fires
  - Flooding
  - Evacuation Routes and Emergency Response
  - Geologic, Seismic, and Soils Hazards
  - Climate Change
  - Hazards and Hazardous Materials
- Noise

The City will use the goals, policies, and implementation programs in this Safety and Noise Element to guide public health and safety decisions related to land development, public investments, and the provision of public services.

2 RELATED PLANS INCORPORATED BY REFERENCE

2.1 Local Hazard Mitigation Plan

In 2006, the State adopted Assembly Bill (AB) 2140, which added provisions requiring a linkage between a local jurisdiction's Local Hazard Mitigation Plan (LHMP) and the Safety Element of the General Plan; it also specified the contents that must be included in a LHMP.

The Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) for the County of El Dorado/City of Placerville planning area was 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 Local Hazard Mitigation Plan can be found at this link: MJLHMP. The MJLHMP includes an Annex for the City of Placerville. The Annex can be found at this link: Annex and was adopted by the City Council on November 12, 2024.

The City of Placerville hereby adopts and incorporates by reference the most current El Dorado County MJLHMP as part of this Safety and Noise Element to the General Plan.[1]

2.2 Community Wildfire Protection Plans

Government Code Section 65302(g)(3)(D) states that if a city or county has adopted a fire safety plan or document separate from the general plan, an attachment of, or reference to, a city or county's adopted fire safety plan or document that fulfills commensurate goals and objectives, and contains general plan safety element information related to fire safety, may be incorporated by reference.

The City hereby incorporates by reference into this Safety and Noise Element of the City General Plan the most current version of the Community Wildfire Protection Plan, Western El Dorado County (CWPP), the Placerville Community Wildfire Resilience Strategy (CWRS) and the Greater Placerville Wildfire Evacuation Preparedness, Community Safety and Resiliency Study (WEPS). The County CWPP and Placerville CWRS identify specific fire protection problems, strategies and issues, provide goals and strategic action plan recommendations, and help to coordinate and implement site-specific fuel reduction projects. The WEPS study identifies major evacuation routes within the project area in El Dorado County and assesses the performance of the road networks under specific evacuation scenarios based on different criteria, including evacuation time estimates (ETE) and potential bottlenecks based on model simulations.

2.3 Placerville Airport Land Use Compatibility Plan

To ensure land use compatibility with aviation uses at the Placerville Airport from a safety and noise perspective, the City hereby incorporates by reference the following sections of the Placerville Airport Land Use Compatibility Plan (prepared by the El Dorado County Airport Land Use Commission) into this Safety and Noise Element of the City General Plan:

- Glossary of Terms, pages vii to xviii;
- Chapter 2: Basic Provisions;
- Chapter 3: ALUC Review Process;
- Chapter 4: Land Use Compatibility Criteria;
- Chapter 6: PLA-1: Placerville Airport Policies and Compatibility Maps; and
- Chapter 9: Background Data: Placerville Airport and Environs.

[1] AB 2140 requires a jurisdiction to adopt the LHMP into the Safety Element of the general plan in order to be fully eligible for disaster relief funding under the California Disaster Assistance Act. The requirements of AB 2140 can be met by either including the LHMP language specific to AB 2140 as part of the general plan Safety Element or incorporating the LHMP by reference into the general plan Safety Element. Furthermore, Senate Bill (SB) 379 (2015) amended Government Code Section 65302 to require that if a jurisdiction has not already adopted an LHMP that addresses climate change, the safety element must be revised to include climate adaptation and applicable resiliency strategies.

3 SAFETY

3.1 Wildland and Urban Fires

3.1.1 Wildland Fire History and Background

Wildfires are a natural part of California's landscape. However, the effects of climate change, overly dense forests, and prolonged drought have resulted in increased tree mortality in California's forests, as well as an increase in the number, area, and severity of wildland fires through the State. Generally, the fire season has extended from late spring through fall each year during the hotter, dryer months; however, the fire season in California and across the West is starting earlier and ends later each year. Climate change is considered by some to be a key driver of this trend because warmer spring and summer temperatures, reduced snowpack, and earlier spring snowmelt create longer and more intense dry seasons that increase moisture stress on vegetation and make forests more susceptible to severe wildfire.

Prime wildfire conditions arise from a combination of high temperatures, low moisture content in the air and fuel, an accumulation of vegetation, and high winds. In mountainous areas, such as Placerville and the adjacent lands, both fire intensity and rate of spread increase as slope increases due to the tendency of heat from a fire to rise via convection.

Characterizing Wildfire Risk

As required by the California Code of Regulations Title 14, Section 1280.01, the California Department of Forestry and Fire Protection (CAL FIRE) has developed Fire Hazard Severity Zones reflecting the degree of severity of fire hazard that is expected to prevail in those zones, and maps showing the locations of the zones, for areas where fire protection is the responsibility of the State (i.e., a State Responsibility Area). CAL FIRE has also provided Fire Hazard Severity Zone ratings for various cities and counties where fire protection is the responsibility of a local agency (i.e., a Local Responsibility Area).[2]

Wildland fire is a concern for Placerville residents and businesses. As shown in Exhibit 3-1.1, approximately 50% of the city has been classified by CAL FIRE as a Very High Fire Hazard Severity Zone, within a Local Responsibility Area. The city is surrounded by State Responsibility Area lands that are classified as Very High, High, and Moderate Fire Hazard Severity Zones.

[2] Fire Hazard Severity Zone maps are developed by CAL FIRE using a science-based and field-tested model that assigns a hazard score based on the factors that influence fire likelihood and fire behavior. Many factors are considered such as fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather for the area. Fire Hazard Severity Zones show areas of "hazard" rather than "risk." The hazard rating is based on the physical conditions that create a likelihood for fire and expected fire behavior over a 30- to 50-year period. The hazard rating does not consider risk reduction measures such as individual defensible space perimeters, recent wildfire, or fuel reduction projects.

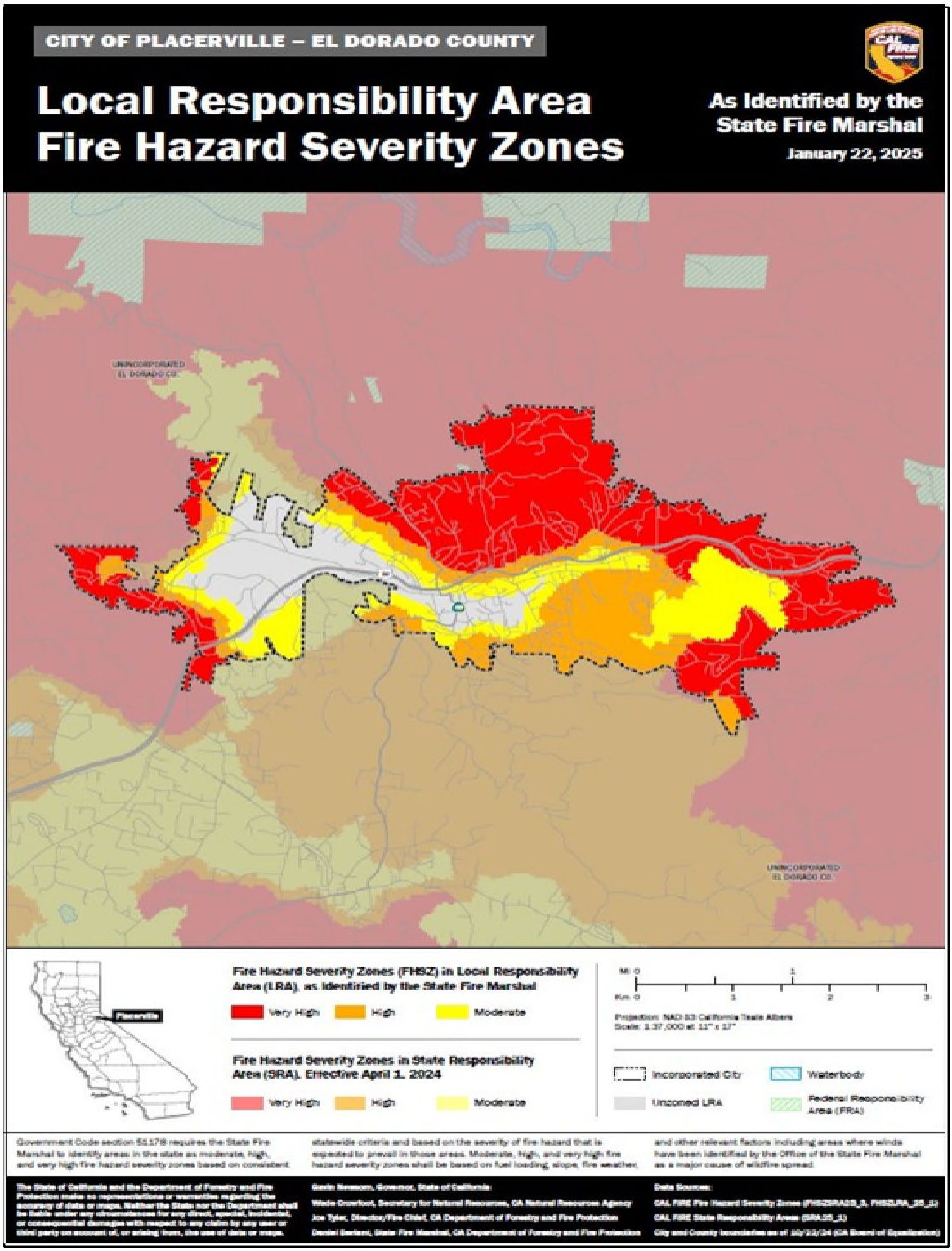


Exhibit 3.1-1 Fire Hazard Severity Zones

The City Council of the City of Placerville adopted the State Fire Marshal's January 22, 2025 LRA FHSZ Map on April 22, 2025. The ordinance can be found at this link: Ordinance 1726,

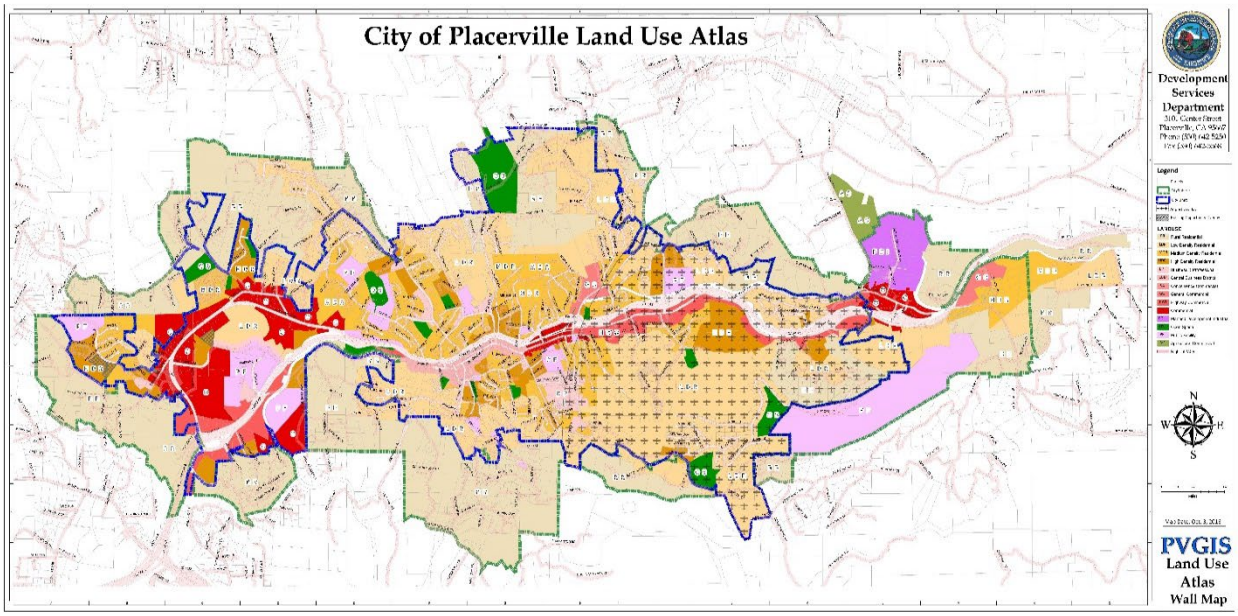


Exhibit 3.1-2 Land Uses Including Residential, Commercial and Public.

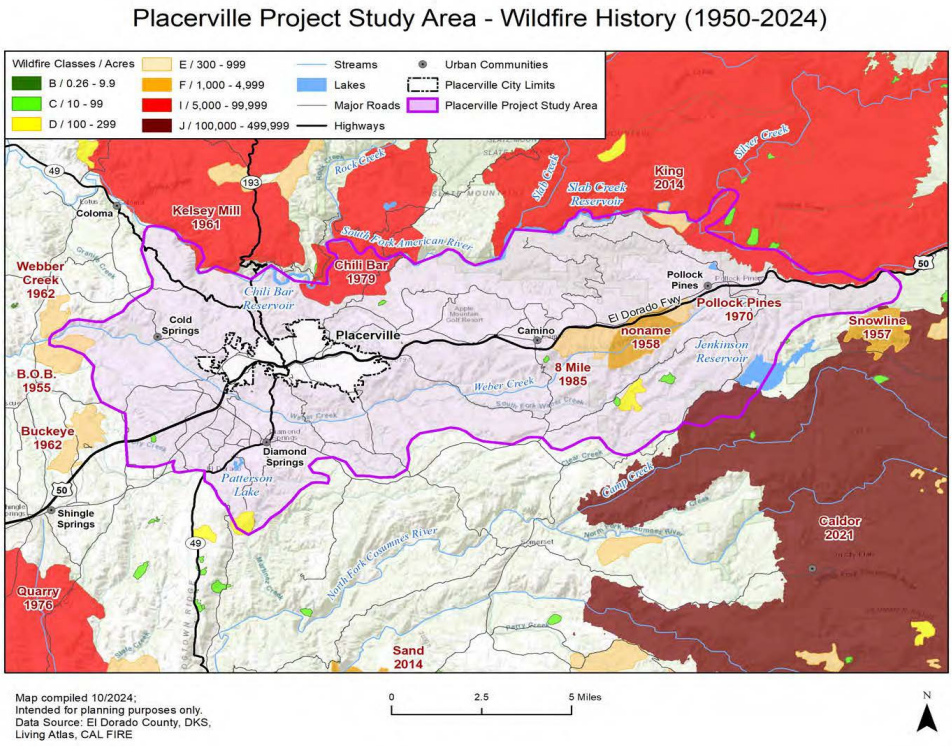


Exhibit 3.1-3 Wildfire History, (CWRS, p. 62)

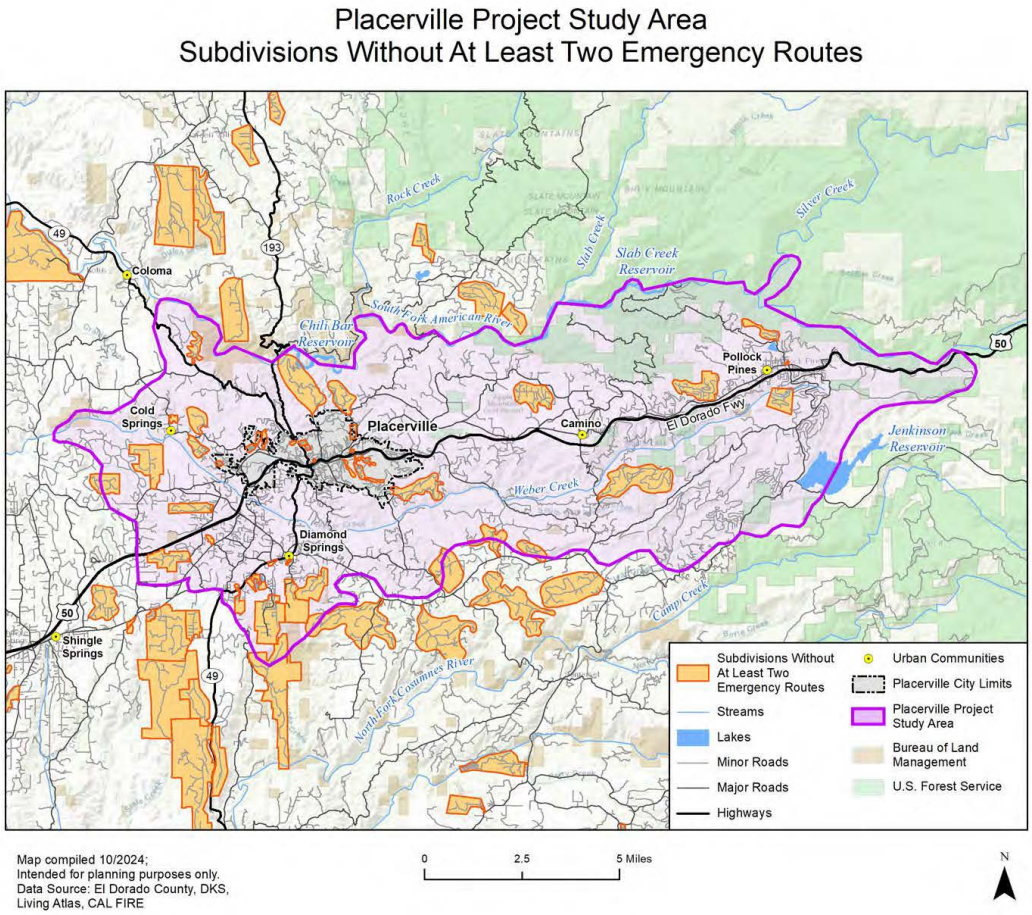


Exhibit 3.1-4 Residential areas without at least 2 emergency evacuation routes, (CWRS, p.29)

Causes of Wildfire

Wildland fires are generally started either by lightning strikes, arson, or human-caused accidents (such as vehicle fires or downed power lines). Potential losses from wildfire include human life, structures and other improvements, natural and cultural resources, and the loss of timberland, cropland, and recreational opportunities. Smoke and air pollution from wildfires can be a severe health hazard.

