



**ROCKLIN**  
CALIFORNIA

PUBLIC REVIEW DRAFT – JULY 2021

# CITY OF ROCKLIN

## Community Safety Element







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# PUBLIC REVIEW DRAFT

## COMMUNITY SAFETY ELEMENT

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# PUBLIC REVIEW DRAFT COMMUNITY SAFETY ELEMENT

## 1. INTRODUCTION

The Community Safety Element (CSE) is a plan to minimize hazards to public health and safety in and around the City of Rocklin. It identifies the natural and human-caused hazards and other community safety issues that affect existing and future development and provides guidelines for protecting residents and other community members from injury and death. It describes present conditions and sets policies and standards for improved public safety. The CSE also seeks to minimize physical harm to the buildings and infrastructure in and around Rocklin, and to reduce damage to local economic systems, community services, and ecosystems.

The CSE identifies and addresses the following public safety issues:

- Geologic and seismic hazards
- Flood hazards
- Hazardous materials management
- Emergency preparedness
- Fire
- Drought
- Severe weather
- Extreme heat
- Climate change

The CSE reflects the City's regard for the health and safety of its residents, and the well-being of other community assets. The element addresses issues the community believes would require government intervention to effectively achieve public safety. It is the responsibility of the City to protect community members from danger and harm. The CSE will help guide new development, as well as community programs and other efforts, with the intent of reducing the potential for harm from natural and human-caused hazards within Rocklin and the planning area.

Some degree of risk is inevitable, as the potential for many disasters cannot be completely eliminated, and efforts to predict when such disasters may occur are limited. The goal of the CSE is to reduce the risk of injury, death, property loss, and other hardships to acceptable levels. In accordance with California law, the CSE serves the following purposes:

- Protect the community from risks associated with a variety of hazards, including seismic activity, landslides, flooding, and wildfire, as required by the California Government Code Section 65302(g)(1).

- Map and assess risks associated with flood hazards, develop policies to minimize flood risk to new development and essential public facilities, and establish effective working relationships among agencies with flood protection responsibilities, as required by California Government Code Section 65302(g)(2).
- Map and assess risks associated with wildfire hazards, develop policies to reduce wildfire risk to new land uses and essential facilities, ensure there is adequate road and water infrastructure to respond to wildfire emergencies, and establish cooperative relationships between wildfire protection agencies, as required by California Government Code Section 65302(g)(3).
- Assess risks associated with climate change on local assets, populations, and resources. Note existing and planned development in at-risk areas and identify agencies responsible for providing public health and safety and environmental protection. Develop goals, policies, and objectives to reduce risks associated with climate change impacts, including locating new public facilities outside of at-risk areas, providing adequate infrastructure in at-risk areas, and supporting natural infrastructure for climate adaptation, as required by California Government Code Section 65302(g)(4).

The CSE is divided into two main components. The first, *Existing Conditions*, discusses the hazards and other safety issues present in Rocklin, including background information and historical records, risk analyses, and a discussion of future issues. The subsequent section, *Community Safety Element Goals and Policies*, contains goals and policies intended to help make Rocklin a safer community that is better protected against these issues.



## 2. EXISTING CONDITIONS

### GEOLOGIC AND SEISMIC HAZARDS

Geologic and seismic hazards are risks caused by the movement of different parts of the Earth's crust, or surface. Geologic hazards are hazards involving land movements that are not linked to seismic activity and are capable of inflicting harm to people or property. Seismic hazards are the hazards associated with potential earthquakes in a particular area.

#### Geologic Hazards

Geologic hazards, such as landslides, depend on the geologic composition of the area. The City of Rocklin is in the Central Valley, in Placer County, bounded by the Sierra Nevada Range on the east and the Pacific Coast Ranges on the west.

The Rocklin planning area is located within a geologic area known as the Loomis Basin. Most of the surface of the Loomis Basin consists of granitic rocks, along with sedimentary rocks and alluvial deposits produced by stream erosion from the Sierra Nevada.

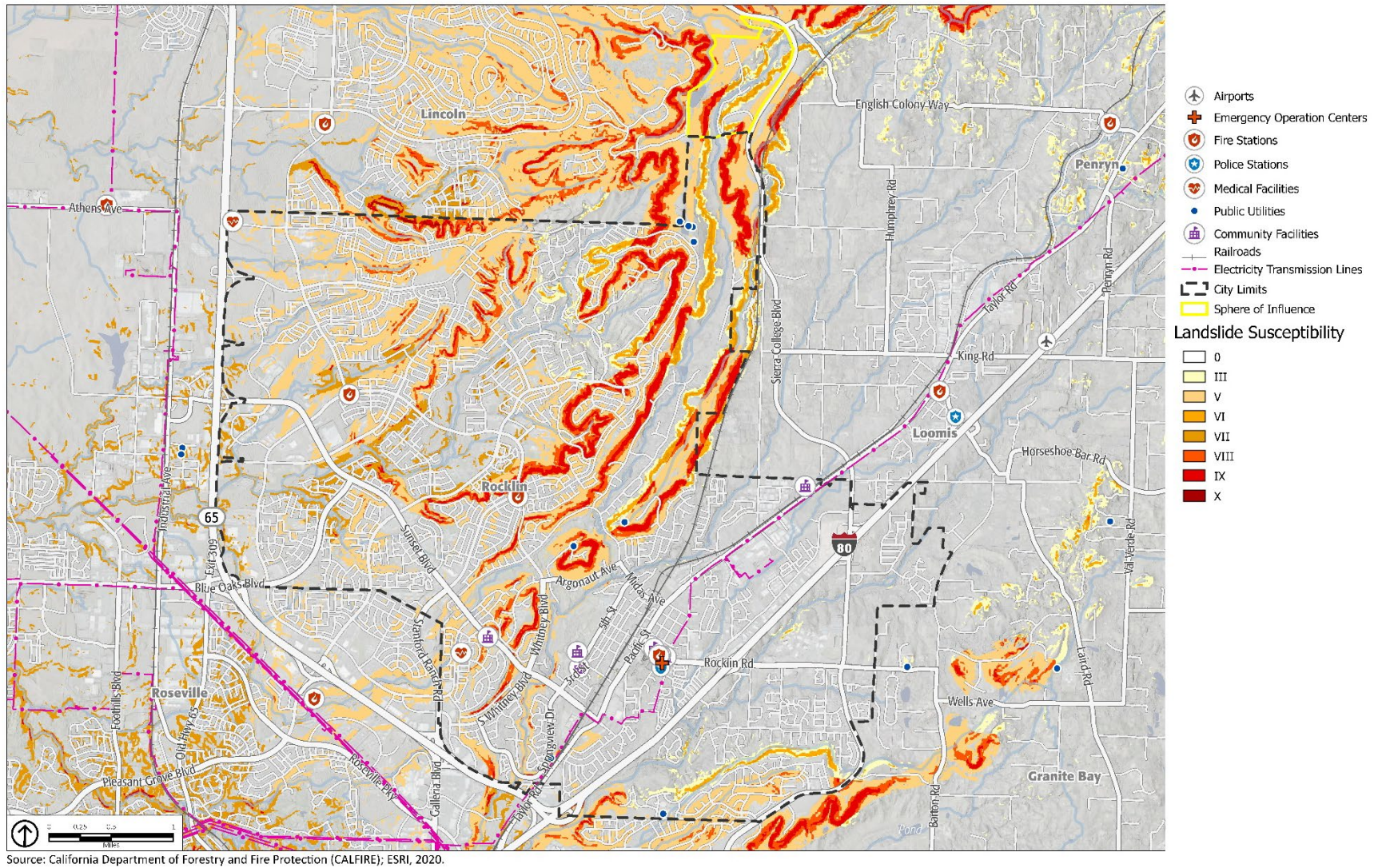
The soils within the Rocklin planning area are predominantly of a type referred to as the Exchequer-Inks units. These soils are undulating to steep, well-drained, and somewhat excessively drained soils that are shallow and found over volcanic rocks. Soils of the Andregg-Caperton-Sierra and Cometa-Ramona units are also found in the Rocklin area. Andregg-Caperton-Sierra soils are undulating to steep, well-drained, and somewhat excessively drained soils that are deep to shallow over granitic rock. Cometa-Ramona soils are undulating, deep, and very deep, well-drained soils found on terraces. These soils are of poor quality, and do not support agricultural uses, except for cattle grazing. According to the soil survey for Western Placer County, some of the soils present in and around Rocklin may require special review and consideration when constructing new buildings, foundations, and infrastructure. These soil types are:

- Alamo Variant Clay, a wet, low-strength soil that has the potential to shrink and swell.
- Exchequer very stony loam, a shallow soil
- Inks-Exchequer Complex, a shallow soil with a risk of sloping hazards
- Fiddymment-Kaseberg loams, a shallow, low-strength soil with the potential to shrink and swell with a hard layer (called a cemented pan) that makes excavation difficult.

The risk of erosion of most soil types found in the planning area is slight to moderate, though the risk of erosion increases as the slope increases, and erosion control should be practiced in connection with any development.

Figure 4-10a shows the landslide risk in and around Rocklin, as identified by the California Geological Survey.

Figure 4-10a: Landslide Susceptibility





## Seismic Hazards

Seismic activity causes pressure to build up along a fault, and the release of pressure results in ground shaking. This shaking itself is known as an earthquake. Earthquakes can also trigger other hazards, including surface rupture (cracks in the ground surface), liquefaction (causing loose soil to lose its strength), landslides, and subsidence (sinking of the ground surface).

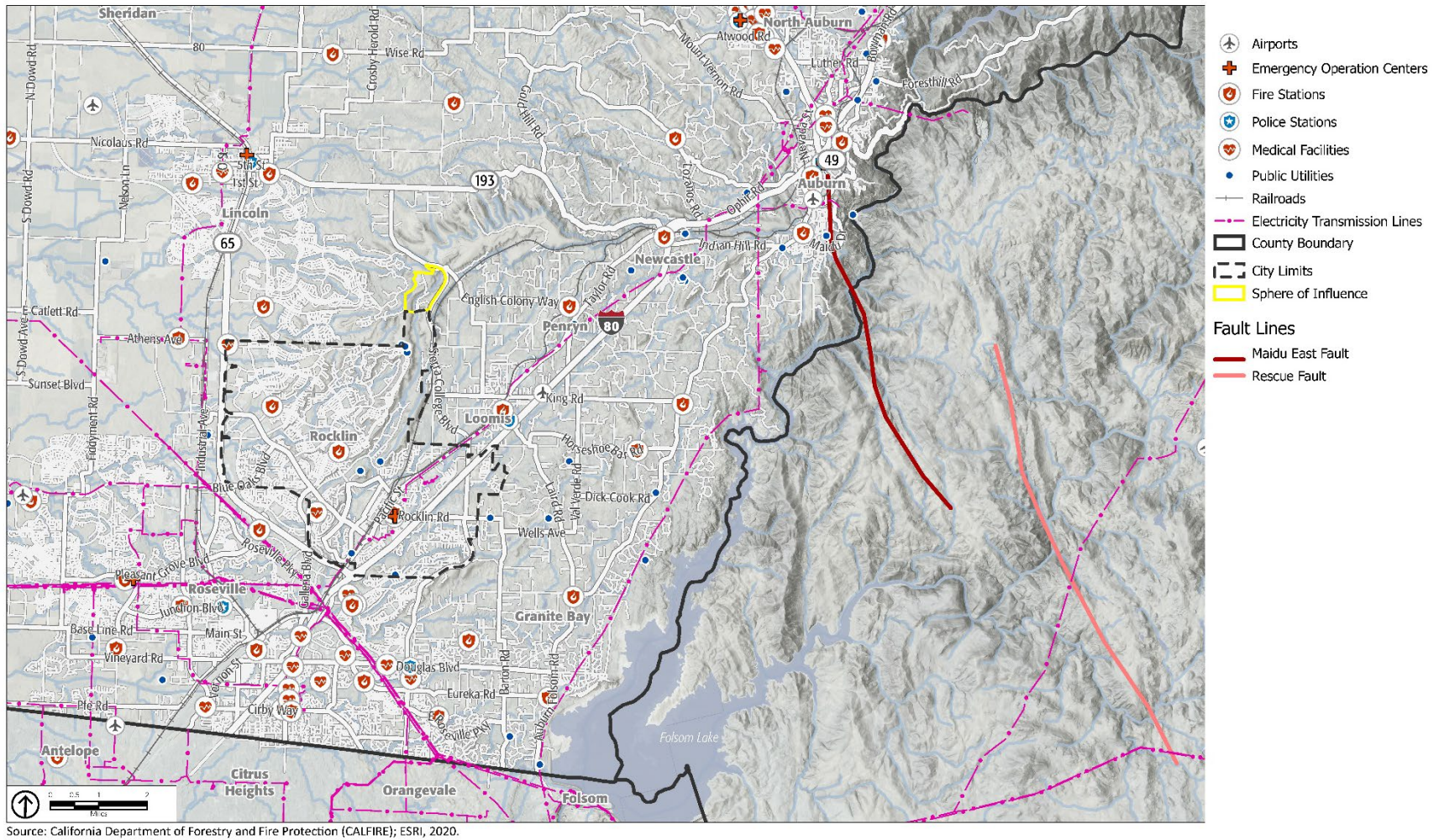
Active and potentially active faults pose risk to the City of Rocklin. Active faults have experienced displacement in historic time, suggesting that future displacement may be expected, whereas potentially active faults are those that have shown displacement within the last 1.6 million years and may or may not have a reasonable chance of creating future earthquakes.

- Structures most likely to be affected are those that are old or near earthquake faults. The nearest fault system, the Foothills fault system, runs through the western Sierra Nevada and has the greatest potential for damaging buildings in Rocklin, especially the unreinforced masonry structures in the older part of the city and structures built before 1960 without adequate anchorage of framing and foundations. Data compiled between 1808 and 1987 show that only 15 earthquakes between a maximum moment magnitude 3.0 and 4.0 (on the Richter scale) were recorded along the Foothills Fault Systems between Mariposa and Oroville. Two segments of the Foothills fault system, the Bear Mountain Fault and the Melones Fault, are approximately 15 and 22 miles east of Rocklin, respectively, although these two segments are not considered active.
- Active faults within 50 miles from Rocklin include the Dunnigan Hills Fault and Cleveland Hills Fault. The closest identified active fault is the Cleveland Hills fault, approximately 40 miles north of Rocklin. The Dunnigan Hills Fault is approximately 45 miles west of Rocklin. The Cleveland Hills fault is considered one of the most active in the area in terms of destructive potential and was the source of a strong earthquake in 1975 around the City of Oroville.
- Active faults located between 50 and 100 miles from Rocklin include the West Napa Fault, Marsh Creek Fault, Concord-Green Fault, Hayward Fault, and Calaveras Fault. With all these active faults, there is a high potential that the area will be subject to at least moderate ground shaking one or more times over the next century.

Additionally, Rocklin may experience minor ground shaking from distant earthquakes on faults to the west and east. For example, to the west, both the San Andreas Fault (source of the 8.0-estimated Richter magnitude San Francisco earthquake that damaged Sacramento in 1906) and the closer Hayward Fault have the potential for major events. The San Andreas Fault near San Francisco and the Hayward Fault in the East Bay area are 93 and 73 miles away, respectively. Similarly, several faults in Nevada may cause minor ground shaking in Rocklin. Critical damage may also occur to structures that provide emergency services (medical facilities, fire stations, schools, etc.). Roads and utility lines for water, gas, power, telephone, sewer, and storm drainage may be disjointed and services disrupted. These structures require special attention in the public safety programs of the City.

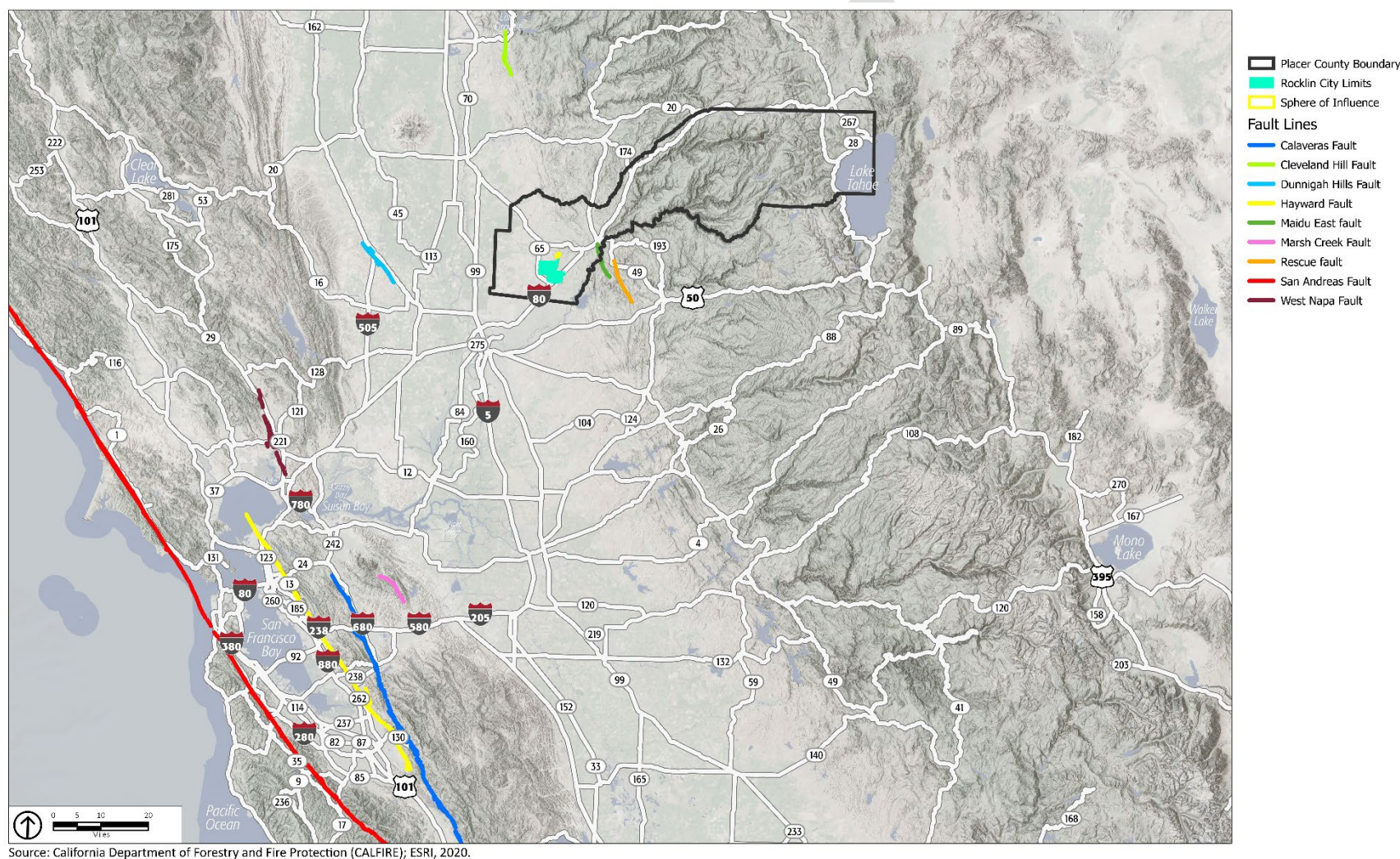
Figure 4-10b shows the fault lines in the vicinity of Rocklin. Figure 4-10c shows key fault lines in the wider northern California region.

Figure 4-10b: Fault Lines





**Figure 4-10c: Regional Fault Lines**



## Potential Changes to Geologic and Seismic Risk in Future Years

### Likelihood of Future Occurrence

#### Geologic Risk

Unlikely — Minor landslides may have occurred in the past, probably over the last several hundred years, as evidenced by past deposits exposed in erosion gullies. With significant rainfall, additional failures are possible in the identified landslide hazard areas, and minor landslides could occur in areas affected by fires. However, the topography of Rocklin is quite flat and not known to be unstable. Slopes and gullies in the city are heavily vegetated and the overall risk of landslide is deemed low.

#### Seismic Risk

Unlikely — Placer County is traversed by a series of northwest-trending faults that are related to the Sierra Nevada uplift. Several active faults are in the vicinity of Placer County and Rocklin. However, faults near the city are considered inactive and unlikely to cause seismic activity.

Throughout recorded history, no major earthquakes have been recorded in Rocklin. Earthquakes on various active and potentially active San Francisco Bay Area fault systems could produce a wide range of ground-shaking intensities in the vicinity, but the impacts to the city would be less severe than closer to the source.

### Climate Change and Geologic and Seismic Hazards

While climate change is unlikely to increase earthquake frequency or strength, the threats from seismic hazards are expected to continue. The risk from geologic hazards may increase due to climate change and a projected increase in precipitation extremes (i.e., wetter wet periods and drier dry periods). While total average annual rainfall may decrease only slightly, rainfall is predicted to occur in fewer, more intense precipitation events. Heavy rainfall could cause an increase in the number of landslides or make landslides larger than normal. The combination of a generally drier climate in the future, which will increase the chance of drought and wildfires, and the occasional extreme downpour could create the potential for more minor landslides.

## FLOOD HAZARDS

Flooding is the rising and overflowing of a body of water onto normally dry land. History highlights floods as one of the most frequent natural hazards impacting communities in Placer County. Floods are among the costliest natural disasters in terms of human hardship and economic loss nationwide. Floods can cause substantial damage to structures, landscapes, and utilities, as well as life-safety issues. Floods can be extremely dangerous, and even six inches of moving water can knock over a person given a strong current. Floodwaters can transport large objects downstream, which can damage or remove stationary structures, such as dam spillways. Ground saturation can result in instability, collapse, or other damage. Objects can also be buried or destroyed through sediment deposition. Floodwaters can also break utility lines and interrupt services. Standing water can cause damage to crops, roads, foundations, and electrical circuits.