Historic Wildfires

As shown on Exhibit 3.1-3, Several destructive wildland fires have occurred in the vicinity of Placerville:

- The 2021 Caldor Fire burned 221,835 acres from Grizzly Flats (southeast of Placerville) to an area extending southeast of South Lake Tahoe, including the land between State Route (SR) 88 and U.S. Highway 50, as well as land north of U.S. Highway 50. The Caldor Fire resulted in the loss of over 1,000 structures (about three-quarters of which were residences and one-quarter businesses) and the evacuation of nearly every residence and business from Grizzly Flats eastward along the U.S. Highway 50 corridor to and including South Lake Tahoe (a distance of more than 30 miles and affecting more than 50,000 people). The fire destroyed two-thirds of the community of Grizzly Flats, and the economic cost has been estimated at $1.2 billion.

- The 2014 King Fire burned 97,717 acres of Eldorado National Forest land and privately-owned timberland, as well as 12 residences at the north edge of Pollock Pines.

- The 2013 Kyburz Fire burned 615 acres of private timberland and Eldorado National Forest land on the north side of Kyburz.

- The 2004 Fred's Fire started near Kyburz and burned 7,700 acres of private timberland and Eldorado National Forest land to the north, east, and west.

- The 1992 Cleveland Fire burned 24,580 acres of private timberland and Eldorado National Forest land along both sides of Ice House Road and northward to the edge of the Crystal Basin Recreation Area, as well as southeast along the U.S. Highway 50 corridor. The Cleveland Fire resulted in the death of two air tanker pilots, and the destruction of 41 residences.

Secondary Hazards from Wildfire

Catastrophic wildfire can also create favorable conditions for other secondary hazards such as flooding, landslides, and soil erosion (and subsequent water quality degradation) during the rainy season. For example, during the winter rainy season in 1997, a portion of the hillside north of U.S. Highway 50 that had been completely burned (all vegetation was lost) in the 1992 Cleveland Fire gave way, resulting in a massive landslide that closed U.S. Highway 50 for nearly a month, dammed the South Fork American River for approximately 5 hours, and destroyed three homes. The since-named 1997 Mill Creek landslide resulted in an estimated 350,000 cubic yards of slide material (35,000 truckloads) that had to be removed over a 4-week period, at a direct

cost of $4.5 million. Indirect economic costs due to highway closure were estimated at more than $1 million per day.

Reducing Fire Hazards

Fire hazards can be reduced by a variety of actions such as maintaining a defensible space around residences and businesses, removing underbrush in areas with heavy fuel loads and creating fuel breaks, and using up-to-date equipment that is properly maintained and equipped with spark arrestors. Federal, State, and local agencies and organizations rely primarily on a combination of these three factors to help prevent wildfire.

3.1.2 Wildland Fire Resiliency and Hazard Risk Reduction

California Vegetation Treatment Program

Approved by the California Board of Forestry and Fire Protection in December 2019, the California Vegetation Treatment Program is a statewide program by which public agencies, primarily CAL FIRE, will perform vegetation treatment activities for the purposes of wildfire prevention. These individual projects will occur throughout those portions of the State Responsibility Areas that make up the "treatable landscape," which includes approximately 20.3 million acres within the 31-million-acre Statewide State Responsibility Area. Vegetation treatment will consist of a variety of activities intended to strategically modify portions of the landscape in order to reduce losses from, and improve resiliency to, wildfire. Examples include prescribed burning, mechanical treatment, manual treatment, prescribed grazing, and the use of herbicides. Over 50 percent of El Dorado County is within the "treatable landscape," including the U.S. Highway 50 corridor (which includes Placerville).

Wildfire and Forest Resilience Action Plan

California's *Wildfire and Forest Resilience Action Plan*, prepared in 2021 by the Governor's Forest Management Task Force (including CAL FIRE), sets forth a plan to accelerate efforts to: (1) restore the health and resilience of California forests, grasslands, and natural places; (2) improve the fire safety of California communities; and (3) sustain the economic vitality of rural forested areas. As part of this program, the following actions are planned:

- CAL FIRE and other state entities will expand its fuels management crews, grant programs, and partnerships to scale up fuel treatments to 500,000 acres annually by 2025.
- California state agencies will expand forest management on State-owned lands to improve resilience against wildfires and other impacts of climate change.
- The U.S. Forest Service (USFS) will double its current forest treatment levels from 250,000 acres to 500,000 acres annually by 2025 in California.
- The California Natural Resources Agency (CNRA) will expand its Regional Forest and Fire Capacity Program to all include high-risk areas throughout the State, to increase local and regional governments' capacity to implement forest health and fire prevention projects.

- CAL FIRE will develop a list of 500 high priority fuel breaks across the State.
- The USFS will develop a restoration strategy for wildfire-affected federal lands in California.
- CAL FIRE will partner with the California Office of Emergency Services (Cal OES) and other federal, State, and local agencies to develop a coordinated strategy to prioritize and rehabilitate burned areas and affected communities.
- CAL FIRE will coordinate the implementation of grants and technical assistance programs for private landowners through a unified Wildfire Resilience and Forestry Assistance Program. (Private landowners own more than 40 percent of California's forested lands.)

California's Strategic Plan for Expanding the Beneficial Use of Fire

Prepared by the California Wildfire and Forest Resilience Task Force and approved by Governor Newsom in 2022, California's Strategic Plan for Expanding the Beneficial Use of Fire provides a comprehensive strategy for state, federal, and tribal partners to use managed fire on up to 500,000 acres annually by 2025 to make forests more resilient. The plan also includes provisions to establish a Prescribed Fire Training Center and develop a new statewide Prescribed Fire Claims Fund to reduce liability for private landowners seeking to conduct prescribed burns.

Strategic Fire Plan for California

The California Board of Forestry and Fire Protection, in coordination with CAL FIRE, establishes overarching policy through the statewide 2018 Strategic Fire Plan for California. Pursuant to Public Resources Code Section 4130, this master framework provides broad strategic direction to achieve a fire-resilient natural environment, foster fire-resistant infrastructure, and promote a wildfire-responsive society through robust public-private partnerships. The state plan balances targeted fire prevention and suppression activities with natural resource management to ensure California's forests remain resilient carbon sinks that support long-term climate change adaptation goals. Locally, these statewide directives are directly operationalized and executed through the regularly updated Amador-El Dorado Unit (AEU) Strategic Fire Plan, which translates the master framework into localized fuel reduction projects, regional risk assessments, and specific tactical suppression strategies tailored to the city and its surrounding wildland-urban interface.

South Fork American River Cohesive Strategy

The eastern half of Placerville (east of SR 49) is situated within the area encompassed by the South Fork American River (SOFAR) Cohesive Strategy, which is a collaborative effort among federal, State, and local agencies, organizations, and individuals to implement, on a local level, the National Cohesive Wildland Fire Management Strategy.

The Eldorado National Forest, CAL FIRE, and Sierra Pacific Industries are the primary collaborative partners. The SOFAR Cohesive Strategy project area encompasses approximately 410,000 acres, including approximately 250,000 acres of the Eldorado National Forest. It includes the upper 75 percent of the South Fork of the American River Watershed, 50 percent of the King Fire burn area, and 49 miles of the U.S. Highway 50 corridor. The SOFAR Cohesive Strategy has three primary goals: restoring and maintaining resilient landscapes, creating fire-adapted communities, and response to wildfires.

Fire Adapted 50 Project

East of Placerville, the Fire Adapted 50 Project includes a collaborative partnership led by the El Dorado County and Georgetown Divide Resource Conservation Districts and the Sierra Nevada Conservancy, with support from CAL FIRE and Sierra Pacific Industries, to establish a more fire-resilient community along the wildland–urban interface with a focus on the U.S. Highway 50 corridor. The project focuses on fuels reduction in the areas of Sly Park, Camino, Pollock Pines, and along both sides of U.S. Highway 50 from Fresh Pond to Echo Summit. Portions of the Fire Adapted 50 Project were implemented prior to the Caldor Fire, and in those areas where treatments were implemented (the Sly Park and Jenkinson Lake area), the treatments were effective in helping to protect local watershed resources, critical infrastructure, and nearby residences from fire damage during the 2021 Caldor Fire.

County Office of Wildfire Preparedness and Resilience

Recognizing the wildfire threat to people, infrastructure, and natural resources, the El Dorado County Board of Supervisors updated the County Strategic Plan in 2022 to support the creation and maintenance of fire-adapted communities through a countywide wildfire protection strategy. The County Office of Wildfire Preparedness and Resilience was established to lead this effort and coordinate the planning and implementation of wildfire mitigation activities across jurisdictions and land ownerships. The City of Placerville is a stakeholder in the Wildfire Preparedness and Resilience Advisory Committee.

Community Wildfire Protection Plan, Western El Dorado County

The 2025 update of the *Community Wildfire Protection Plan for Western El Dorado County* is substantially complete. The Plan identifies specific fire protection problems and issues, lists goals and recommendations, identifies communities for fire safe planning, provides for formation of local community Fire Safe Councils, adopts a standard outline for Community Wildfire Protection Plans, and identifies the El Dorado County Fire Safe Council as a focal point for bringing citizens and protection agencies together to plan and accomplish fire safe measures. The Community Wildfire Protection Plan for Western El Dorado County has been incorporated by reference as part of this Safety and Noise Element (see Chapter 2, above).

Placerville Fire Safe Council

The Placerville Fire Safe Council was formed by local citizens in January 2019 to help reduce the loss of life, property, and natural resources in the Placerville area due to wildfire. The Placerville Fire Safe Council is an all-volunteer organization that is a

satellite group of the El Dorado County Fire Safe Council. The Placerville Fire Safe Council works to educate homeowners and residents about wildfire preparedness and how to plan for and prevent wildfires. The Placerville Fire Safe Council conducts outreach events and implements projects such as cooperative fuel-reduction projects in neighborhoods and collaborates with other agencies to complete landscape-level vegetation management projects.

Placerville Community Wildfire Resiliency Strategy

The purpose of the Placerville Community Wildfire Resiliency Strategy (CWRS) is to assess the wildfire hazards and risk and protection priorities of the community, bring together responsible wildfire management and suppression agencies and organizations to support the wildfire mitigation strategies, and provide a framework for the future identification and prioritization of landscape-level fuels treatment projects.

The goal of the CWRS is to minimize the risk of wildfire to the city and the surrounding communities and the identified assets at risk by seeking to increase the capacity to develop, prioritize, and implement landscape-level fuel treatment projects on a geographic scale that achieves community wildfire resiliency. The CWRS has been incorporated by reference as part of this Safety and Noise Element (see Chapter 2, above). The CWRS was prepared by the Eldorado County Resource Conservation District.

El Dorado Amador Prescribed Burn Association

Building on the concepts embodied in the State's *Strategic Plan for Expanding the Beneficial Use of Fire*, a number of California counties have formed prescribed burn associations, including the El Dorado Amador Prescribed Burn Association (which includes Placerville). The goal of the El Dorado Amador Prescribed Burn Association is to provide the community with training, equipment, and support to empower private landowners to conduct intentional burns on their properties. The El Dorado Amador Prescribed Burn Association members pool their resources and energy to conduct carefully planned burns under specified prescriptions to maintain productive forests and grasslands, enhance wildlife habitat, and ensure safer communities.

3.1.3 Urban Fires

There are a variety of causes of urban area fires. Many of the causes are a result of human carelessness or mechanical failure and therefore are difficult to predict and even harder to eliminate. In some instances, however, potential fire hazards can be reduced if they are recognized as problems.

Urban fires can result from arson, carelessness (e.g., children playing with matches, inappropriate disposal of cigarettes, etc.), automobile accidents, electrical and natural gas equipment failure, flammable liquids, candles, grease, and faulty stoves or furnaces.

Older wood-frame buildings are particularly susceptible to fire damage.[3] Over the years, development standards have become more stringent to reduce the frequency and severity of urban fires. For example, building codes now require fire walls for adjacent structures. Smoke detectors are now commonly required. Electrical standards have also changed to reduce fire risk inside structures.

3.1.4 Fire Protection Regulations and Ordinances

A variety of regulations are designed to reduce fire risk.[4]

Placerville Hazardous Vegetation and Combustible Materials Abatement Ordinance

The Placerville Hazardous Vegetation and Combustible Materials Abatement Ordinance (Municipal Code Title 7, Chapter 16), adopted in 2019, requires all property owners to keep property free from combustible material and hazardous vegetation that constitutes a fire hazard. For all improved parcels, a defensible space of at least 30 feet must be maintained around all buildings and structures. Additional defensible space outward, up to 100 feet, from all buildings and surrounding neighboring structures may be required depending on the property slope, fuel load, and/or fuel type. A 10-foot minimum clearance of vegetation next to the roadside is required, along with a 10-foot minimum vegetation clearance from chimney and stovepipe outlets. Roofs and gutters must be maintained free of vegetative litter such as dead leaves and pine needles. Spark arrestors must be installed on all chimneys and stovepipes. Address numbers must be clearly visible from the roadside. The property must be maintained free of ladder fuels. Unimproved parcels have different requirements but must include mowing of grass and may require a firebreak.

[3] In 1856, most of the then-existent city of Placerville was burned by three fires that occurred in April, July, and October. Most of the city was destroyed. The Neptune Hose Company provided fire protection services to the city at that time, but they did not have a fire engine. After the fires of 1856, two fire engines were purchased for the City, one in 1857 and another in 1858. Over the years, a variety of fire engines were purchased by the City as the available technology improved. Two of the older engines are still used occasionally for parades and other special functions.

[4] California Public Resources Code Section 4291 requires the owners of certain lands to maintain "defensible space" for fire suppression within a 100-foot perimeter (but not beyond the property line) around any building or structure. The amount of necessary fuel modification must consider the flammability of the structure as affected by building material, building standards, location, and type of vegetation. Fuels must be maintained and spaced in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure. However, Public Resources Code Section 4291 applies only to properties within a State Responsibility Area; Placerville is within a Local Responsibility Area.

City of Placerville Defensible Space Guidelines

The City has prepared a set of *Defensible Space Guidelines*, which are advisory not mandatory, and are intended to provide examples of fuel modification measures that may be used to create defensible space around structures.[5]

California Building, Fire, and Wildland-Urban Interface Codes

The California Building Standards Code (Title 24) establishes the design and construction requirements for all structures in the state, with core fire safety standards—such as commercial sprinklers and fire alarms—detailed in the Building (Part 2) and Fire (Part 9) Codes. For structures in wildfire-prone areas, strict exterior ignition-resistant standards are governed by the California Wildland-Urban Interface Code (CWUIC, Title 24, Part 7). These regulations apply to all State Responsibility Areas and locally designated Very High Fire Hazard Severity Zones (VHFHSZ). Because the City of Placerville contains locally designated VHFHSZs within its Local Responsibility Area, all new construction and substantial alterations within these zones must comply with CWUIC standards.

Prohibition on Open Fires

Open burning is prohibited in Placerville after the time when burning is declared prohibited by CAL FIRE, until the date CAL FIRE declares that the hazardous fire conditions have abated for that year (usually after rainfall sufficient for thorough wetting of vegetation), or at any other time during any year when unusual fire hazard conditions exist in the City as determined by the Fire Chief (Placerville Municipal Code Title 3, Chapter 3, Section 3-3-2). At times when open burning is permissible, burn permits are required from the El Dorado County Fire Protection District or CAL FIRE, and the El Dorado County Air Quality Management District as applicable.

Requirements for Access of Firefighting Equipment

The El Dorado County Regional Fire Protection Standard, Emergency Access Apparatus Ways (Standard #B-003), applies to all development in the County that is served by the El Dorado County Fire Protection District, which includes the city of Placerville. This standard sets forth the requirements for access of firefighting equipment, including a requirement that new planned developments (not individual homes) have at least two points of ingress and egress. The standard also sets forth the maximum allowable length of a dead-end road that serves all types of residential housing (both individual homes and planned subdivisions). The standard addresses road access lengths, widths, and vertical clearances, along with parking, gates, easements, and turn-around requirements.

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[5] The vegetation surrounding a building or structure is fuel for a fire. Research and experience have shown that fuel reduction around a building or structure increases the probability of it surviving a wildfire. Fuel reduction through vegetation management is the key to creating good defensible space. A defensible space perimeter also provides firefighters with a safe working environment that allows them to protect buildings and structures from encroaching wildfires and minimizes the chance that a structure fire will escape to the surrounding wildland. The Defensible Space Guidelines are available on the City's website.

Fire Hydrants, Flow, Vegetation Clearances, and Access Standards

California Government Code Section 65302(g)(1) requires all general plan safety elements to address peak load water supply requirements, and minimum road widths and clearances around structures, as they relate to both fire and geologic hazards. There are no geologic hazards in Placerville to which this requirement would apply. With regards to fire hazards, Placerville Municipal Code Title 3, Chapter 10 addresses the location, type, and number of fire hydrants and fire flow requirements in the city. Minimum vegetation clearances around structures are required in Placerville Municipal Code Title 7, Chapter 16. Placerville Municipal Code Title 10, Chapter 7 addresses street standards within subdivisions, including minimum road widths and the requirements for turnarounds on dead-ends streets. The El Dorado County Regional Fire Protection Standard, Emergency Access Apparatus Ways (discussed above), applies to Placerville and contains the requirements related to roadway access for firefighting equipment, including roadway widths, lengths, vertical clearances, and turn-arounds.

State Law for the Safety Element and Fire Risk

California Government Code Section 65302(g)(3)(iv) requires all general plan safety elements to identify the general location and distribution of existing and planned uses of land in very high fire hazard severity zones, including structures, roads, utilities, and essential public facilities. As discussed above and shown in Exhibit 3.1-1, Approximately half of the City of Placerville is within a Very High Fire Hazard Severity Zone. Exhibit 3.1-2 shows the locations of existing roads, utilities, and essential public facilities within areas classified as a Very High Fire Hazard Severity Zone.

3.1.5 Fire Protection and Fire Protection Related Services

The City of Placerville contracts with the **El Dorado County Fire Protection District**, which is an independent special district governed by a locally elected five-member board of directors. There are two fire stations in Placerville:

- **Station No. 25,** located at 3034 Sacramento Street is staffed 24 hours per day, 7 days per week by an Engine Company, a Medic Unit, and the Duty Chief.
- **Station No. 26**, located at 730 Main Street, now houses the City of Placerville Police Department. As an unstaffed fire station, it houses the Fire District's aerial ladder.

In 2022, Fire Station No. 25 responded to a total of 355 fire engine calls and 407 medical unit calls. Of the 355 fire engine calls during 2022, only 7 were directly related to fires. The remainder were related to medical aid, traffic collisions, and public assistance.

In addition to Station No. 25, there are other nearby El Dorado County Fire Protection District stations that are manned and staffed with firefighting equipment in Camino, Pleasant Valley, and Shingle Springs that can assist with firefighting efforts in Placerville.

The **Diamond Springs–El Dorado Fire Protection District** provides fire protection services in the area immediately west and southwest of Placerville, on the west side of Weber

Creek. The Diamond Springs El Dorado Fire Protection District operates four fire stations with engines, trucks, and water tenders, which could assist with firefighting efforts in Placerville, if needed. The Diamond Springs - El Dorado Fire Protection District and the Eldorado County Fire Protection District formally merged through action of LAFCO and the effective date of the reorganization is May 1, 2026.

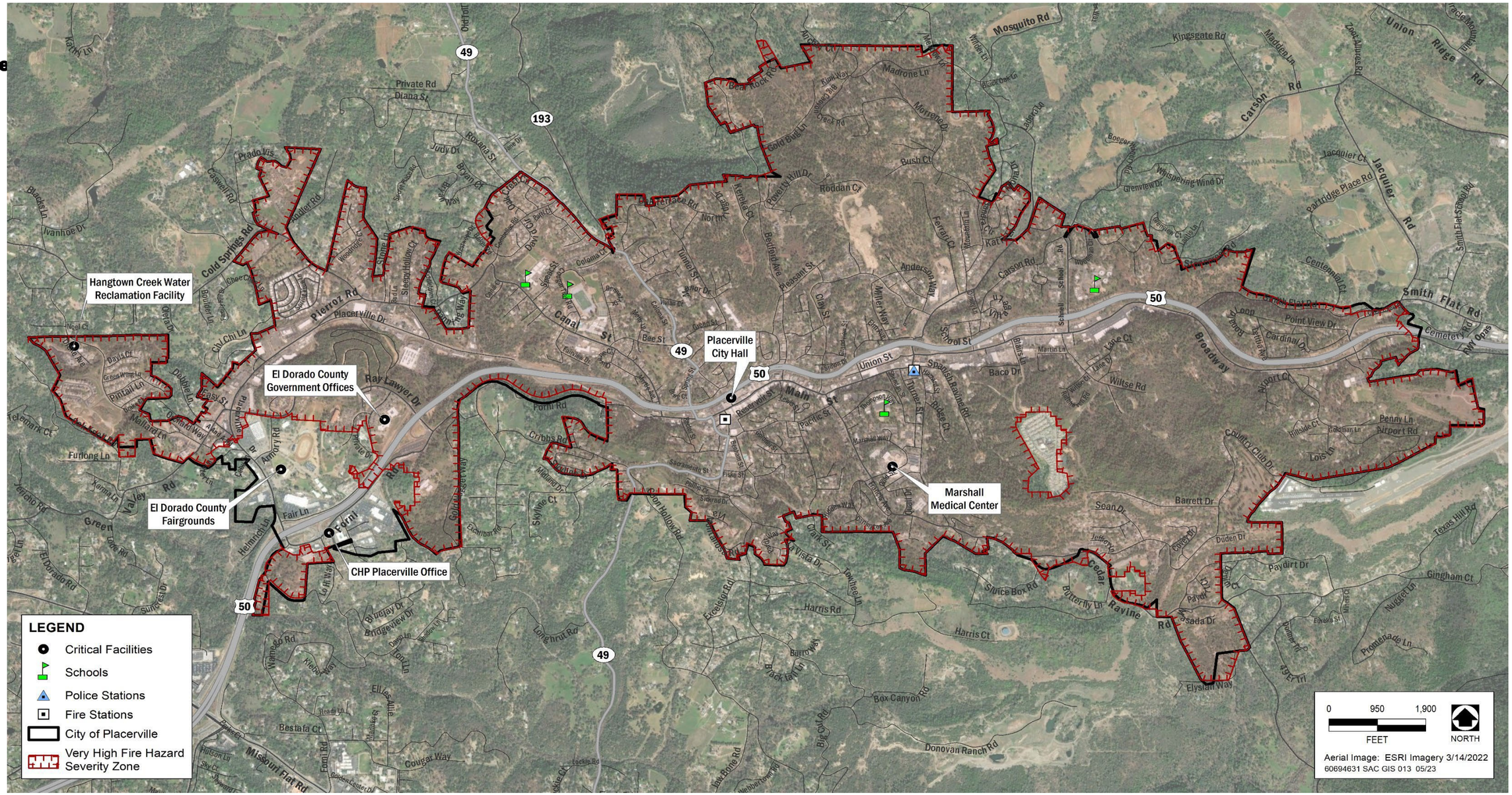
A Countywide Fire Protection and Emergency Medical Services Municipal Service Review and Sphere of Influence Update was prepared and adopted in December of 2022 by the El Dorado County LAFCO. The two-volume document plus maps can be found at the following link: https://www.edlafco.us/el-dorado-county-fpd-msr. The City of Placerville's future emergency service needs, as outlined in the Countywide Fire Protection and Emergency Medical Services Municipal Service Review and Sphere of Influence Update, project a 15-25% increase in call volumes by 2040 due to population growth and development, necessitating additional staffing, advanced life support (ALS) enhancements, and infrastructure upgrades. The 2022 MSR (Volumes I/II) do not identify any areas in the City of Placerville lacking emergency services. **No areas within the City of Placerville lack emergency services.** Coverage and response times within Placerville remains within County standards, though wildfire risks persist countywide.

The California Department of Forestry and Fire Protection (CAL FIRE): Interaction and coordination with local agencies make CAL FIRE an integral partner for fire protection in the city and county. CAL FIRE is primarily a wildland fire agency that began expanding into a multi-task force approximately 25 years ago. CAL FIRE is California's fire safety agency, providing fire prevention education, engineering, and enforcement, as well as coordinating fire suppression efforts with local governments. It protects all the land, property, and citizens in the state, including the natural resources on 31 million acres of wildland and all the citizens and structures within those acres.
The cost of fighting fires is wholly borne by the state in areas designated as SRAs.

The **Governor's Office of Emergency Services (OES)** routinely tasks CAL FIRE to manage and supplement the fire suppression capacities of other agencies during disasters by responding to emergencies in all counties and cities in California. CAL FIRE also regularly responds to jurisdictions outside its normal boundaries (in Local Responsibility Areas) and occasionally outside the state. In addition to its fire suppression duties, CAL FIRE regulates and inspects timber harvesting on private lands.

The **El Dorado Irrigation District (EID)** provides water supply and service to municipal, industrial, and irrigation customers within its service area, which is located in El Dorado County and on the western slope of the Sierra Nevada mountains. The total WTP supply capacity in the main system is greater than estimated peak daily demands through 2045. The District's 2024 Water and Recycled Water Master Plan documents EID's existing potable and recycled water systems and outlines a planning framework for operating and maintaining the systems through 2045. The purpose of the Master Plan is to identify system deficiencies and recommend improvements to serve existing customers and continued additional connections from approved new development, along with planning level cost estimates. Implicit in this purpose is to ensure compliance with California Fire Code and local fire agency standards. The Master Plan Ch. 8, Section: 8.2 "Summary of Water and Recycled Water System Capital Improvements" (Page: 8-4 to 8-17) summarizes costs for improvements (Table 8.4, 8-5) and focuses on transmission,

storage, and supply reliability through 2045.



Source: AECOM 2023

Exhibit 3.1-5 Critical Facilities in Very High Fire Hazard Severity Zones

If a wildland fire were to ignite within the State Responsibility Areas lands surrounding the City of Placerville, CAL FIRE would have the primary fire-fighting responsibility. In the case of any fires within the City of Placerville, the El Dorado County Fire Protection District would have the primary fire-fighting responsibility. If a fire within the City were to grow beyond the ability of the County Fire Protection District to contain it, the County Fire Protection District has the ability to reach out to CAL FIRE (and other firefighting agencies) to provide additional firefighting services.

CAL FIRE is divided into two regions and 21 operational units. The Amador–El Dorado Unit (AEU) includes the counties of Amador, El Dorado, Alpine, Sacramento, and portions of San Joaquin County. CAL FIRE and the Eldorado National Forest operate a joint agency command center located at the AEU's Headquarters in Camino, which dispatches to all CAL FIRE, Eldorado National Forest, and Tahoe Management Unit emergency incidents. Additional CAL FIRE stations are located in El Dorado, Garden Valley, and Pilot Hill.

Eldorado National Forest lands are present to the north (Georgetown Ranger District) and the east and southeast (Placerville Ranger District) of Placerville. The Placerville Ranger District has two fire engines based in Sly Park, and the Eldorado Interagency Hotshot Crew is also based in Sly Park. The Eldorado National Forest also has a Sikorsky UH-60 Blackhawk helicopter, based at the Placerville Airport, which will be used for water drops. The helicopter will be available on an on-call basis to support firefighting efforts throughout the west. If necessary, Eldorado National Forest engines and crews could be activated to provide support to wildland fires in and around the city.

A wildfire air attack base is located at the Nevada County Airport in Grass Valley. Operations at this airport provide initial air attack and longer-term support of wildland firefighting operations for both CAL FIRE and USFS aircraft in the region, including the Placerville area. Larger air tankers for both CAL FIRE and the USFS are based at McClellan Airport in Sacramento, and at the Redding Municipal Airport in Redding. Air tankers at either of these locations could be activated to provide support for fires in or near Placerville, if needed.

3.1.6 Fire Protection Goals and Policies

Goal 3.1: Minimize the risk of loss of life, injury, and property damage due to wildland and urban fires.

> **Policy 3.1-1:** All new developments shall comply with the **California Wildland-Urban Interface Code (Title 24, Part 7)** for ignition-resistant construction, fire protection plans, and operational safety. This includes adherence to Chapter 5 for building materials, Chapter 4 for fire protection planning, and Chapter 6 for vegetation management and defensible space. Projects shall further comply with **Public Resources Code Section 4291**, and the consolidated **SRA Fire Safe Regulations** as integrated into the California Code of Regulations, along with all other applicable state and local regulations to minimize wildfire risk. In State Responsibility Areas (SRAs) or Fire Hazard Severity Zones (FHSZs) including Very High, High, and Moderate zones, new developments shall meet or exceed standards for road access, water supply, defensible space, and fuel modification. Compliance shall be verified through fire protection plans, inspections, or other mechanisms as required by the City of Placerville, El Dorado County Fire Protection District, or the Office of the State Fire Marshal.

- **Policy 3.1-2:** All development in the City shall comply with the requirements set forth in the Placerville Hazardous Vegetation and Combustible Materials Abatement Ordinance. The link to the ordinance can be found here: Municipal Code Title 7, Chapter 16

- **Policy 3.1-3**: New developments with private roads shall establish a road maintenance agreement including HOA funding to ensure regular vegetation clearance and defensible space maintenance, compliant with Placerville's Hazardous Vegetation Ordinance (Municipal Code Title 7, Chapter 16), subject to annual verification by the City or the El Dorado County Fire Protection District.

- **Policy 3.1-4:** The City will maintain street standards that comply with the California Code of Regulations (CCR) Title 14, Division 1.5, Chapter 7, Subchapter 2, Articles 1-5 (Fire Safe Regulations), ensuring adequate width, turning radius, and grade to facilitate access by firefighting apparatus. All plans for new streets shall be reviewed by the El Dorado County Fire Protection District to verify compliance with CCR Title 14 and ensure that appropriate standards are met.

- **Policy 3.1-5:** All new developments shall be required to meet the minimum fire flow rates and other standards specified by the City's Municipal Code.

- **Policy 3.1-6:** All new public and private streets shall be designed in accordance with California Code of Regulations (CCR) Title 14 and applicable local standards.

- **Policy 3.1-7:** The City shall require that all new commercial and industrial structures, and the primary dwelling unit(s) on parcels zoned for residential development, are located within 150 feet of vehicle access that is useable by fire trucks.

- **Policy 3.1-9:** The City will require that numbering for proposed structures, residences, and businesses is clearly visible from the adjacent street.

- **Policy 3.1-10:** The City will cause the remove obstructions obscuring street signs and house numbers. Commercial structures with rear street access shall be identified with the business name and street address in a clear and conspicuous manner on the rear of the building.

- **Policy 3.1-11:** The City shall prioritize the siting of new essential public facilities, such as fire stations, police stations, emergency command centers, hospitals, and critical infrastructure outside of Very High Fire Hazard Severity Zones (VHFHSZ) when feasible.

- **Policy 3.1-12:** In accordance with CA Govt Code § 51179, the City shall adopt and use the "most current" FHSZ maps in its jurisdiction within 120 days of receiving recommendations from the State Fire Marshal.

- **Policy 3.1-13:** The City shall identify existing developments that do not meet contemporary fire-safe standards for road access (e.g., minimum width, turning radius, or secondary egress), defensible space requirements, or structure (home) hardening standards. The City shall consider developing a prioritized retrofit program to bring these developments into compliance, including timelines, funding strategies, and incentives for property owners to implement road improvements,

vegetation management, and home hardening measures (such as ember-resistant vents, ignition-resistant roofing and siding, dual-pane tempered windows, and other exterior hardening features consistent with the California Wildland-Urban Interface Code).

- **Policy 3.1-14:** The City of Placerville will evaluate redevelopment plans following a large fire or natural disaster to ensure that fire hazard mitigation strategies, such as enhanced defensible space, fire-resistant building materials, and improved access for emergency services, are incorporated into the design and construction of new or rebuilt structures. The city will coordinate with the El Dorado County Fire Protection District, CAL FIRE, and other relevant agencies to assess damage, identify vulnerabilities, and implement updated fire safety standards in redevelopment projects to enhance community resilience.

- **Policy 3.1-15:** All new development within the Very High Fire Hazard Severity Zone (VHFHSZ) shall prepare and implement a site-specific Fire Protection Plan (FPP), approved by the City and Fire District, to minimize wildfire risks and enhance community safety. The FPP shall include the following components: (1) a comprehensive risk analysis identifying site-specific hazards and vulnerabilities; (2) an assessment of fire response capabilities, including access for emergency services and water supply; (3) fire safety requirements addressing defensible space, infrastructure resilience, and building ignition resistance; (4) mitigation measures and design considerations for non-conforming fuel modification to reduce fuel loads; (5) provisions for wildfire education, ongoing maintenance responsibilities, and operational limitations; and (6) detailed evacuation planning, including routes, shelters, and communication strategies.

- **Policy 3.1-16**: The City shall seek to avoid or minimize the approval of new residential subdivisions within Very High Fire Hazard Severity Zones (VHFHSZ) to the extent feasible and consistent with the City's Housing Element and State housing mandates, e.g., SB 330. In instances where residential development is proposed within a VHFHSZ, the City shall require a project-specific finding that the development's design, including robust ingress and egress, enhanced defensible space, and ignition-resistant construction, mitigates wildfire risk to a level that ensures the safety and viability of the site and its evacuation routes.