Floods are usually caused by large amounts of precipitation, either from a period of very intense precipitation or a long period of steady precipitation. General rainy season floods can occur in Rocklin any time from November through April. This type of flood results from prolonged, heavy rainfall and is

characterized by high peak flows of moderate duration and by a large volume of runoff. Flooding is more severe when prior rainfall has resulted in saturated ground conditions.

Development reduces the total ground absorption area by creating impermeable surfaces (structures, pavement, streets). Storm runoff is augmented by water flows from development contributing to street flooding. Moreover, developed areas generate irrigation water runoff from landscaping, which may channel stormwater and other runoff flows into nearby underdeveloped areas and street gutters.

Areas at an elevated risk of flooding are generally divided into 100-year flood zones and 500-year flood zones, as identified by the Federal Emergency Management Agency (FEMA). A 100-year flood zone has a 1 percent chance of experiencing a major flood in any given year; a 500-year flood zone has a 0.2 percent chance (one in 500) of flooding in any given year. Very small portions of the city are located inside of the 100- and 500-year flood zone, which occur along Pleasant Grove Creek, Clover Valley Creek, Antelope Creek, Sucker Ravine, and Secret Ravine. The 100-year and 500-year floodplain together make up Rocklin's Regulatory Floodplain.

Figure 4-11 shows the 100- and 500-year flood zones in and around Rocklin, as mapped by FEMA.

As land uses and climate conditions shift and as improvements are made to flood control channels, the size of these flood zones is likely to change. Table 4-9a contains flood analysis results for Rocklin. This table shows the number of parcels in the 100- and 500-year flood zones. Improved parcels include land that was developed for some use by the construction of improvements, or land that has been prepared for development by grading, draining, or installing utilities.

**Table 4-9a: Rocklin Planning Area – Count and Improved Value of Parcels in Flood Zone**

100-Year Flood Zone			500-Year Flood Zone		
Total Parcel Count	Improved Parcels*	Total Improved Value	Total Parcel Count	Improved Parcels*	Total Improved Value
238	168	\$63,080,444	89	79	\$12,450,668

Source: Placer County, 2016 LHMP

Note: \*With respect to improved parcels within the floodplain, the actual structures on the parcels may not be located within the actual floodplain, may be elevated, and/or otherwise outside of the identified flood zone.



Figure 4-11: Flood Hazard Zones

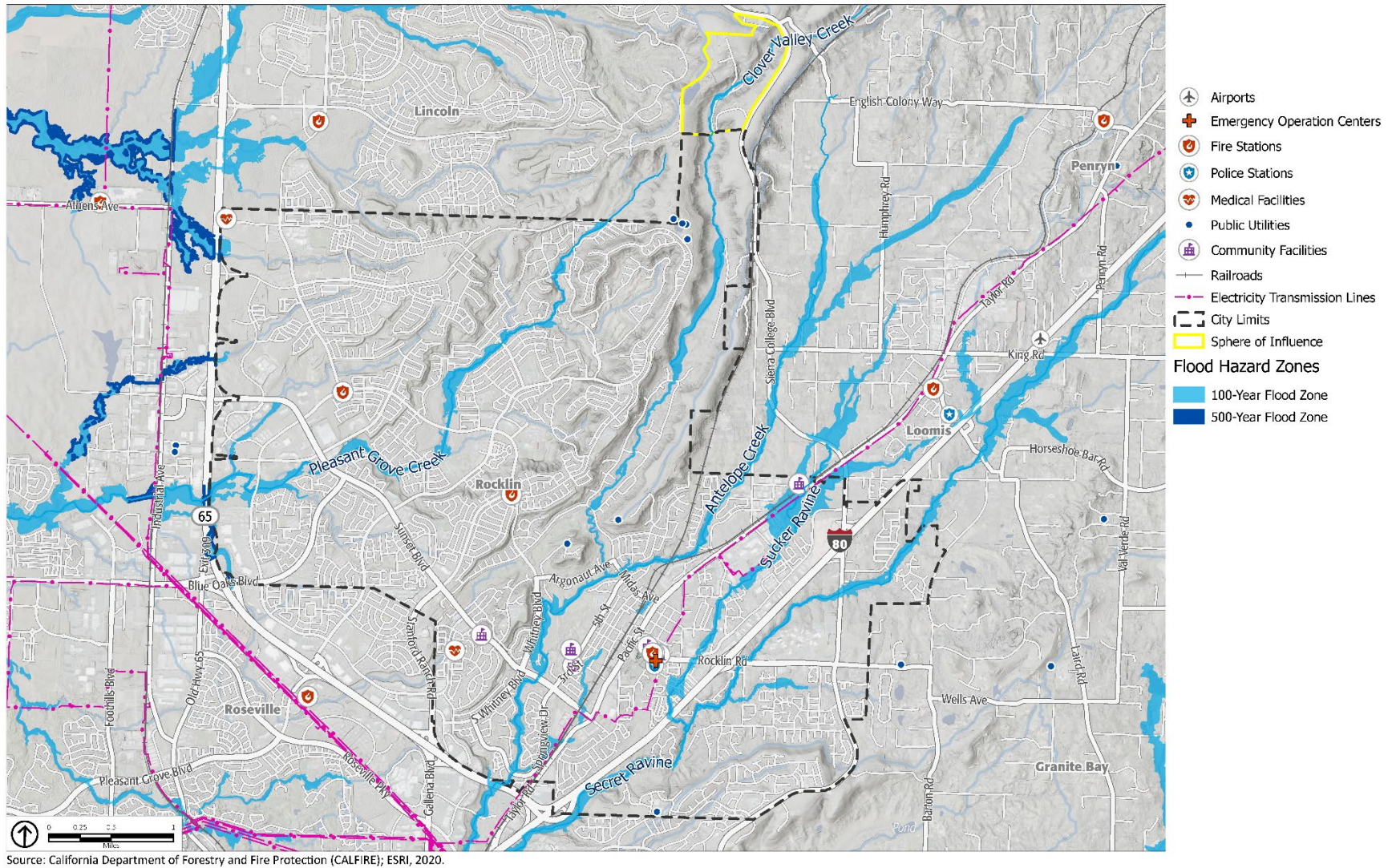




Table 4-9b represents a detailed and summary analysis of total acres for each of the mapped flood zones for the planning area.

**Table 4-9b: Rocklin Planning Area –Acres within Flood Zone**

Flood Zone	Total Flood Zone Acres	Improved Flood Zone Acres	% of Improved Flood Zone Acres
100-Year Flood Zone	661.68	149.78	22.6%
500-Year Flood Zone	26.34	16.27	61.8%

Source: Placer County, 2016 LHMP

Most of the land in Rocklin within a mapped floodplain (i.e., 100- and 500-year flood zone) is not used for residential purposes. In fact, approximately 133 acres, or 20 percent of total mapped floodplain, is for residential uses. Commercial uses account for the majority of mapped floodplain within the city; approximately 357 acres, or 53 percent, of total mapped floodplain is for commercial uses. While this does not minimize the potential damage from flooding, it does mean that fewer people live in a mapped floodplain and so are less likely to be directly harmed. According to a land use analysis shown in Table 4-9c, an estimated 423 people live in the 100-year flood zone and 206 people live in the 500-year flood zone.