IMPLEMENTATION PROGRAMS

1. **Implementation Program 3.1-1:** The city will continue to require compliance with the California Fire Code for all new development. Compliance shall be verified through plan review and inspections by the City or the El Dorado County Fire Protection District. The city will periodically communicate with the El Dorado County Fire Protection District to ensure that the District is maintaining a regular program of fire inspection for commercial and industrial buildings.

2. **Implementation Program 3.1-2**: Conduct City led proactive public outreach, including at-risk populations, to: (a) encourage public participation in the Rave Mobility Safety emergency alert system and Smart911 app and (b) conduct public outreach to familiarize residents with Placerville's Defensible Space Guidelines. (c) Promote El Dorado County Fire Safe Council Programs to the public: (d) Promote home hardening best practices and available retrofit resources for existing residences in High

and Very High Fire Hazard Severity Zones.

- The Chipping Program
- The Defensible Space Program
- The Hazardous Tree Removal Program
- The Home Assessment Program
- Fire Safe Sponsored Public Education Programs

3. **Implementation Program 3.1-3:** Support Fire Safe Councils and community groups, including the Eldorado County and Placerville Fire Safe Councils. The City will work with these Councils and the El Dorado County Office of Wildfire Preparedness and Resilience to maintain fire hazard reduction projects, such as community fuel breaks and road clearance. The City along with other County-wide community partners will strive to accomplish this through the implementation of the Western El Dorado County Community Wildfire Protection Plan,(CWPP) including Recommended Actions CW-8, CW-10 CW-13, CW-15, CW-17, and CW-17, CW-28 found on CCWP pages 181 – 184, 190. The City will also collaborate closely with fire protection agencies, including the El Dorado County Fire Protection District and CAL FIRE.

4. **Implementation Program 3.1-4:** Consistent with the recommendations (Section 5.0 “Recommendations” p.40) of the Greater Placerville Wildfire Evacuation Preparedness Study which can be found at this link: WEPS, the city shall, contingent upon staffing and funding availability, conduct an inventory of existing developments with substandard roads (e.g., less than 28 feet wide, lacking secondary egress, or with inadequate turning radii) that do not meet contemporary fire-safe standards. The city should prioritize upgrades to these roads, particularly in high or very high Fire Hazard Severity Zones, and continue to seek funding through grants, impact fees, or partnerships with the El Dorado County Fire Protection District and Placerville Fire Safe Council to implement improvements that enhance emergency access and evacuation.

5. **Implementation Program 3.1-5:** The City shall continue to implement a mandatory defensible space and home hardening retrofit program for existing developments in high or very high Fire Hazard Severity Zones (FHSZs) (as identified by the State Fire Marshal) that do not comply with contemporary defensible space or structure hardening standards. The program shall include: (1) inspections by City Code enforcement and the El Dorado County Fire Protection District to identify non-compliant properties; (2) a phased compliance schedule with deadlines for property owners; (3) financial assistance programs or incentive programs (e.g., grants or tax rebates) to support vegetation management and home hardening measures (including ember-resistant vents, ignition-resistant roofing and siding, and related exterior hardening features); and (4) enforcement through the Hazardous Vegetation and Combustible Materials Abatement Ordinance (Municipal Code Title 7, Chapter 16) and applicable building and fire code provisions.FHSZfinancial assistance

6. **Implementation Program 3.1-6:** The City of Placerville will establish a process to evaluate redevelopment after a large fire or natural disaster, ensuring fire hazard mitigation. This includes:

    - Assessing damage and vulnerabilities with the El Dorado County Fire

Protection District and CAL FIRE.

- Requiring redevelopment plans to include fire-resistant materials, defensible space, and compliance with the California Fire Code.
- Engaging stakeholders to align with the Community Wildfire Protection Plan.
- Seeking state and federal funding for fire mitigation in redevelopment.
- Reviewing Fire Protection Plans to ensure compliance.
  This process will begin within one year of a declared fire-related disaster.

3.2 Flooding

3.2.1 Flood Zones, Localized Flooding, Drainage, and Regulations

Flood Zones

Flooding affects parts of the city during winter rainstorms. The primary areas that are susceptible to flooding are along Hangtown Creek, which flows through the city from Smith Flat in the east, westward along Main Street and then Placerville Drive, continuing north of Placerville Drive, and then west across Mallard Lane north of Davis Court. In addition, flood hazards are also present along Cedar Ravine (which flows north into Hangtown Creek), and along an unnamed tributary to Hangtown Creek that flows south along Mosquito Road. Finally, another small flood hazard zone is present just north of Airport Road along a drainage that flows west into Hangtown Creek. These areas all include 100-year flood zones. In addition, a few areas classified as 500-year flood zones are present.[6]

There is also one area where an "Awareness Floodplain" has been mapped by the California Department of Water Resources (DWR) in Placerville, in the northwestern part of the city, west of Mallard Lane along Hangtown Creek. DWR's Awareness Floodplain Maps are prepared using approximate assessment procedures; they show potential flood risk areas (without flood depths) that have not been mapped by FEMA.

Exhibits 3.2-1a and 3.2-1b show the locations within the western and eastern portions of the city, respectively, that are subject to flood hazards.

Localized flooding is known to occur in the city, particularly along Hangtown Creek where there is existing development along the City's historic main street that is within the 100-year floodplain.

A review of data available from the DWR Division of Safety of Dams indicates the city is not subject to flooding from potential failure of any dams in the region.[7]

National Flood Insurance Program

The City of Placerville participates in the National Flood Insurance Program (NFIP), which is managed by FEMA. The NFIP provides federally backed flood insurance to homeowners and businesses. FEMA has minimum floodplain management standards

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[6] A 100-year flood hazard zone includes inundation areas based on a flood that has a 1 in 100 (1 percent) chance of occurring in any given year. A 500-year flood hazard zone is based on a flood that has a 0.2 percent change of occurring in any given year. Flood hazard zones are defined and mapped by the Federal Emergency Management Agency (FEMA).

[7] Seiches are earthquake-generated waves within enclosed or restricted bodies of water. However, because no sizable lakes or reservoirs are present in the City, and the location of highest probability of impact within El Dorado County are shore areas of Lake Tahoe over 45 miles away, there are no seiche hazards. A tsunami is a series of waves in a water body resulting from the displacement of a large volume of water. Tsunamis are generally caused by earthquakes or undersea volcanic eruptions. Because the City is more than 100 miles from the Pacific Ocean, tsunamis do not represent a hazard.

for communities, with which the City must comply, in order to participate in the NFIP. FEMA has adopted Flood Insurance Rate Maps (FIRMs) showing the location of mapped flood hazard zones.

Stormwater Management

Placerville maintains a stormwater drainage system, which discharges primarily into Hangtown Creek (a tributary of Weber Creek and the South Fork American River). Stormwater runoff from properties that are not connected to the City's stormwater drainage system discharges via overland flow from areas of higher elevation to areas of lower elevation into local creeks and streams. Storm drain inlets can become clogged with leaves and other debris in the fall, resulting in localized flooding. The City Public Works Division maintains the storm drainage system, including debris removal from the inlets to reduce localized, seasonal flooding.

Flood Damage Protection Ordinance

The City's Flood Damage Protection Ordinance (Placerville Municipal Code Title 4, Chapter 9) was adopted in 2008 to comply with FEMA requirements. The ordinance is intended to minimize flood losses by including specific methods and provisions for:

1. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities.

2. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.

3. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters.

4. Controlling filling, grading, dredging, and other development which may increase flood damage; and

5. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters, or which may increase flood hazards in other areas.

3.2.2 Flood Damage Prevention Goals and Policies

Goal 3.2: Minimize the potential for loss of life, injury, and property damage due to flooding.

- **Policy 3.2-1:** The City will continue to participate in the National Flood Insurance Program and maintain local regulations that comply with applicable Federal Emergency Management Agency standards.
- **Policy 3.2-2:** New residential development shall be constructed so that the lowest floor is at least one foot above the 100-year flood level. **Policy 3.2-3:** New non-residential development shall be anchored and flood-proofed to prevent damage from a 100-year flood, or alternatively, elevated to at least one foot above the 100-year flood level.

- **Policy 3.2-4:** The City will require a floodplain hydraulic study for all new

development (including public facilities such as bridges) within any 100-year flood zone to demonstrate through hydraulic modeling that the proposed development will not increase the base flood elevations by more than one foot of depth, and will not result in any increase in downstream flood flows or flood depths.

- **Policy 3.2-5:** Existing development shall comply with Policies 3.2-2 and 3.2-3 when improvements are made, which cost at least 50 percent of the current market value of the structure before the improvements.

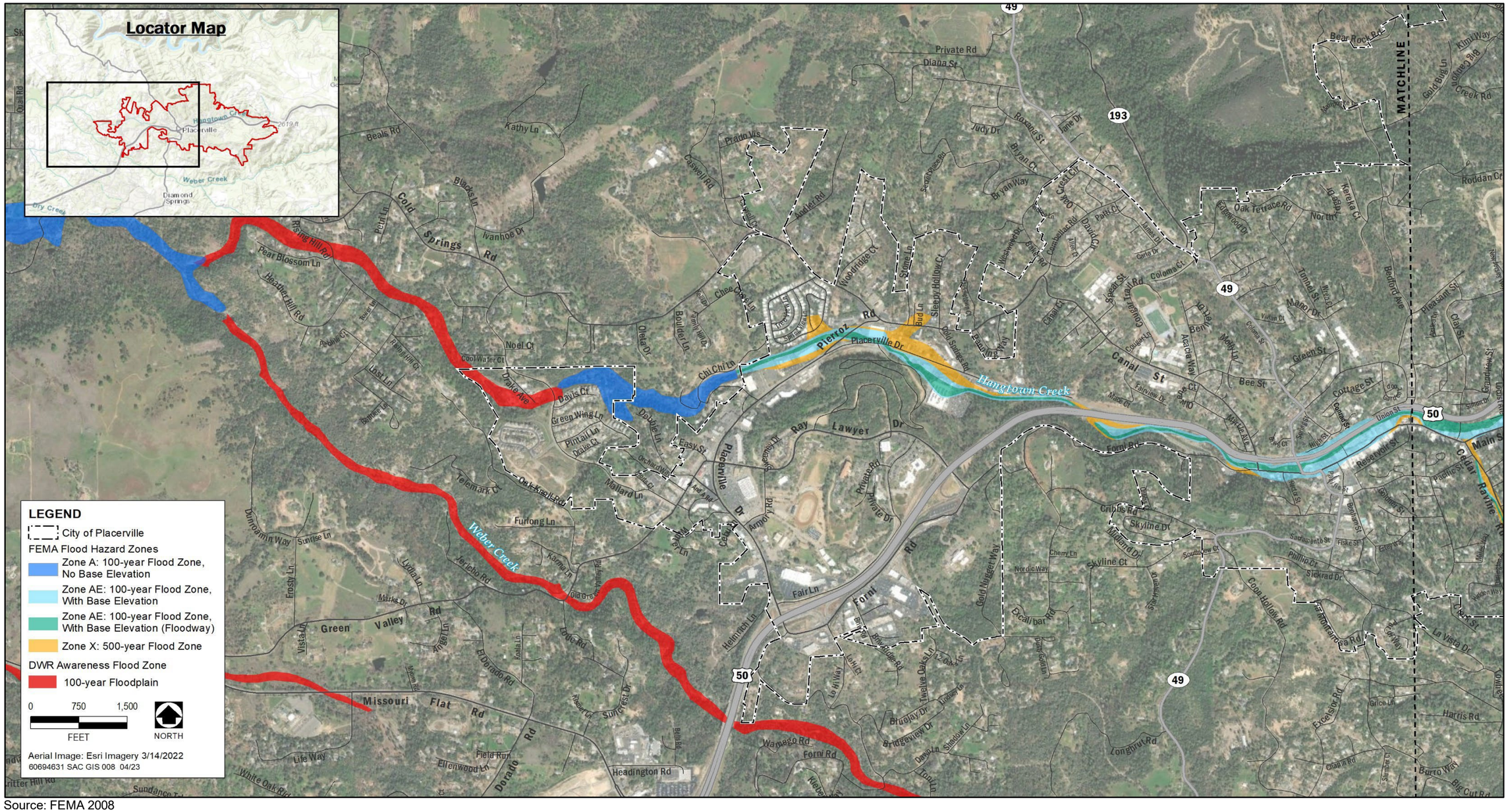
- **Policy 3.2-8:** All new developments shall be connected to the City's storm drainage system, where feasible. If such connection is not feasible, all new developments shall demonstrate to the satisfaction of the City through the planning and permitting process that operational stormwater runoff would be appropriately retained or detained on-site so as to prevent on-site and off-site flooding, and that appropriate stormwater quality pre-treatment measures would be implemented.

IMPLEMENTATION PROGRAMS

1. **Implementation Program 3.2-1:** The City will arrange staffing and funding to provide for necessary channel improvements to, and tree and brush clearance along watercourses in Placerville to reduce flooding.

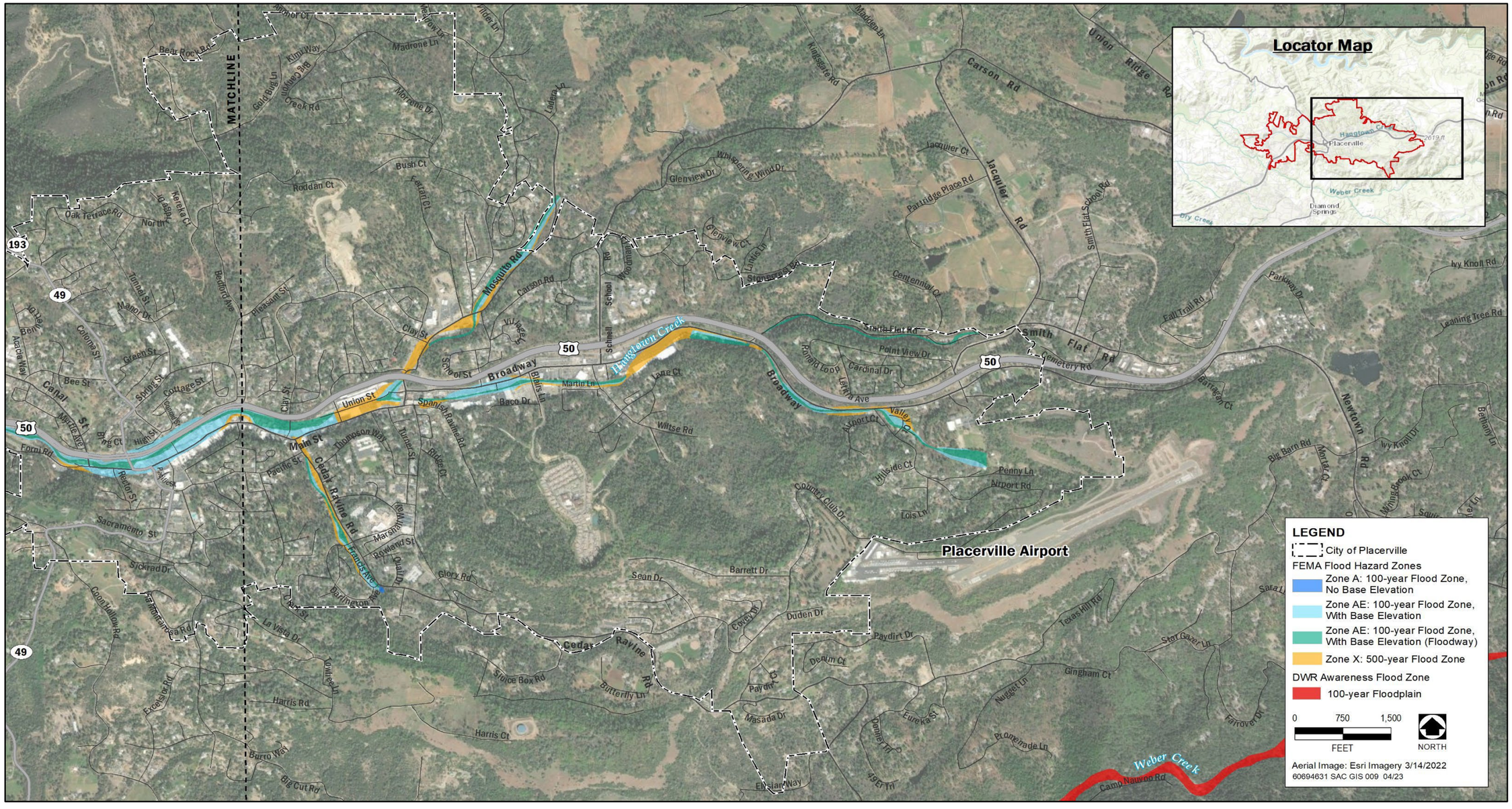
2. **Implementation Program 3.2-2:** The City will seek funding to develop a storm drain system map that shows the location of all drainage inlets, conveyance facilities (e.g. pipes and open channels or ditches), and outfalls and the waters of the United States that receive discharges from those outfalls.