**Table 4-9c: Rocklin Planning Area – Population at Risk to Flooding**

100-Year Flood Zone		500-Year Flood Zone	
Improved Residential Parcels*	Population**	Improved Residential Parcels*	Population**
156	423	76	206

Source: Placer County, 2016 LHMP

Notes: \*With respect to improved parcels within the floodplain, the actual structures on the parcels may not be located within the actual floodplain, may be elevated, and/or otherwise outside of the identified flood zone.

\*\*U.S. Census Bureau 2010 average household size for Rocklin is 2.71

Rocklin is part of the Placer County Flood Control and Water Conservation District, an agency which helps to reduce the risk of flooding throughout Placer County. The District is responsible for implementing flood control projects, conducting watershed master planning activities, reviewing proposed development projects that might influence flood risk, and providing additional support to help protect lives and property from flooding. Rocklin has also adopted a Flood Hazard Ordinance as part of its Municipal Code (Title 15, Chapter 16). The ordinance contains regulations to restrict or prohibit land uses and activities that create or exacerbate flooding or related risks, require that developments and land uses that may be at risk from floods are adequately protected, and governs alternations to floodplains, stream channels, and protective barriers.

## Potential Changes to Flood Risk in Future Years

### Likelihood of Future Occurrence

Occasional—Rocklin is traversed by several stream systems and is at risk to both riverine flooding and localized stormwater flooding. Placer County and the City of Rocklin have been subject to previous occurrences of flooding. In the City of Rocklin, much of the flood damage occurs in the floodplains of Antelope Creek, Secret Ravine Creek, Clover Valley Creek, and Sucker Ravine.

### Climate Change and Flooding

Floods are among the most damaging natural hazards in Placer County, and climate change is expected to make them worse, including in and around Rocklin. Although climate change is not projected to significantly change average annual precipitation levels, scientists expect that it will cause more years with extreme precipitation events. This means that more years are likely to see particularly intense storm systems that drop enough precipitation over a short enough period to cause flooding. Because of this, floods are expected to occur more often in Placer County, and climate change may expand the parts of Placer County, including Rocklin, that are considered flood prone. There are some indirect effects of climate change that may also increase flooding throughout Placer County. Climate change is expected to increase the frequency and severity of droughts, which cause soil to dry out and become hard. When precipitation does return, water runs off the surface rather than being absorbed into the ground, which can lead to floods. Wildfires, which are also expected to become more frequent due to climate change, cause a similar effect by baking the surface of the ground into a harder and less penetrable layer. Trees and other vegetation help slow water down, which lets the water absorb into the soil and prevents it from turning into runoff. Because of this, the loss of trees and other plants from wildfires, pests, diseases, or other climate-related exposures can also increase flooding risk.

## HAZARDOUS MATERIALS MANAGEMENT

Hazardous materials pose a significant risk to public safety, humans, and environmental health. They include toxic chemicals, flammable or corrosive materials, petroleum products, and unstable or dangerously reactive materials. They can be released through human error, malfunctioning or broken equipment, a form of terrorism, or as a consequence of other natural or humanmade disasters (i.e., flooding, fire, earthquakes, etc.). Vehicle accidents can cause hazardous materials to be released accidentally during transportation. Numerous manufactured substances can be hazardous to health. Hazardous wastes generated by city residents and businesses contribute to environmental and human health hazards.

A release or spill of bulk hazardous materials could result in fire; explosion; toxic cloud; or direct contamination of water, people, and property. The effects may involve a local site or many square miles. Health problems may be immediate, such as corrosive effects on skin and lungs, or be gradual, such as the development of cancer from a carcinogen. Damage to property could range from immediate destruction by explosion to permanent contamination by a persistent hazardous material.

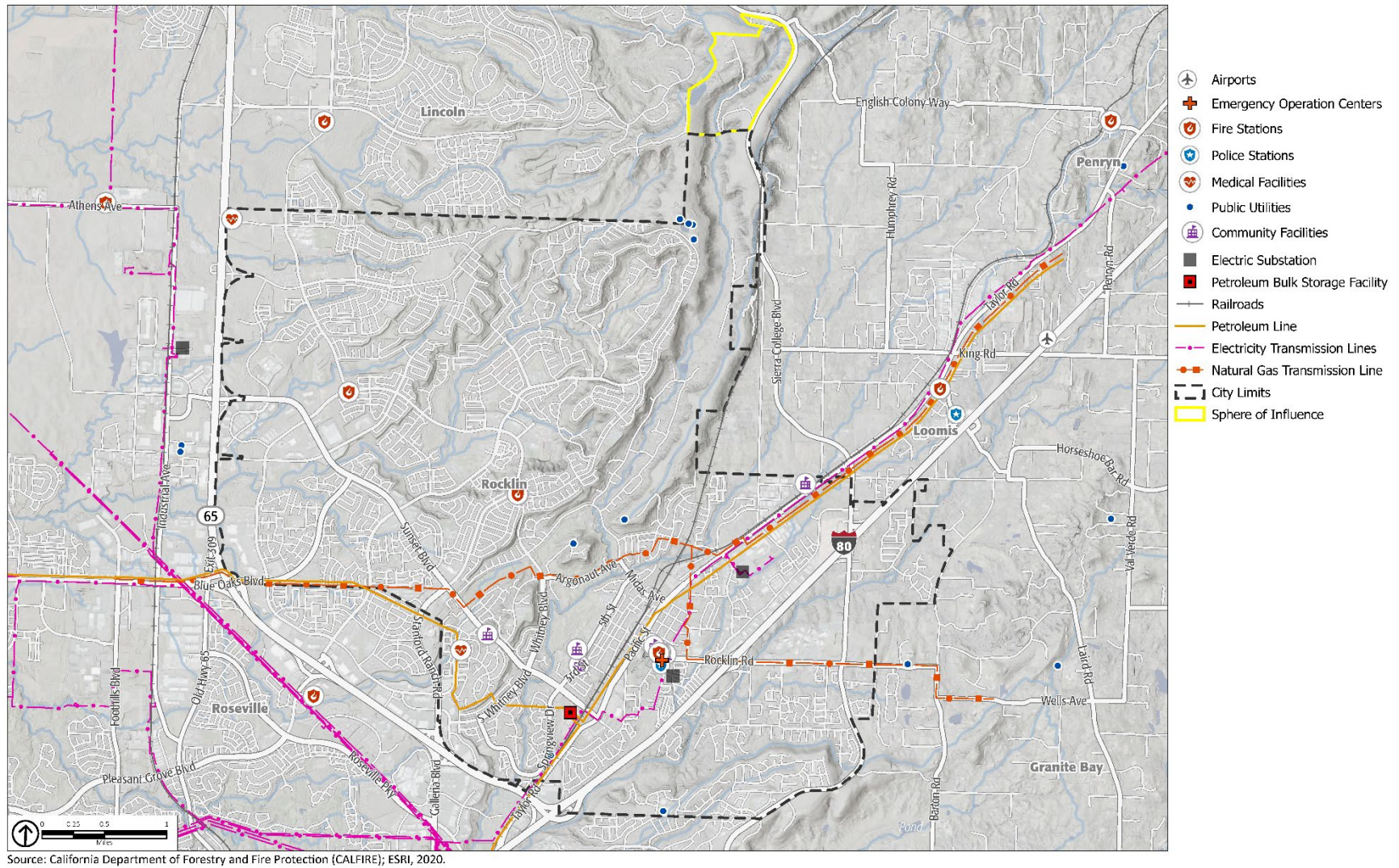
Most hazardous materials in the community are being transported on truck routes along major roadways, such as Interstate (I-) 80 and State Route (SR) 65 that pass through Rocklin. The bulk of truck-carried hazardous materials that enter the County do so via I-80. The cargos consist of a wide range of hazardous substances. Rocklin has experienced 59 reported highway hazardous materials incidents since 1970.