3. **Implementation Program 3.2-3:** As funding is available, the City should develop and implement a program that will lead to the detection and elimination of illicit non-storm water discharges to the City's storm drainage system.



Source: FEMA 2008

Exhibit 3.2-1a Floodplain Mapping, Western Placerville



Source: FEMA 2008

Exhibit 3.2-1b Floodplain Mapping, Eastern Placerville

3.3 Evacuation Routes and Emergency Response

3.3.1 Evacuation Routes

Government Code Section 65302(g)(5) (SB 99) requires the identification of residential developments in any identified hazard area that do not have at least two emergency evacuation routes.

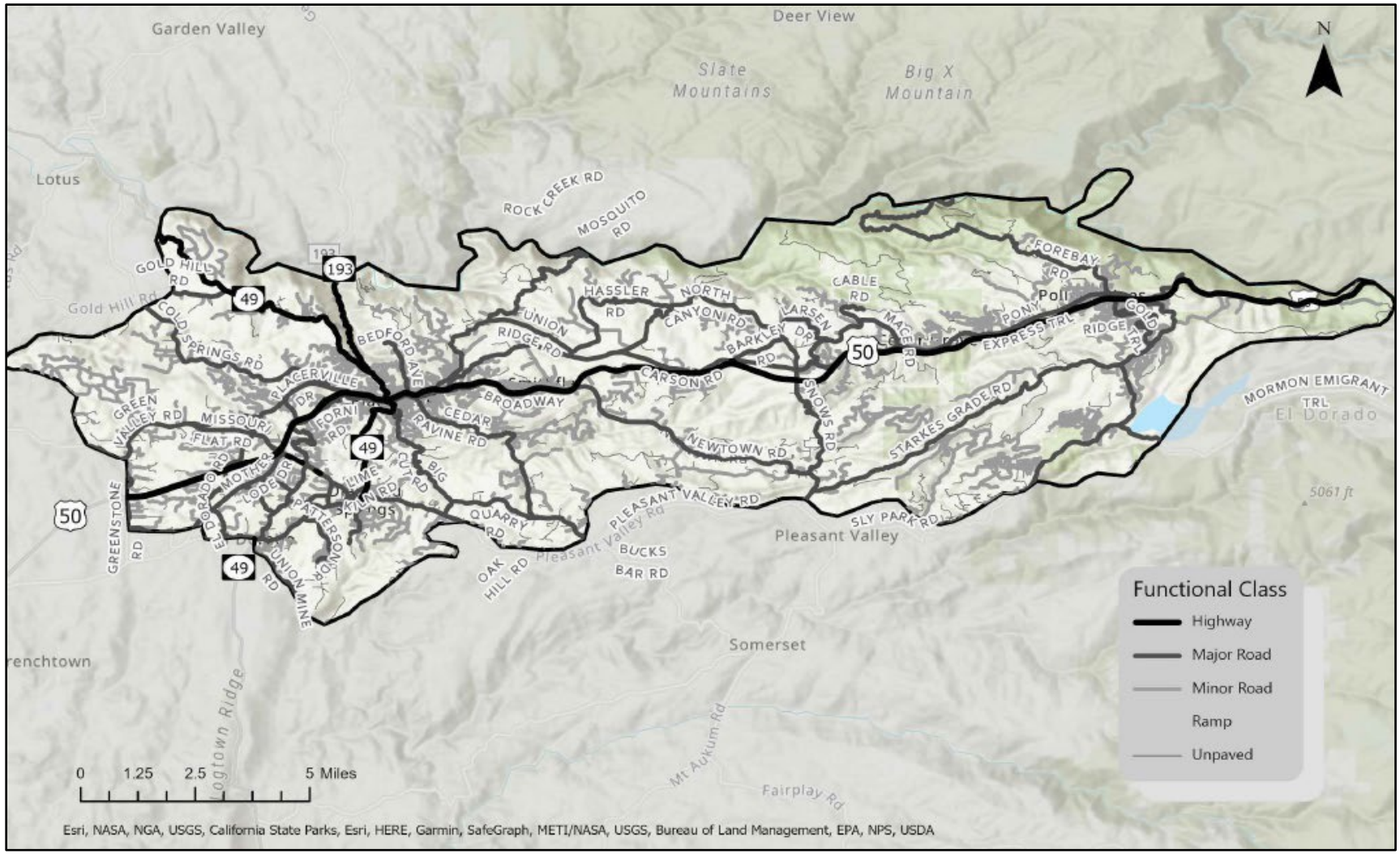
There are several residences at the following locations that are within FEMA 100-year flood hazard zones; however, all of these residences have at least two evacuation routes:

- Southern end of Coloma Street;
- Cedar Ravine;
- Mosquito Road near Hocking Street;
- Airport Road; and
- Smith Flat Road.

As shown in Exhibit 3.3-1, Approximately half of the city of Placerville is within a Very High Fire Hazard Severity Zone for wildland fire. There are dead-end streets in Placerville that provide access to residences, but these streets serve individual residential parcels, not subdivisions. As discussed previously, all new residential subdivisions in Placerville are required to have at least two points of ingress and egress. Also, the length of dead-end streets is controlled by the size of the parcels served; regardless of the number of parcels served, residential dead-end streets may not exceed one mile in length (for 20-acre parcels or larger) (El Dorado County Regional Fire Protection Standard, Emergency Access Apparatus Ways). Minimum street widths are controlled by the City's Street Standards, which are provided in the Land Use and Circulation Element of the City General Plan, and street standards for subdivisions are set forth in Placerville Municipal Code Title 10, Chapter 7.

Government Code Section 65302.15 (AB 747, Levine, 2019) requires the General Plan Safety Element to identify evacuation routes and "their capacity, safety, and viability under a range of emergency scenarios." The El Dorado County Transportation Commission's June, 2024 *Greater Placerville Wildfire Evacuation Preparedness, community Safety & Resilience Study, "Final Report"* is intended to identify vulnerabilities in the transportation, communication, and water networks that could lead to catastrophic failure during a wildfire and identify the infrastructure improvements necessary to make those networks more resilient. A copy of the **Wildfire Evacuation Preparedness Study** can be found at this link: WEPS. Due to the unpredictable nature of fire behavior and the almost limitless number of potential ignition spots, the Plan is not intended to identify specific evacuation routes but instead will recommend ongoing campaigns to increase public awareness of potential evacuation routes.

The primary evacuation route for Placerville residents and **businesses is U.S. Highway 50**, a four-lane highway bisecting the city in an east–west direction. State Route 49, a two-lane roadway bisecting the city north–south, also serves as a key evacuation corridor. Various local roadways, shown in **Exhibit 3.3-1**, provide additional North-South and East-West connectivity depending on the emergency's location. Consistent with **Government Code § 65302.15**, the City satisfies the required analysis of evacuation route capacity, safety, and viability through the **2024 WEPS study**, which provides dynamic modeling for the dominant wildfire hazard (50% of the City is in a Very High FHSZ). For lower-probability hazards—such as localized flooding or low-risk seismic events—the **2024 El Dorado County MJHMP** and **Annex "A" for Placerville** provide the risk-based framework required by OPR guidance. This proportionate approach ensures rigorous modeling for the most foreseeable threats while confirming that additional full-scale modeling for low-probability hazards is neither warranted nor required.



Source: El Dorado County Transportation Commission 2023

Exhibit 3.3-1 Placerville Roadways and Potential Evacuation Routes

3.3.2 Emergency Response Services and Coordination

The City of Placerville has partnered with the El Dorado County Office of Emergency Services (OES) for emergency response planning and activities within the City limits. The El Dorado County Sheriff's Office has the responsibility for managing the County's OES. Sheriff's Office employees assigned to the OES work in collaboration with fire services, Emergency Medical Services, hospitals, schools, and public and private agencies to implement preparedness programs, develop emergency response plans, and conduct training drills. Activation of the Emergency Operations Center facilitates the sharing of information and resources between the County, the Operational Area cities including Placerville, and other federal, State, and local agencies.

The El Dorado County Office of Emergency Services coordinates a comprehensive Multi-Jurisdictional Hazard Mitigation Plan to protect communities from wildfires, floods, and severe weather.

The City of Placerville has partnered with the El Dorado County OES and the Rave Mobile Safety emergency alert system (Smart911 app) emergency notification service to alert residents and businesses by telephone, cell phone, text message, email, and social media when there is a threat to the health or safety of residents. The Rave Mobile Safety emergency alert system (Smart911 app) provides emergency alert notifications in the event of evacuation orders and warnings from natural disasters discussed in this Safety Element, such as fires and flooding.

The City and the El Dorado County OES emphasize preparedness planning for all residents and businesses. Links to City and County preparedness planning resources are available on the City and County websites.

3.3.3 Evacuation and Emergency Response Goals and Policies

Goal 3.3-1: Provide for appropriate evacuation and emergency response in the event of potential natural or man-made disasters.

- **Policy 3.3-1**: The City will continue to encourage public participation in the Rave Mobile Safety emergency alert system (Smart911 app) and real time evacuation routes through Perimetermap.com.
- **Policy 3.3-2:** The City will coordinate with the County to conduct periodic emergency response exercises for training purposes.
- **Policy 3.3-3:** The City will keep the public informed in the event of a disaster, and cooperate with regional, state, and federal emergency service providers to coordinate emergency planning.
- **Policy 3.3-4:** The City of Placerville will work with EDCTC and El Dorado County OWPR to integrate access and functional needs (AFN) considerations into all wildfire evacuation and emergency response planning to ensure equitable, accessible, and timely evacuations for vulnerable residents, reducing disproportionate risks of injury, displacement, or fatalities during wildfire events. This includes prioritizing dynamic routing, multilingual communications, and transportation support tailored to Placerville's VHFHSZ-constrained topography and limited egress points.

- **Policy 3.3-5:** On-street parking shall not be allowed on streets less than 28 feet in width, measured curb to curb.
- **Policy 3.3-6:** The City shall ensure that all new roads and streets approved and constructed comply with the emergency access and evacuation standards set forth in CCR Title 14, including adequate width, turning radius, and grade to facilitate safe and efficient emergency evacuation.
- **Policy 3.3-7:** The City will not approve any multi-family residential developments unless they are served by a street system with at least two streets capable of carrying peak load traffic.
- **Policy 3.3-8:** All new streets that provide access to more than 10 parcels shall be designed with at least two means of egress.
- **Policy 3.3-9:** For all new residential developments of five or more parcels or dwellings, a traffic study shall be required that includes a discussion and analysis of the project's impact on evacuation routes and emergency access, ensuring that additional traffic does not exacerbate existing bottlenecks.
- **Policy 3.3-10:** New residential and commercial developments shall be required to contribute to infrastructure improvements (e.g., through impact fees) to mitigate their impact on evacuation routes.
- **Policy 3.3-11:** Consistent with the 2024 Greater Placerville Wildfire Evacuation Preparedness, community Safety & Resilience Study (WEPS), p. 56, the City should continue to work with the Eldorado County Transportation Commission (EDCTC) to identify potential funding sources for critical infrastructure improvements that would facilitate emergency evacuation.

Government Code Section 65302.15 requires the evaluation of evacuation route capacity, safety, and viability under a "range of emergency scenarios." The City recognizes catastrophic wildfire as the "bounding scenario," representing the absolute worst-case event for Placerville's transportation network. Because the *Greater Placerville Wildfire Evacuation Preparedness, Community Safety & Resilience Study (WEPS)* analyzes this maximum jurisdiction-wide stress, the network's evaluated capacity inherently encompasses the lesser traffic demands of localized, non-wildfire emergencies (such as isolated flooding or hazardous material incidents) that generally trigger limited evacuations or shelter-in-place orders. Per Policy 3.3-12, the City will continue monitoring the need for targeted non-wildfire analyses as conditions evolve.

- **Policy 3.3-12:** During the next update of the El Dorado County Multi-Jurisdictional Hazard Mitigation Plan, or sooner if new data or development warrants, the City shall evaluate the need for supplemental evacuation capacity, safety, and viability analyses for non-wildfire hazards (such as flooding or seismic events). If deemed necessary, the City shall conduct these analyses and incorporate the findings into this Safety Element.

3.4 Geologic, Seismic, and Soils Hazards

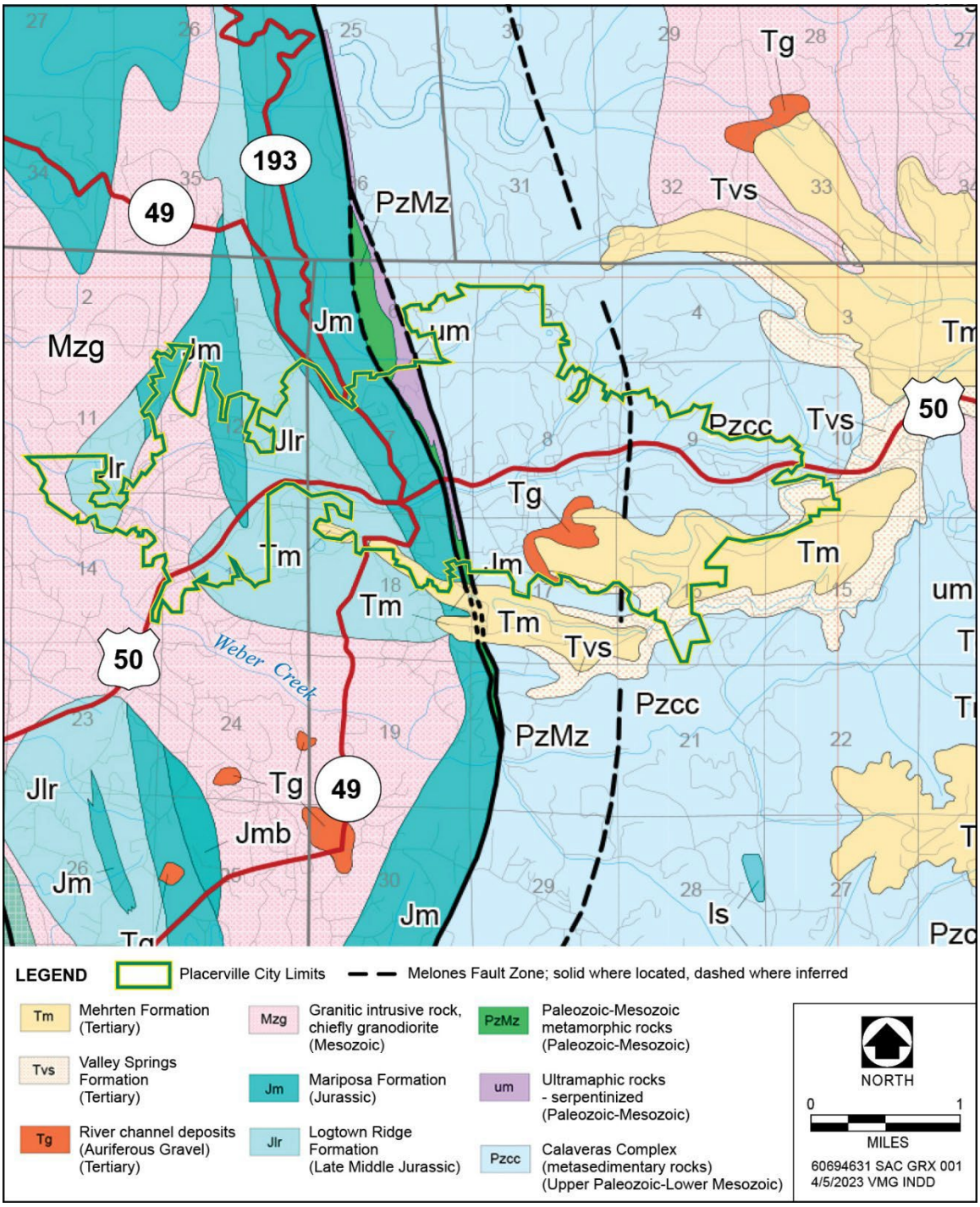
3.4.1 Geologic Background

Placerville is located in El Dorado County on the western side of the Sierra Nevada, in the Western Metamorphic Belt—a broad band of metamorphic rocks that lie on the west side of the Sierra Nevada and extend northwest for 200 miles through the central and northern Sierra. The mountains in the Western Metamorphic Belt formed as a result of collision between the North American continental plate and the Farallon oceanic plate, which eventually was crushed underneath the North American plate approximately 100 million years ago (in an area that geologists term a “subduction zone”). Rocks along the western margin of the North American plate consisted of basalt and granite, which were formed by magma underneath the earth’s surface and eventually cooled and solidified over millions of years. The eastern margin of the Farallon plate consisted of rocks that were deposited in an ocean environment, such as limestone, chert, and slate. Rocks in a subduction zone are subject to very high temperatures and pressures, which can result in metamorphosis—for example, a change from basalt to greenstone (in El Dorado County, greenstone is known to contain naturally occurring asbestos). When the North American and Farallon plates collided, a chain of volcanoes was created.

Over millions of years, there were alternating periods of volcanic activity, and volcanic dormancy. Eventually, the continual movement of the plates resulted in uplift of the existing rocks, thus forming the mountains that are visible today.