In addition to highway traffic, other hazardous materials are transported through Rocklin on the Union Pacific Railroad. Hazardous materials are regularly shipped via the rail line and, while unlikely, an incident involving a rail accident within the city could have devastating effects. In the event of an emergency involving hazardous materials, there is potential for extreme risk to life and property. The Rocklin Fire Department is responsible for the management of emergencies involving hazardous materials.

A petroleum bulk storage facility known as the Roseville Station began operations in 1957 at the northwest corner of Pacific Street and Sunset Boulevard. The facility operates 24 hours a day, 7 days a week. The facility receives incoming petroleum product via a 12-inch line from the City of Concord, which is approximately 90 miles southwest of Rocklin. The product is then pumped from Rocklin north to Chico via an 8-inch-diameter line and northeast to Sparks, Nevada, through 6-inch, 8-inch, and 12-inch-diameter lines. There is also a 4-inch line supplying the Roseville rail yards (see Figure 4-12 for pipeline locations within the planning area). The types of products passing through the facility include gasoline, diesel, commercial jet fuel, and military jet fuel. The total capacity of all storage tanks on the site is approximately 455,000 barrels or 19-million gallons. The Kinder-Morgan Energy Company now owns the pipelines and bulk storage facility, previously owned by Southern Pacific Transportation Company. Pipelines to the northeast of the facility are located primarily within railroad right-of-way) and pipelines to the northwest are generally located on private properties. Kinder-Morgan has developed local response teams, should a product release occur, and has also upgraded the containment system surrounding the tanks. The dike area is designed to hold full release from the largest tank, should failure occur. Additionally, the Fire Department maintains a Foam Tender for response to spills or fire at the facility.



**Figure 4-12: Natural Gas, Petroleum and Electric Transmission Lines**



Hazardous material incidents may occur anywhere and at any time in the City of Rocklin. Containment, identification, and cleanup of hazardous materials are mandated by law. Hazardous materials spills on state and federal highways are the responsibility of the California Department of Transportation (Caltrans) and the California Highway Patrol, which provide on-scene management of the spill site and coordinate with the Environmental Health Department, California Emergency Management Agency, and the local fire department.

Incident command and management responsibility at the scene of hazardous materials incidents within the City of Rocklin have been assigned to the Rocklin Fire Department.

All City of Rocklin Fire Department personnel have been trained to the First Responder Operational (FRO) level. In addition, several personnel have been trained to the Hazardous Materials Specialist level. Hazardous materials incidents may require a multi-agency response. The City of Roseville Fire Department and Placer County Interagency Hazardous Materials Response Teams provide mutual-aid response to the City of Rocklin when requested.

Several state agencies monitor hazardous materials/waste facilities. Potential and known contaminated sites are monitored and documented by the Department of Health Services (DHS) and the Regional Water Quality Control Board (RWQCB). A review of the leaking underground storage tank list produced by the RWQCB, and the Hazardous Waste and Substances Sites List produced by the Office of Planning and Research, indicates that there are no active leaking underground tanks in Rocklin.

If an imminent public health threat is posed by an outside factor, the City will support local regulating agencies in notifying the public. The transport of hazardous materials/wastes and explosives through the planning area is regulated by Caltrans. I-80 is open to vehicles carrying hazardous materials/wastes. City streets and unincorporated county areas are generally not designated as hazardous materials/waste transportation routes, but a permit may be granted on a case-by-case basis. Transporters of hazardous wastes are required to be certified by Caltrans and manifests are required to track the hazardous waste during transport. The danger of hazardous materials/waste spills during transport does exist and will potentially increase as transportation of these materials increases on I-80, SR 65, and the railroad. The Rocklin Police Department, Rocklin Fire Department, Placer County Office of Emergency Services (OES), and the Placer County Division of Environmental Health are responsible for response to hazardous materials accidents at all locations within the City.

### **Potential Changes to Hazardous Materials in Future Years**

#### **Likelihood of Future Occurrence**

Likely — The Union Pacific Railroad line passes through the City of Rocklin. Hazardous materials are regularly shipped via the rail line and an incident involving a rail accident within the City could have devastating effects.

The City has little control over the types of materials that are shipped via the rail line. Regarding government activities, the content of shipments may be confidential for reasons of security and/or is generally unknown to the City. While the City has little influence over the types of material transported via the rail line, the potential for rail incidents can be reduced by ensuring that at-grade crossings within the city are operating in a safe and effective manner. SR 65 and I-80 pass through the City as well. These are



designated Caltrans hazardous materials routes. Petroleum distribution lines and storage tanks are also located within the city.

Given that 59 reported highway hazardous materials incidents have occurred in Rocklin since 1970, it is likely that a hazardous materials incident will occur in the future. However, according to Caltrans, most incidents are related to releases of fluids from the transporting vehicles themselves and not the cargo, thus the likelihood of a significant hazardous materials release within Rocklin is more limited and difficult to predict.

### Climate Change and Hazardous Materials

Climate change is unlikely to affect hazardous materials transportation incidents. However, increases in the frequency and intensity of severe storms may create a greater risk of hazardous materials releases during these events.

## EMERGENCY PREPAREDNESS

Emergency preparedness activities in Rocklin are conducted through Rocklin Fire Department. The fire department is prepared to handle most everyday emergencies, such as fire, medical, or hazardous situations. Emergency procedures in the City are guided by the Emergency Operations Plan (Rocklin Municipal Code, Chapter 2.32). The Emergency Operations Plan addresses the planned response for the City of Rocklin to emergencies associated with disasters, technological incidents, or other dangerous conditions created by either man or nature. The plan also provides a framework to guide the City's efforts to mitigate and prepare for, respond to, and recover from major emergencies or disasters.

The City has established a Disaster Council, which is responsible for reviewing and recommending emergency operations plans for adoption by the City Council. The Disaster Council plans for the protection of persons and property in the event of fires, floods, storms, epidemics, riots, earthquakes, and other disasters.

The City of Rocklin also participates in the Placer County Alert Network, which operates an emergency notification system that allows public safety agencies to help protect lives and property by providing critical information to residents during emergencies and dangerous situations. The Placer County Alert Network is managed by the Placer County Sheriff's Office and allows public safety agencies to quickly send an emergency alert to citizens in any affected geographic area within Placer, Sacramento, and Yolo Counties. This system enables the Placer County Sheriff's Office to provide residents with critical information quickly in a variety of situations, such as severe weather, unexpected road closures, missing persons, and evacuations of buildings or neighborhoods. Placer Alert provides community members with emergency notifications through telephone call, text message, and email notifications.

Major roads and highways serve as evacuation routes in cases of emergency. SR 65 and I-80 both intersect the city and could serve as evacuation routes. SR 65 extends north to south along the western and southern border of the city, ultimately merging with I-80 to the south. I-80 extends southwest to northeast, from the southern extent of the city to the east. Within the city limits are highly trafficked roads that directly or indirectly connect to SR 65 and I-80; these roads include Sunset Boulevard, Pacific Street, Whitney Ranch Parkway, Sierra College Boulevard, Stanford Ranch Road, Park Drive, and Rocklin Road.

The City of Rocklin currently has a total of six public railroad crossings, including one above-grade road crossing on Sunset Boulevard. SR 65 also crosses over the railroad tracks, but it is in the City of Roseville just west of Rocklin. I-80 provides the closest unimpeded crossing of the railroad tracks to the east of Rocklin, in Newcastle.

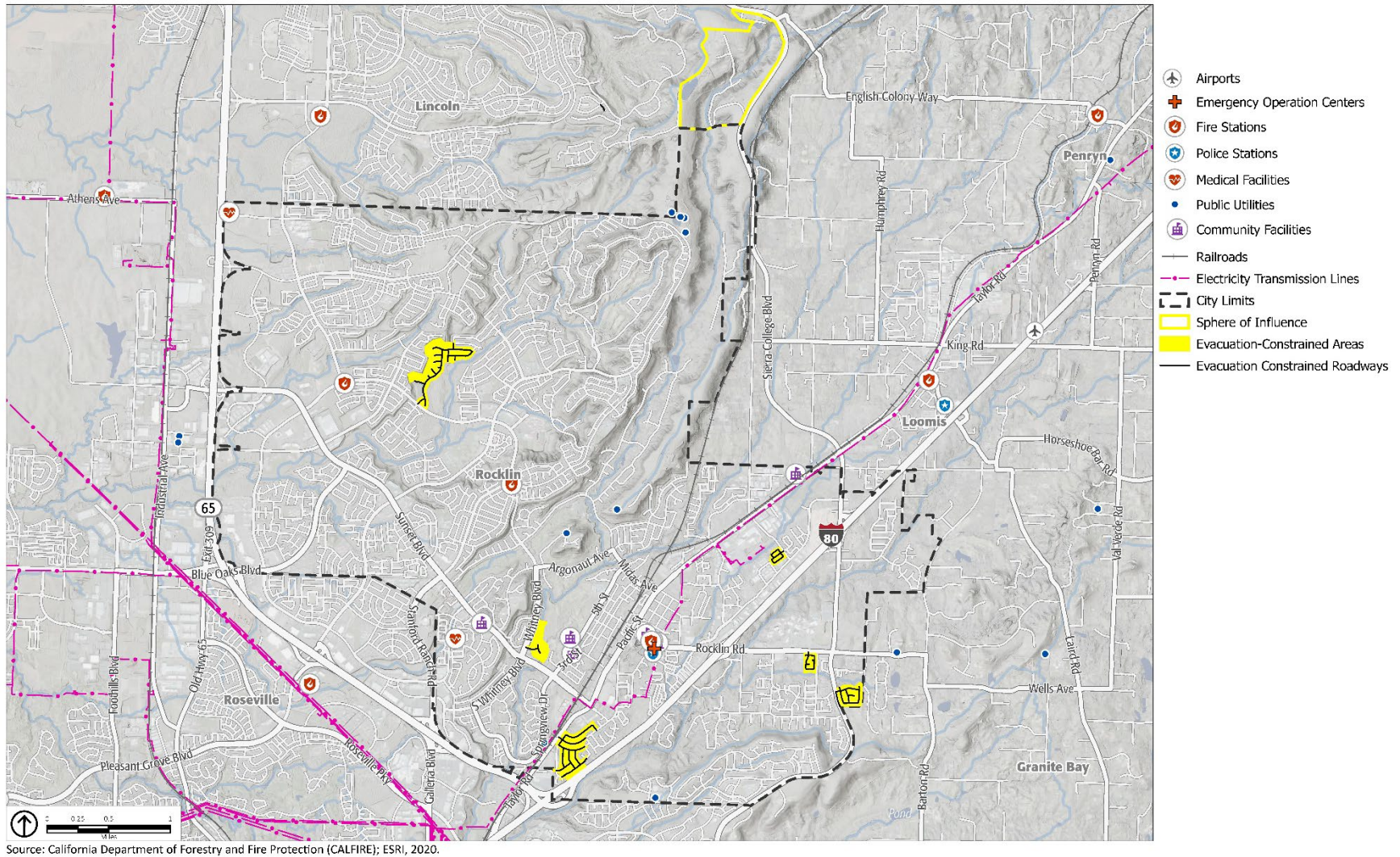
Due to the lack of over/undercrossings of railroad tracks, portions of the city are isolated each time a train passes. This could pose an obstacle to emergency vehicles, especially in the event a train stalls or derails.

Some residential properties or neighborhoods have a limited number of routes in and out of the area. During a major evacuation event, these areas may experience a large number of vehicles trying to evacuate through a single or small number of low-capacity roadways, creating a potential for traffic congestion that can slow down evacuation efforts and increase the risk of harm. Such congestion may also make it difficult for emergency responders to gain access to the area, creating a potentially more dangerous situation. Figure 4-13a shows the areas in Rocklin that may face evacuation constraints. These areas contain only a single-access point and lack any emergency vehicle access connections that could be used for evacuation purposes.

### **Mutual Aid Agreements**

Additional emergency management and response services in Rocklin are assisted through the California Master Mutual Aid Agreement. This agreement is signed by the Governor of California and managed by the California Office of Emergency Services (Cal OES) with a purpose “to provide for systematic mobilization, organization, and operation of necessary fire and rescue resources of the state and its political subdivisions in mitigating the effects of disasters, whether natural or man-caused.”

Figure 4-13a: Evacuation-Constrained Areas





## FIRE

Fire hazards can take the form of wildfires or urban fires. California is recognized as one of the most fire-prone and consequently fire-adapted landscapes in the world. The combination of complex terrain, Mediterranean climate, and productive natural plant communities, along with ample natural ignition sources, has created conditions for extensive wildfires. Wildfire is an ongoing concern for communities in Placer County. The wildfire season in the Sierra foothills typically lasts mid-June through early-October, although drought years or unusual weather may extend the period. Fire conditions arise from a combination of high temperatures, low-moisture content in the air and plant materials, an accumulation of vegetation, and high winds.

Three types of fires are of concern to the City: (1) wildfires, (2) wildland-urban interface fires, and to a lesser extent (3) structural fires.