The Sierra Nevada generally consists of elongated north–south oriented valleys with parallel ridges. The Placerville City limits encompass several ridges and narrow ravines in the Sierra Nevada. As a result, elevations vary widely within the City limits but generally increase from west to east, ranging from approximately 1,600 feet above mean sea level (amsl) in the northwest to approximately 2,500 feet amsl in the southeast.

The rocks in the Western Metamorphic Belt reflect the diverse history of plate movements and volcanic eruptions. These rocks have been faulted, folded, metamorphosed, and then intruded by granite and other types of rocks that formed from underground magma. Rock formations that are exposed at the surface in and near the city are shown in Exhibit 3.4-1.



Source: Busch 2001

Exhibit 3.4-1. Placerville Geology

3.4.2 Seismic Hazards

Typical seismic hazards include surface rupture, ground shaking, and various types of ground failure (such as liquefaction, subsidence, and settlement). However, Placerville is not situated in a seismically active area, and therefore the potential for these hazards to occur in Placerville is low, as described below.

Geologists have determined that the greatest potential for surface fault rupture and strong seismic ground shaking is from "active faults"; that is, faults with evidence of activity during the Holocene epoch (i.e., the last 11,700 years). Faults classified as "potentially active" (where there is evidence that movement has occurred during the Quaternary period, which is currently defined as the last 2.6 million years), have a lower potential for surface fault rupture and strong seismic ground shaking.

The nearest active fault is the West Tahoe-Dollar Point Fault Zone, which traverses Echo Lake, Fallen Leaf Lake, and Lake Tahoe approximately 38 miles east of the city (Exhibit 3.4-2).[8]

A portion of the Bear Mountains Fault Zone approximately 4.5 miles west of the City has shown evidence of activity in the last 700,000 years, and therefore is considered potentially active (Exhibit 3.4-2). Two inactive traces of the Melones Fault, which is part of the Foothills Fault System, cross through the City in a north-south direction (see Exhibits 3.4-1 and 3.4-2). Because the Melones Fault has not exhibited evidence of activity within the last 2.6 million years, an earthquake along this fault is unlikely and the risk of surface fault rupture is very low.

For purposes of geotechnical reports and compliance with the California Building Standards Code (CBC), scientists use computer models to project the anticipated amount of ground shaking from an earthquake. Considering the distance of the City from the nearest active faults, the California Geological Survey has classified the City in the lowest potential seismic shaking hazard category (Branum et al. 2016). Furthermore, the potential for structural damage from seismic hazards is minimized for all types of new development, which must be constructed in accordance with applicable CBC requirements. Older masonry and brick structures that were constructed before building codes were in effect have the highest risk of structural damage during an earthquake.

Liquefaction occurs when loose, water-saturated sediments lose strength and fail during strong seismic ground shaking. Damaging soil settlement and subsidence can occur during earthquakes even without the presence of liquefaction. However, because the City is composed of solid bedrock with outcrops of the very hard and stable Mehrten Formation and given that the potential for strong seismic ground shaking is low, liquefaction, settlement, and subsidence do not represent hazards in the city.

[8] California's Alquist-Priolo Earthquake Fault Zoning Act is intended to reduce the hazard of surface faulting by preventing the construction of structures intended for human occupancy across the trace of active faults. The nearest fault delineated under the Alquist-Priolo Earthquake Fault Zoning Act is the southern end of the West Tahoe-Dollar Point Fault Zone.

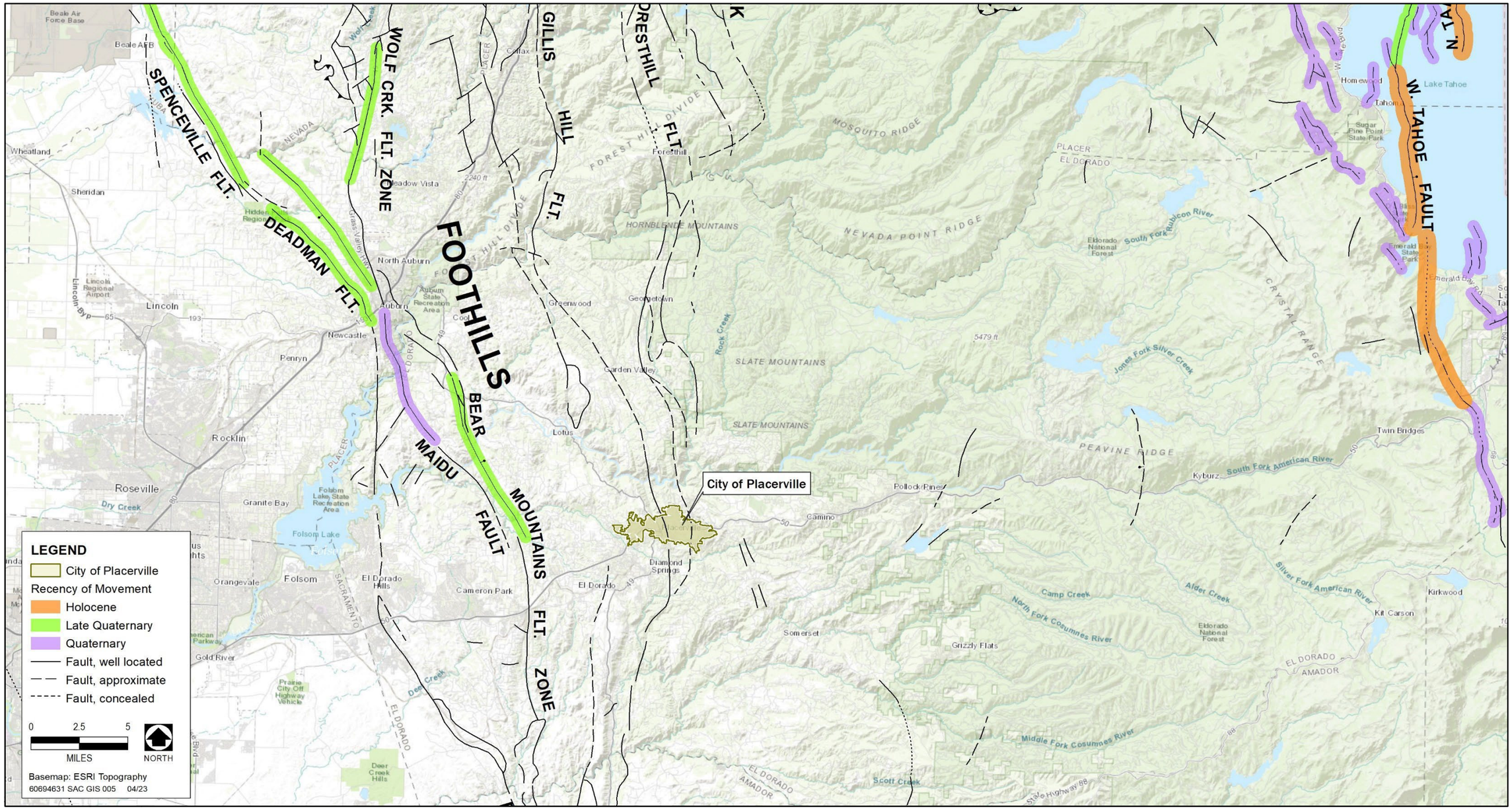


Exhibit 3.4-2. Regional Faults

3.4.3 Landslides

Areas of steep slopes with unstable soil or weakly cemented rock can result in landslide hazards when exposed to excessive winter rainfall, or excessive grading at the top or bottom of the slopes. Areas with steep slopes that have been affected by wildfires may also experience landslides, mudflows, or debris flows due to vegetation removal, and because fire causes the soil to become less absorbent resulting in increased stormwater runoff. Strong seismic ground shaking from earthquakes can also cause landslides.

Bedrock geology, particularly the contact area between different geologic units (as well as along earthquake fault zones) can be a factor in landslides where the rocks in the contact area become sheared and deeply weathered, creating areas of instability. This latter type of landsliding has been well documented along the U.S. Highway 50 corridor east of the city (from Riverton to Strawberry), where slopes range from 40 to 70 percent in rocks associated primarily with the Shoo Fly Complex. Many landslides along the U.S. Highway 50 corridor move slowly, traveling perhaps only a few inches over many days. Occasionally, however, a landslide will move rapidly, traveling hundreds of feet in a matter of minutes, as did the Mill Creek landslide in January 1997.

There are areas of steep slopes in the city; slopes of 30 percent or more are shown on Exhibit 3.4-3. There are areas of contact between different rock units in the city along with two fault traces associated with the inactive Melones Fault Zone (see Exhibit 3.5-1), although the rock units that underlie the city are not associated with the Shoo Fly Complex. There are no landslide hazard Zones of Required Investigation in the city that have been delineated by the California Geological Survey under the Seismic Hazards Mapping Act, nor are there any mapped landslide deposits depicted on geologic maps. No historic landslide areas are known within the city.

The Placerville Grading, Erosion, and Sediment Control Ordinance (Municipal Code Title 8, Chapter 7, Section 8-7-30) requires a soils or geologic report to be submitted to the Planning Division when proposed grading includes a cut or fill exceeding 10 feet in depth, and for roadways where the slope exceeds 30 percent.

3.4.4 Soil Properties and Limitations

Soil properties influence the development of building sites, including the engineering design, construction techniques, and site maintenance. The Natural Resources Conservation Service (NRCS) soil database provides an indication of the extent of various limitations of soils for different types of development.

Soil Erosion

Most soils can be categorized into hydrologic soil groups (which apply only to surface soil layers) based on runoff-producing characteristics. Hydrologic soil groups are factored into calculations of erosion and stormwater runoff potential when drainage plans are prepared for new development. Soils are assigned by NRCS to groups A, B, C, or D. Placerville soils are assigned to either Hydrologic Group C or D (NRCS 2022). Group C soils have slow infiltration rate and therefore have a high stormwater runoff potential, and Group D soils have a very slow water infiltration rate and a very high stormwater runoff potential. High to very high volumes and rates of stormwater runoff can result in soil erosion, particularly on steep slopes.

Soil erosion is addressed during the construction process through preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of site-specific Best Management Practices (BMPs) that are specifically designed to control stormwater runoff and reduce erosion. SWPPPs for projects in Placerville must be submitted to and approved by the Central Valley Regional Water Quality Control Board. A copy of the approved SWPPP must be provided to the City prior to the start of construction activities, for any project that would disturb one acre or more of land.

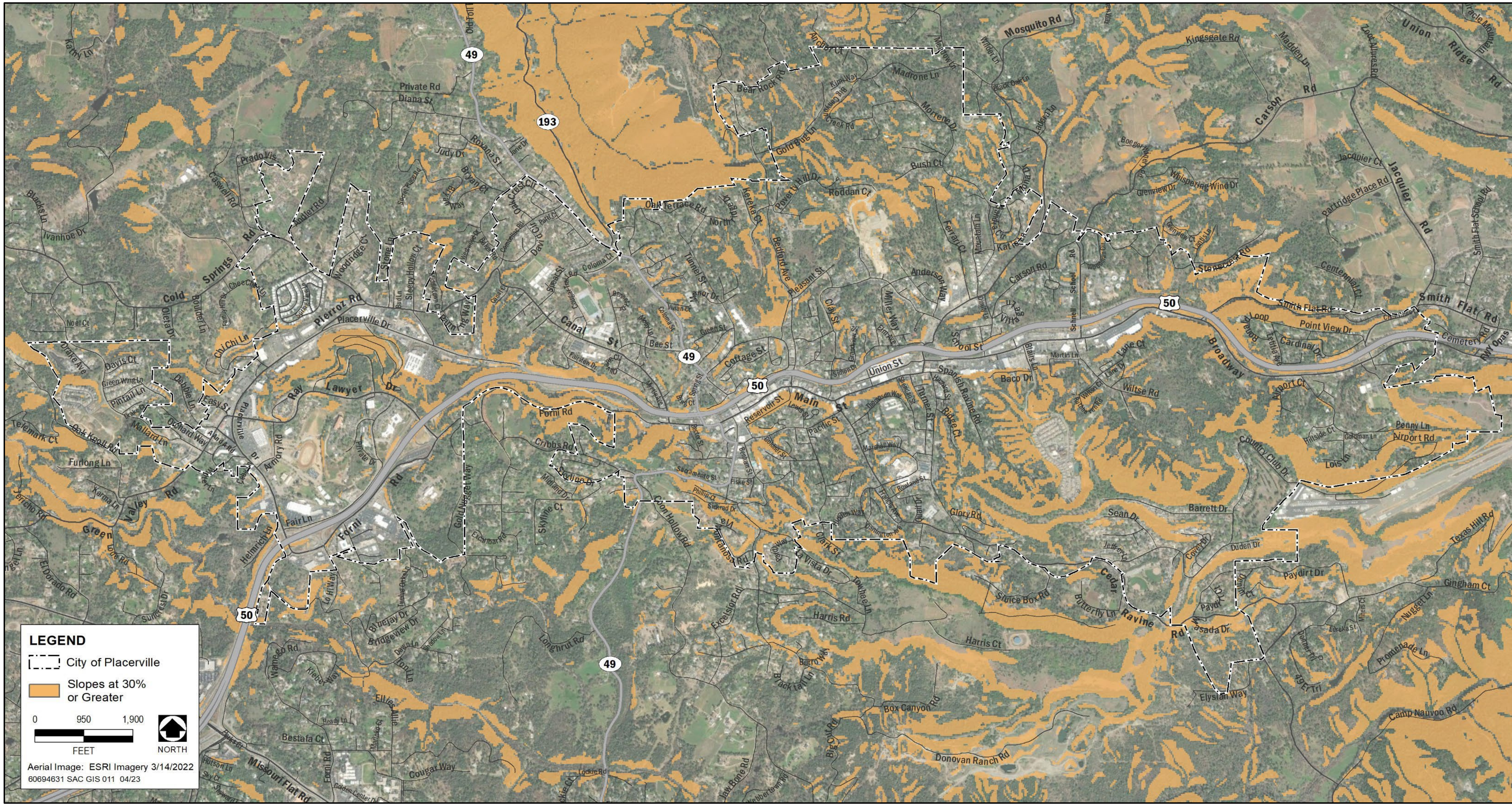
The Placerville Grading, Erosion, and Sediment Control Ordinance (Placerville Municipal Code Title 8, Chapter 7) regulates grading on private property to avoid pollution of watercourses with nutrients, sediments, or other earthen materials generated on or caused by surface runoff on or across the permit area. Grading plans that meet the requirements of Municipal Code Sections 8-7-22 and 8-7-23 must be submitted to the City for review and approval prior to issuance of a grading permit.

The Placerville Stormwater Quality Ordinance (Placerville Municipal Code Title 7, Chapter 15) requires the use and maintenance of BMPs to reduce pollutants in construction-related stormwater discharges to the maximum extent practicable and prohibits waste disposal in stormwater facilities and watercourses. The City may also require new and/or redevelopment projects to implement BMPs to control operational stormwater discharges to reduced pollutants, including sediment transport (Section 7-15-14[G]).

Expansive Soil

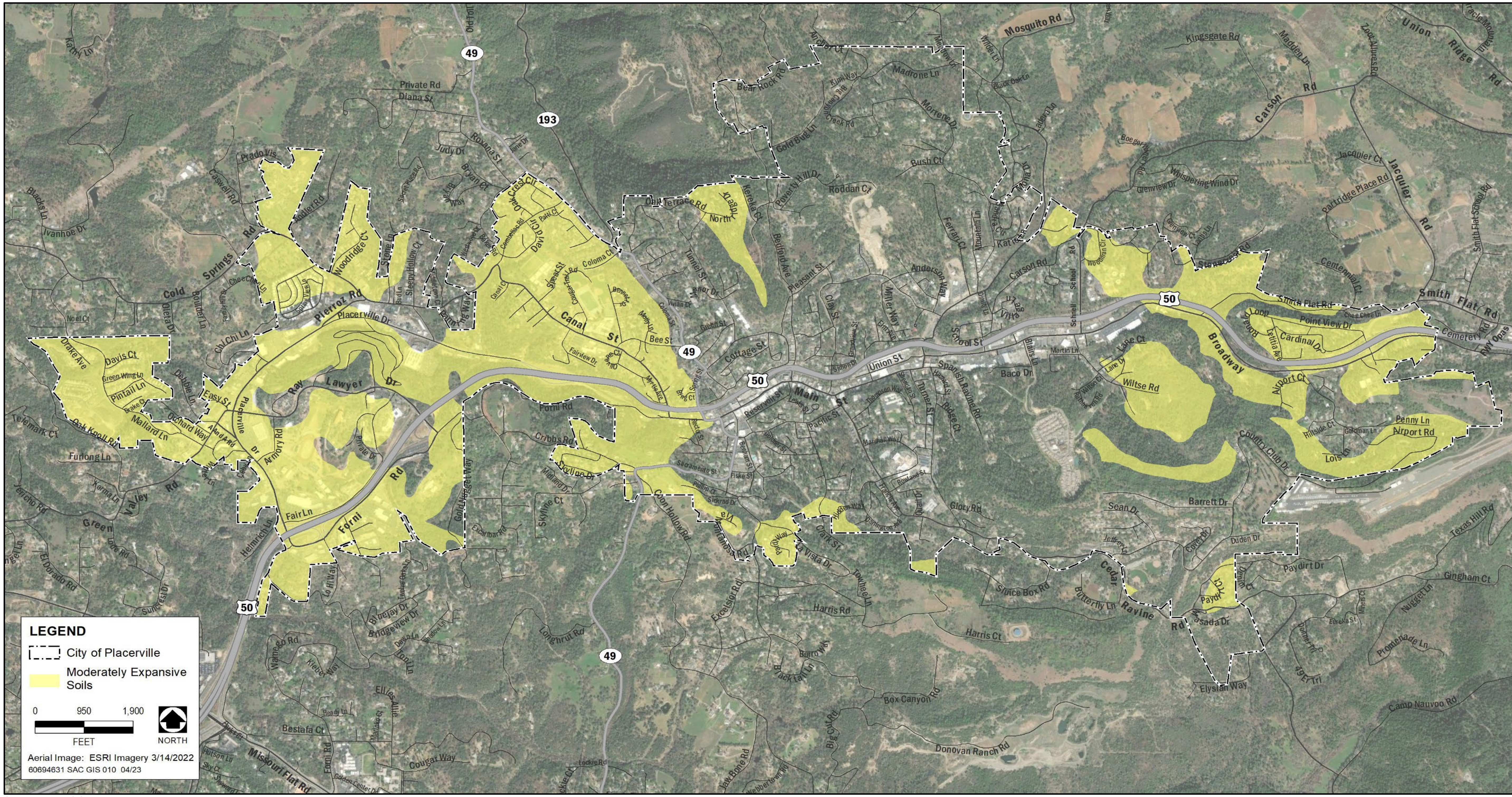
Expansive soils are composed largely of clays, which greatly increase in volume when saturated with water and shrink when dried (referred to as “shrink-swell” potential). Soils with a moderate to high expansion potential can result in cracked foundations, structural distortions, and warping of doors and windows. Underground pipelines can also be damaged. NRCS (2022) soil data indicates that approximately 60 percent of the soils in Placerville are not expansive, while the remaining 40 percent are moderately expansive. Moderately expansive soils in Placerville are shown on Exhibit 3.4-4.

Hazards from expansive soil can be reduced through engineering design and construction practices, such as soil treatment with lime, removal of expansive soil and replacement with engineered fill material, or buildings that employ a post-tensioned slab foundation as recommended by a geotechnical engineer following a site-specific investigation.



Source: NRCS 2022

Exhibit 3.4-3. Steep Slopes



Source: NRCS 2022

Exhibit 3.4-4. Moderately Expansive Soils

The Placerville Grading, Erosion, and Sediment Control Ordinance (Municipal Code Title 8, Chapter 7, Section 8-7-30) requires a soils or geologic report that includes site-specific soil borings to be submitted to the Planning Division when proposed grading would occur in areas of expansive soils.

Soil Suitability for Septic Systems

The City Public Works Division operates and maintains approximately 60 miles of sewer lines within the City limits. It is the customer's responsibility to maintain the sewer line from the sewer main to the house or business.

Placerville Municipal Code Title 7, Chapter 4, Section 7-4-22 requires all properties to be connected to the City sewer system, unless the terrain prohibits a connection. In that case, Section 7-4-22 requires a building site inspection and approval for a septic system by either the County or City health officer, and compliance with applicable County regulations regarding septic tanks.

Most soils in Placerville are rated by the NRCS as "very limited" for septic systems either due to steep slopes or due to a shallow depth to bedrock (i.e., not enough soil depth for microbial "treatment" to occur) (NRCS 2022). However, these limitations can be addressed by the use of various engineered systems that employ alternative treatment methods, such as larger shallower leach fields, mound systems that have an elevated drainfield, or the use of drip irrigation.

3.4.5 Naturally Occurring Asbestos

Naturally occurring asbestos (NOA), which was identified as a toxic air contaminant in 1986 by the California Air Resources Board, is located in many parts of California and is commonly associated with ultramafic rocks.[9] All types of asbestos are considered hazardous to human health. Ultramafic rocks, which have been partly to completely serpentinized, are mapped within the City limits (see Exhibit 3.4-1).

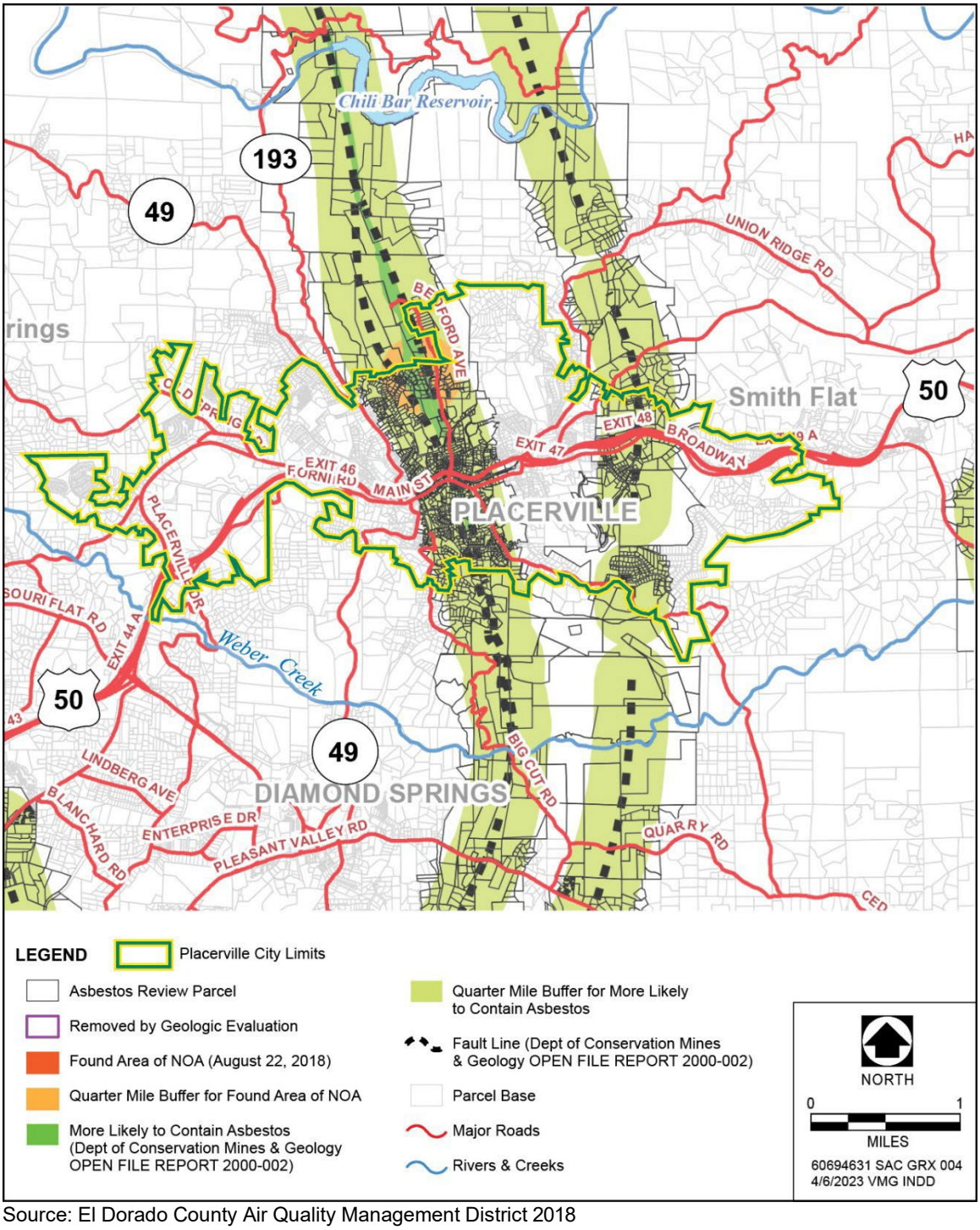
Exposure and disturbance of rock and soil (e.g., during earth-moving activities such as excavation and grading, and during operational activities such as continued driving on gravel roads or gardening in serpentine soil) that contain asbestos can result in the release of asbestos fibers to the air. Subsequent inhalation of these fibers can result in serious public health risks such as mesothelioma and lung cancer.

The El Dorado County Air Quality Management District has prepared a map entitled *Asbestos Review Areas—Western Slope, County of El Dorado*, which includes the City of Placerville (El Dorado County 2018) (Exhibit 3.4-5). The map identifies areas where NOA is more likely to be present in the Placerville area, and identifies at least one area of NOA that has been definitively located within the City limits (along Bedford Avenue) within the band of mapped ultramafic rocks. Although geologic conditions are more likely

[9] Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Ultramafic rocks form in high-temperature environments well below the surface of the earth. By the time they are exposed at the surface by geologic uplift and erosion, ultramafic rocks may be partially to completely altered into a type of metamorphic rock called serpentinite. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in the bodies of these serpentinized rocks or along their boundaries.

for asbestos formation in the areas identified on the map (based on California Geological Survey Open-File Report 2000-002 [Churchill et al. 2000]), the presence thereof is not certain. A site-specific geologic investigation must be performed to definitely determine whether NOA is present.

El Dorado County Air Quality Management District Rule 223-2 requires construction contractors to implement activities that will reduce asbestos dust created from earthmoving activities. An Asbestos Dust Mitigation Plan must be submitted for review and approval by the Air District when more than 20 cubic yards of earth will be moved at all properties within a designated “Asbestos Review Area” as shown on Exhibit 3.4-5.



Source: El Dorado County Air Quality Management District 2018

Exhibit 3.4-5. Areas More Likely to Contain Naturally Occurring Asbestos

3.4.5 Geologic and Seismic Hazards Goals and Policies

Goal 3.4: Reduce risk to people and property from geologic and seismic hazards.

- **Policy 3.4-1:** The City will require appropriate seismic safety upgrades to be implemented by property owners when modifications are proposed to structures such as unreinforced masonry buildings that may require seismic safety upgrades.

- **Policy 3.4-2:** The City will require that all buildings intended for human occupancy and all new public facilities (including water tanks, reservoirs, and bridges), are engineered to withstand seismic shaking and the effect of seismically-induced ground failure as required by the California Building Standards Code and local City standards, through the plan check and permitting process.

- **Policy 3.4-3:** The City will require the following information and plans to be submitted for all projects subject to discretionary review by the City in areas of slopes of 30 percent or greater and areas of potential soil expansion:

  - Engineering geologic report;
  - Soils and foundation engineering report;
  - Grading, erosion, and sediment control plan;
  - Plan review letter evidencing review of all proposed development by a qualified engineering geologist;
  - As-built construction report, including building plans, explanation and discussion of any deviations from the approved grading plan, the location and results of field tests, results of laboratory tests, and a statement that the work was performed under the supervision of and in accordance with recommendations of the engineering geologist and/or soils engineer; and
  - Signature of an engineering geologist certified by the State of California and/or a soils engineer registered in the State of California.

- **Policy 3.4-4:** The City will retain a qualified consulting geologist to review geological reports prepared in connection with new development projects.

- **Policy 3.4-5:** Construction site operators shall install and maintain adequate erosion and sediment controls to reduce pollutants in stormwater runoff.

- **Policy 3.4-6:** Applicants for development projects shall prepare construction plans and specifications with erosion, sedimentation, and construction material and waste controls that are adequate to reduce pollutants in stormwater runoff.

- **Policy 3.4-7:** Development projects that disturb one acre or more of land shall incorporate appropriate operational BMPs to control the volume, rate, and pollutant loading of stormwater runoff.

- **Policy 3.4-9:** Proposed development projects that generate wastewater shall connect to the City wastewater system, unless steep terrain would be prohibitive of such a connection.

- **Policy 3.4-10:** The treatment, development, operation, and maintenance of all on-site wastewater disposal systems will be required to comply with applicable County Environmental Health Division standards.

- **Policy 3.4-11:** In areas where naturally occurring asbestos may be present (shown on Exhibit 3.4-5), the City will require a site-specific geologic investigation when more than 20 cubic yards of earth will be moved with appropriate recommendations where necessary to reduce the spread of asbestos fibers.

- **Policy 3.4-12:** Project applicants shall provide the City Planning Department with a copy of the Asbestos Dust Mitigation Plan required by the El Dorado County Air Quality Management District when more than 20 cubic yards of earth will be moved at all properties within a designated "Asbestos Review Area" as shown on Exhibit 3.4-5.

IMPLEMENTATION PROGRAMS

- **Implementation Program 3.4-1:** The City will develop post-construction stormwater design standards that are suitable and effective for preventing post-construction storm runoff pollution, or require compliance with such standards developed by the County or developed for multi-agency use.

3.5 Climate Change

California Government Code Section 65302(g)(4) requires cities and counties to address the potential effects from climate change as part of the Safety Element of their respective general plans. Climate change is a shift in normal weather conditions over time. A growing body of scientific research has linked climate change to an increase in the concentration of greenhouse gas (GHG) emissions in the Earth's atmosphere. Some GHGs occur naturally and are responsible for the "greenhouse effect" that provides a habitable climate on Earth. However, a significant amount of GHGs are created through human activities and are resulting in atmospheric levels of GHGs in excess of natural conditions.[10]

The California Energy Commission and the University of California, Berkeley (2021) developed a climate change modeling tool called Cal-Adapt, as part of recommendations of the 2009 California Climate Adaptation Strategy. Cal-Adapt produces peer-reviewed, scientific climate projections for the entire state of California. The data is available to the public at https://cal-adapt.org/, and is continuously updated as the science of climate change evolves.

The Sacramento Area Council of Governments (SACOG), of which the City of Placerville is a member, has prepared several climate-related plans and analyses that apply to the region: *Climate Action Plan*, *Climate Change Vulnerability Assessment*, *Project-Level Adaption Strategies for Transportation*, and *Vulnerability and Critically Assessment for Transportation*. SACOG also hosts a Climate Adaptation website that enables

exploration of peer-reviewed data showing how climate change might affect the transportation networks and residents of the Sacramento region. Furthermore, the El Dorado County LHMP, which is incorporated by reference as part of this Safety and Noise Element (see Chapter 2, above) addresses the potential effects of climate change. Finally, El Dorado County is in the process of identifying Climate Change Vulnerability on a countywide basis (the results of which are not yet available as of the time of this writing). Based on data provided by the LHMP and SACOG, Table 3.5-1 presents a summary of the types of climate change hazards that may occur in the city of Placerville, and the resulting potential impacts to people and the natural environment.

Table 3.5-1. Projected Effects of Climate Change in the City of Placerville

Hazard	Climate Change Influence	Result
Wildfire	Wildfires in El Dorado County, particularly in the Sierra Nevada, occur from spring through fall, when temperatures are high and several months have passed without significant precipitation, resulting in low fuel moisture. Warmer temperatures, an increase in drought-stressed trees and shrubs, an increase in diseased and dying trees affected by bark beetles and wood boring pests, and a higher percentage of days with strong wind are all conditions created by	Wildfires can cause property damage and loss of life, loss of timberland and recreational land, and result in the destruction of plant and animal ecosystems as well

[10] Scientists use a variety of different numerical models (called Global Climate Models) to simulate the Earth's physical processes. These models use mathematical equations to predict how the atmosphere, oceans, ice, land surface, and natural and human-caused emissions of GHGs will interact globally in the climate system over the next centuries.

Hazard	Climate Change Influence	Result
	climate change that are likely to result in increased vulnerability to wildland and wildland-urban interface fires. Climate change is also affecting the length of the wildfire season, causing it to begin earlier in the year and end later in the year.	as direct animal mortality.
Flooding	Climate change is projected to cause more years with particularly intense storm systems that result in high rainfall amounts over a short period, and could overtop the capacity of local streams and drainage systems. Flooding already occurs in Placerville (during severe winter storm events) along Hangtown Creek, where several businesses are located within a FEMA 100-year flood hazard zone. Flooding may also occur more frequently when: (1) increased drought causes the soil to dry out and become hard, making it more difficult for rainfall to penetrate the soil; (2) the heat from increased wildfires bakes the surface layers of the soil resulting in decreased rainfall penetration; and (3) loss of vegetation (from wildfires and pests) results in fewer tree roots and less leaf litter, which in turn increases stormwater runoff.	Flooding on roadways and bridges impedes evacuation, flooding at residences and businesses results in loss of human life and property damage, and flooding on agricultural land results in crop damage or loss. Flooding in the Sierra Nevada also carries sediment downstream and degrades water quality.
Freeze and Snow Events	Freeze and snow events are common in Placerville. Winter weather and freezing temperatures can occasionally be accompanied by high winds, which can cause downed trees and power lines, power outages, accidents, and road closures. Snow levels in Placerville tend to be light given the city's elevation; however, climate change is likely to increase the number and/or severity of major winter storms (i.e., atmospheric river events), thus resulting in increased snowfall and more days at or below freezing.	Freezing of underground pipelines, downed power lines and trees, traffic accidents, delays in emergency service response times, temporary school closures, and the need for snow removal equipment.
Heavy Rain, Hail, Lightning, and Wind	Heavy rain and thunderstorms, which may produce hail, are the most frequent type of severe weather occurrences in Placerville, often accompanied by strong wind and lightning. An increase in heavy rainfall (i.e., atmospheric river events) caused by climate change could result in additional flooding. Projected increases in strong winds and lightning would directly contribute to increased fire hazards.	Increased flooding, and increased wildland and wildland-urban interface fires.
Landslides, Debris Flows, and Rockfall	Climate change is expected to cause an increase in intense levels of precipitation, and heavy rainfall or snowfall could increase the number of landslides or make landslides larger than normal, as well as increase the potential for erosion. Vegetation, which helps to hold hillsides together, can be stripped away by secondary climate change hazards such as increased wildfires, droughts, or disease/pest	An increase in landslides could result in increased temporary losses of transportation access, and increased loss of property damage

Hazard	Climate Change Influence	Result
	infestations. Without vegetation to help stabilize the slope, hillsides may be more likely to slide and erosion may be more likely to occur.	and human life. Increased erosion could result in increased degradation of water quality.
Drought/Tree Mortality	Climate change is projected to result in statewide droughts that are more frequent and more intense. California's climate varies between extremely dry and extremely wet periods, driven by the presence or absence of a few large winter storms or "atmospheric rivers." There will likely be more years with extreme levels of precipitation, both high and low; more years with very low levels of precipitation would cause more droughts that last longer and are more intense, as compared to historical norms. Drought conditions will likely be made worse by changes to the snowpack in El Dorado County. Snowpack refers to the total amount of snow and ice that accumulates on the ground. Usually, this snow melts slowly over the year, helping to provide a consistent supply of water during dry months. However, because of climate change, less precipitation is expected to fall as snow and instead will fall as rain due to warmer temperatures, leading to a reduced snowpack. This may make water levels particularly low in late summer and early autumn, which are also often the hottest parts of the year. Extreme drought also weakens trees and results in increased bark beetle infestations in timberland, recreational land, and private property. Climate change is likely to worsen bark beetle infestations because the warmer temperatures and shorter periods of cold weather create a longer period for bark beetles to cause tree damage and to reproduce. The dead trees deplete forest ecosystems, create more fuel for wildfires, and are a safety risk for people and property.	Drought results in less water available for human consumption, industrial processes, and agricultural irrigation. It also decreases the amount of water available to timberland, animals, and plant ecosystems, and results in increased wildfire hazards.
Extreme Heat	Climate change is expected to cause warmer temperatures overall throughout the State, as well as an increase in extreme heat events. However, due to the cooling influence of the Sierra Nevada, Placerville is likely to experience less of a heat increase as compared to areas situated further west in the Sacramento Valley. Nevertheless, extreme heat events are projected to increase. Warmer temperatures increase the need for water consumption and result in greater energy loads for air conditioning systems.	Extreme heat has a direct adverse effect on humans, plants, and animals, including heat-related illness in humans; it also contributes to the spread of wildfires.

Sources: El Dorado County Sheriff and Office of Emergency Services 2019, SACOG 2015

The El Dorado County LHMP, which is incorporated by reference as part of this Safety and Noise Element (see Chapter 2, above), includes climate adaptation strategies to protect people and the environment from the climate change hazards identified in Table 3.5-1.

3.5.2 Climate Change Goals and Policies

Goal 3.5: Reduce potential adverse effects from climate change by promoting climate adapatation strategies.

- **Policy 3.5-1:** The City will continue to participate in FEMA's National Flood Insurance Plan, which restricts new development in floodplains unless certain conditions are met.
- **Policy 3.5-2:** The City will continue to proactively participate in updates to the El Dorado County Local Hazard Mitigation Plan (Placerville Annex).
- **Policy 3.5-3:** The City will support efforts to ensure that new critical facilities are built to withstand hail damage, lightning, and strong winds generated by thunderstorms.
- **Policy 3.5-4:** The City will support new projects that incorporate the use of materials and landscaping to counteract the heat island effect.
- **Policy 3.5-5:** The City will encourage new public projects and private developments to incorporate appropriate climate resilience strategies in new construction.
- **Policy 3.5-6:** The City will take measures to maintain the structural and operational integrity of essential public facilities during climate emergencies.
- **Policy 3.5-7:** The City will support local and regional efforts to enhance power grid resiliency and minimize disruption of power during grid outages, including increased use of solar power.
- **Policy 3.5-8:** The City will support El Dorado County and the Sacramento Area Council of Governments' local and regional transportation planning and climate adaptation strategies.

3.6 Hazards and Hazardous Materials

3.6.1 Hazardous Materials

Industrial, commercial, and transportation related activities are essential to the livelihood and economic wellbeing of the community. While these activities are an asset, they also pose certain potential hazards. Business that use and store hazardous materials, as well as transportation of hazardous materials on State and federal highways, are regulated by numerous federal, State, and local laws and regulations. While a certain risk is created as a result of these activities, hazards are usually minimal.

Industrial/Commercial Land Uses

Industrial activities (particularly those that involve manufacturing processes) along with a variety of commercial land uses such as auto body repair shops, gasoline stations, and dry cleaners require the use of hazardous materials as part of daily activities. As shown on the City's Zoning Map and General Plan Land Use Diagram, Placerville has one area designated and zoned for industrial development.[11] Commercial land uses are concentrated along U.S. Highway 50, and in the areas along Forni Road, Placerville Drive, and Green Valley Road.

The provisions in Government Code Section 65962.5 (commonly referred to as the "Cortese List", named after Dominic Cortese, the former legislator that authored the law to enact the list), refers to information that is used to inform the public about the location of hazardous materials release sites. The California Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB), along with other state and local agencies, are required to include certain contaminated sites on the Cortese List. The Cortese List, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA).[12]

The GeoTracker and EnviroStor hazardous waste and substances sites databases (maintained by SWRCB and DTSC, respectively) contain most of the hazardous materials listings that make up the Cortese List. The GeoTracker database also provides information related to Cleanup Program sites, which are not part of the Cortese List but involve cleanup of other sites where hazardous materials have resulted in environmental contamination. These databases are continually updated to reflect new hazardous materials release sites, as well as closure of existing site cases. Once a hazardous materials site is remediated and the case is closed, it is no longer part of the Cortese List.

A search of the EnviroStore database performed in 2023 indicates that four potentially hazardous material sites in the city were evaluated by DTSC, but none of them are currently active, either because remediation was achieved and the cases were closed, or because no action was determined to be necessary by DTSC.

A search of the GeoTracker database performed in 2023 indicates there are three open, active hazardous materials sites within the city. All three are Cleanup Program sites, meaning they are not part of the Cortese List. The sites are located on Main Street, Hazzard Street, and Broadway, respectively. The case histories associated with these

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[11] Please see the City's website for more detail: https://www.cityofplacerville.org/media/Planning%20Division/ZoningMaps/ZoningAtlas50x24%2009132018.pdf

[12] Because Government Code Section 65962 was enacted over 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information to be included in the Cortese List does not exist. Furthermore, while Government Code Section 65962.5 makes reference to the preparation of a "list," many changes have occurred related to web-based information access since 1992 and this information is now provided on the websites of the responsible organizations rather than on a single published document.

sites indicate they are either in the process of being remediated, or are still under investigation.

The use, storage, and transport of hazardous materials is regulated at the federal, State, and local County level in order to protect people and the environment from accidents involving spills of hazardous materials to the greatest extent practicable.[13] The El Dorado County Department of Environmental Management is the Certified Unified Program Agency that oversees and implements regulations related to permitting and operation of aboveground and underground storage tanks, hazardous materials business plans, hazardous waste generator and on-site hazardous waste treatment (tiered permitting) programs, and hazardous material management plans and hazardous material inventory statements required under the California Fire Code (the California Fire Code is part of the CBC). The California Occupational Safety and Health Administration (CalOSHA) enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees. CalOSHA regulations also include requirements for protective clothing, training, and limits on exposure to hazardous materials.

Transportation

U.S. Highway 50 bisects Placerville in an east–west direction and carries truck traffic. All types of trucks meeting federal and state requirements are permitted on U.S. Highway 50 through Placerville eastward to the intersection with Ice House Road. However, east of Ice House Road through the Sierra Nevada, truck traffic on U.S. Highway 50 is limited to the “California Legal” classification only, and with a maximum length of 65 feet (from kingpin to rear axle). Because of these limitations, along with fewer travel lanes and sharper curves on U.S. Highway 50, the primary truck traffic route to Nevada is Interstate 80 (approximately 30 miles to the north) rather than U.S. Highway 50. The reduced level of truck traffic through Placerville, along with the extensive federal and State laws and regulations related to truck transport, results in a relatively low potential for accidents involving the transport of hazardous materials through Placerville.

Statutory requirements governing hazardous waste transportation in California are contained in the California Health and Safety Code, Division 20, Chapter 6.5, Articles 6.5, 6.6, and 13. Hazardous waste transporters must have a valid registration permit issued by DTSC. In addition, hazardous waste transporters must comply with a variety of other State and federal regulations, including the California Vehicle Code (CCR Title 13); California State Fire Marshal Regulations (CCR Title 19); U.S. Department of Transportation regulations (Title 49 Code of Federal Regulations); and EPA regulations (Title 40 Code of Federal Regulations).

[13] Many of the accidental hazardous materials releases that have occurred in the past took place due to the failure of older, single-walled aboveground or underground metal storage tanks. Today, all such tanks are double-walled, and are generally made of plastic, which does not rust or corrode.

3.6.2 Aviation Hazards

Aviation safety related to the Placerville Airport is handled through land use consistency with the adopted Airport Land Use Compatibility Plan (ALUCP) prepared by the El Dorado County Airport Land Use Commission, as well as compliance with Federal Aviation Administration (FAA) safety regulations. (Airport noise hazards are discussed below in Chapter 4, “Noise.”)

As noted previously in Chapter 2, the City has incorporated by reference the ALUCP’s land use review process, compatibility criteria and maps, and policies for the Placerville Airport as part of this Safety and Noise Element. To ensure land use compatibility with the ALUCP, the City has adopted an Airport Overlay Zone as shown in Exhibit 3.6-1. All land uses within the Airport Overlay Zone are subject to the Placerville Airport ALUCP criteria and policies.

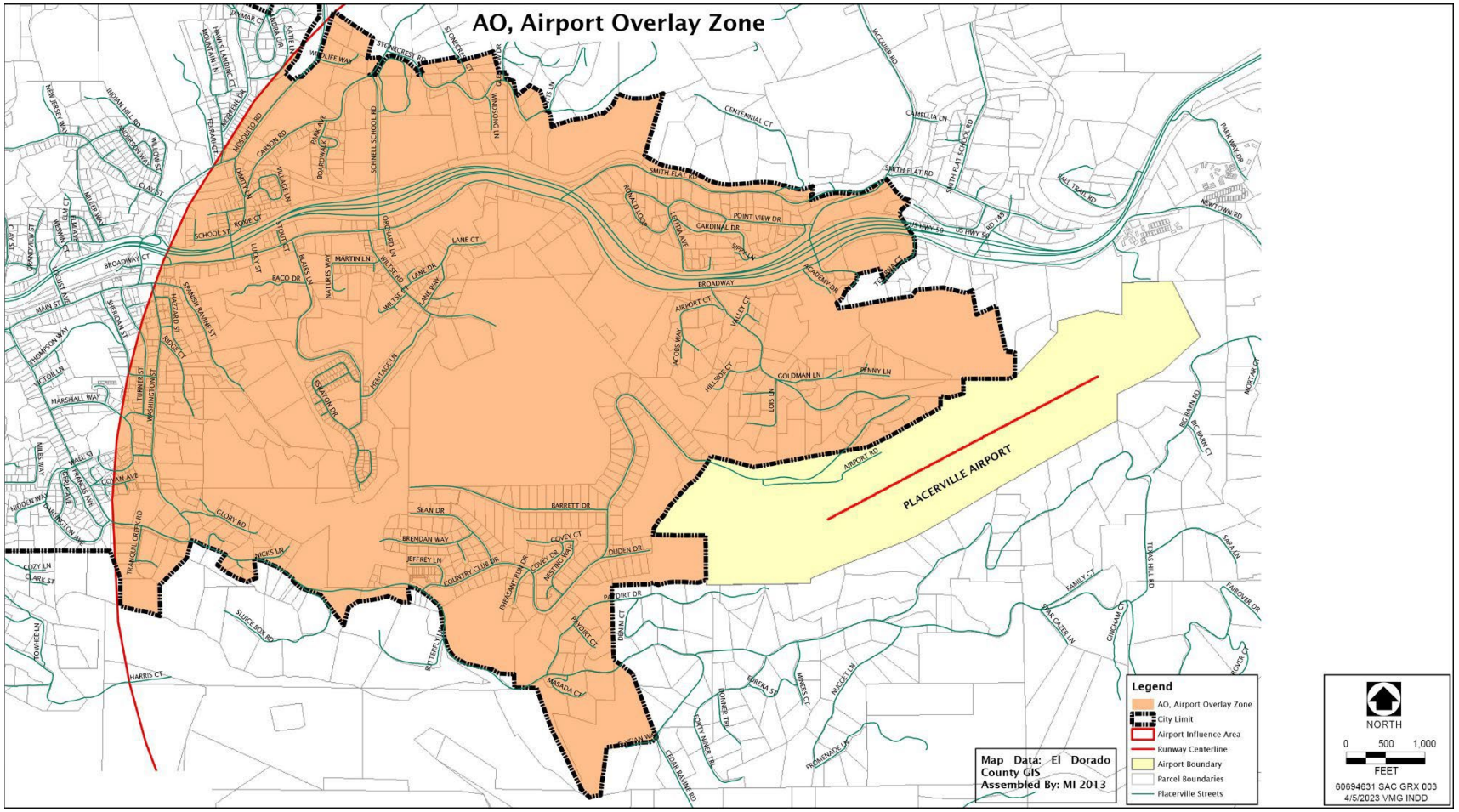
Safety issues related to airport operations and airplanes are regulated by the FAA and the California Department of Transportation’s Division of Aeronautics.

3.6.3 Mining

Placerville (first known as Dry Diggings) originated as a gold mining settlement in the late 1840s. The city is situated within the Mother Lode belt, an area of gold-bearing quartz deposits which extends north–south through the Sierra Nevada from Georgetown in the north to Mormon Bar in the south. The former Placerville Mining District encompassed what is now the historic downtown area along Hangtown Creek, a portion of Cedar Ravine and the unnamed tributary along Mosquito Road, and the area around the Gold Bug Park and Mine including the headwaters of Big Canyon Creek. Both placer mining (which involves separating gold from stream deposits using water) and lode mining (also known as hard rock mining, which extracts veins of ore from solid rock) historically occurred in Placerville. From the mid 1850s through the 1870s, hydraulic and hard rock mines in the Placerville mining district yielded large quantities of gold. Between 1880 and 1930, hard rock mining was the primary form of ore extraction. Since then, there has been little activity in Placerville other than private individuals panning for gold in area streams.

The California Geological Survey (Busch 2001) has classified most of Placerville as MRZ-3a, and a narrow belt of the city along the Melones Fault Zone as MRZ-2b, for lode gold deposits. These classifications indicate that most of the city has known mineral resources of undetermined significance (MRZ-3a), while the area along the Melones Fault Zone has significant inferred mineral resources (MRZ-2b), related to lode gold based on available geologic data. There are abandoned mine shafts in Placerville; although most of the entrances have been sealed, those that are unsealed could represent a hazard to the public from accidental collapse.

The City of Placerville owns and operates the Gold Bug Mine, for recreational and educational purposes only, as part of Gold Bug Park. The City does not have a Surface Mining and Reclamation Act (SMARA) ordinance that would permit commercial mining operations. There are currently no active commercial mining operations and none are planned in the future within the City limits.



Source: El Dorado County Airport Land Use Commission 2012

Exhibit 3.6-1 Airport Overlay Zone

3.6.4 Hazards and Hazardous Materials Goals and Policies

Goal 3.6-1: Promote a living and working environment that is as safe from the effects of hazardous materials as possible.

- Policy 3.6.1-1. City approvals of all new development will consider the potential for the production, use, storage, and transport of hazardous materials and provide for reasonable controls on such hazardous materials.

- Policy 3.6.1-2. Within its authority, the City will regulate the production, use, storage, and transport of hazardous materials to protect the health of Placerville residents.

- Policy 3.6.1-3. The City will collaborate with the County in implementing the County's Local Hazard Mitigation Plan and acknowledge the County as lead agency for hazardous materials management and disclosure.

- Policy 3.6.3-1. The City will require the identification and capping of all abandoned mine shafts and openings.

Goal 3.6-2: Ensure development surrounding the Placerville Airport is compatible with the safety, airspace protection, overflight and other special characteristic policies and maps of the Placerville ALUCP.

- Policy 3.6.2-1: The City will refer development applications within the airport overlay zone to the El Dorado County Airport Land Use Commission and condition such development, as needed, to ensure consistency with the Placerville Airport Land Use Compatibility Plan.