### Wildfires

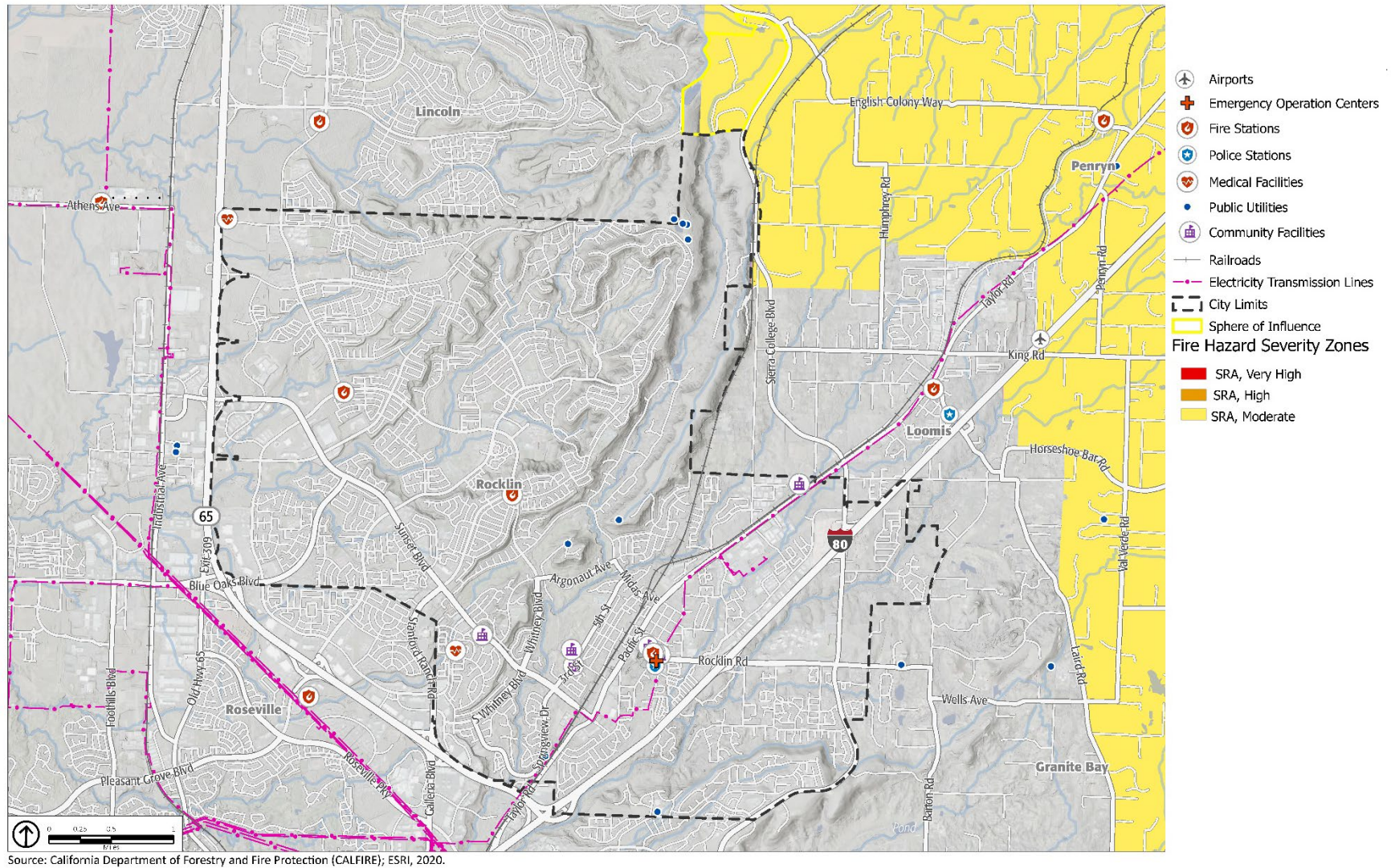
Wildfires occur on mountains, hillsides, and grasslands. Vegetation, wind, temperature, humidity, and slope are all factors that affect how these fires spread. In the planning area, grassland, shrubbery, and dead oak trees provide fuel that allows fire to spread easily across large tracts of land. The climate of the Rocklin region keeps the grass dry and more readily combustible during fire season. Seasonal drought conditions and tree mortality due to insect infestation exacerbate fire hazards. Although it is not currently mapped as a wildfire hazard severity zone, as discussed below, there is potential for wildfires in and around the open space areas in Rocklin.

### Wildland-Urban Interface Fires

The wildland-urban interface is an area where buildings and infrastructure (e.g., cell towers, schools, water supply facilities) mix with areas of flammable wildland vegetation. This interface is sometimes divided into the defense zone (areas in close proximity to communities, usually about a quarter-mile-wide) and threat zones (an approximately one and a quarter-mile buffer around the defense zone). Wildfires and urban interface fires have occurred close to or encroached into the City, especially in large areas of grassland. In the wildland-urban interface, efforts to prevent ignitions and limit wildfire losses hinge on hardening structures and creating defensible space through a multi-faceted approach, which includes engineering, enforcement, abatement, education, emergency response, and economic incentive. Different strategies in the defense and threat zones of the wildland-urban interface help to limit the spread of fire and reduce the risk to life and property.

The California Department of Forestry and Fire Protection (CAL FIRE) classifies land into fire hazard severity zones (FHSZs)—urban unzoned, non-wildland/non-urban, moderate, high, and very high. CAL FIRE does not currently classify moderate and high FHSZs in incorporated communities like Rocklin, although as discussed previously, some parts of the community may still face an elevated wildfire risk. Figure 4-13b shows the wildfire hazard severity zones in and around Rocklin. The highest threat occurs outside of Rocklin to the north and east of the City, between Sucker Ravine and Secret Ravine, on land that is generally undeveloped with large areas of dry grass.

Figure 4-13b: Fire Hazard Severity Zones



## Structural Fires

Structural fires occur in non-commercial and commercial buildings within the city. These fires are often deemed “unintentional” with causations that include lack of maintenance, negligence, and equipment failure. However, the city has experienced “intentional” fires (arson) in buildings that have led to increased fire spread, but these types of fires are rare. Fire spread within buildings increases based on several factors that include construction type, fire load, and presence of detection and suppression systems. The City of Rocklin uses the California Fire Code (CFC) standards to reduce fire spread, loss of life, and property.

## Past Occurrences

Some historical fires have occurred within and near the city limits of Rocklin. Notably, in 2002, the Sierra Fire started in Rocklin and moved into the communities of Loomis and Granite Bay near I-80, ultimately burning 595 acres. Following is a list of historical fires that have occurred around Rocklin dating back to 1975. Figure 4-13c shows the areas burned by historic wildfires in and around Rocklin.

**1990 Placer County Fire.** This fire burned approximately 300 acres of grass, brush, and oaks in Placer Canyon. The fire resulted in evacuations and destroyed several outbuildings.

**2000 Heather Glen Fire.** The Heather Glen Fire, caused by sparks from a lost trailer wheel along (I-80, destroyed one home and forced a neighborhood evacuation in Applegate. While only 10 acres in size, this fire resulted in \$350,000 in damage.

**September 2002 Sierra Fire.** The Sierra Fire started in Rocklin and moved into the communities of Loomis and Granite Bay. It burned approximately 595 acres of grass, brush, and oaks burned near I-80, Barton Road, Wells Avenue, Morgan Place, Indian Springs, and Cavitt-Stallman Road. The fire destroyed six structures and threatened two schools.

**September 2006 Ralston Fire.** The Ralston Fire was a large wildfire in the area of the North Fork of the Middle Fork of the American River. Although approximately 8,400 acres burned, there was no record of major property damage.

**September 2008 Gladding Fire.** The wind-driven fire started northeast of Lincoln and consumed approximately 960 acres, 6 residences, and 10 outbuildings.

**September 2009 49 Fire.** The wind-driven fire started near SR-49 and Rock Creek Road near Auburn. The fire was in a well-developed area and spread very quickly, burning 343 acres before being contained. The fire destroyed 63 residences and 3 commercial buildings and severely damaged 3 residences and 6 commercial properties. The damages were concentrated in neighborhoods east and south of Dry Creek Road. Three people were injured in the wildfire.

**2014 Applegate Fire.** This fire occurred on the east side of I-80 in the Applegate area of Placer County. The fire started on October 8, 2014, and its cause was unknown. The fire burned 459 acres before containment. Six residences and four outbuildings were destroyed. Two injuries were reported; however, no deaths were reported.

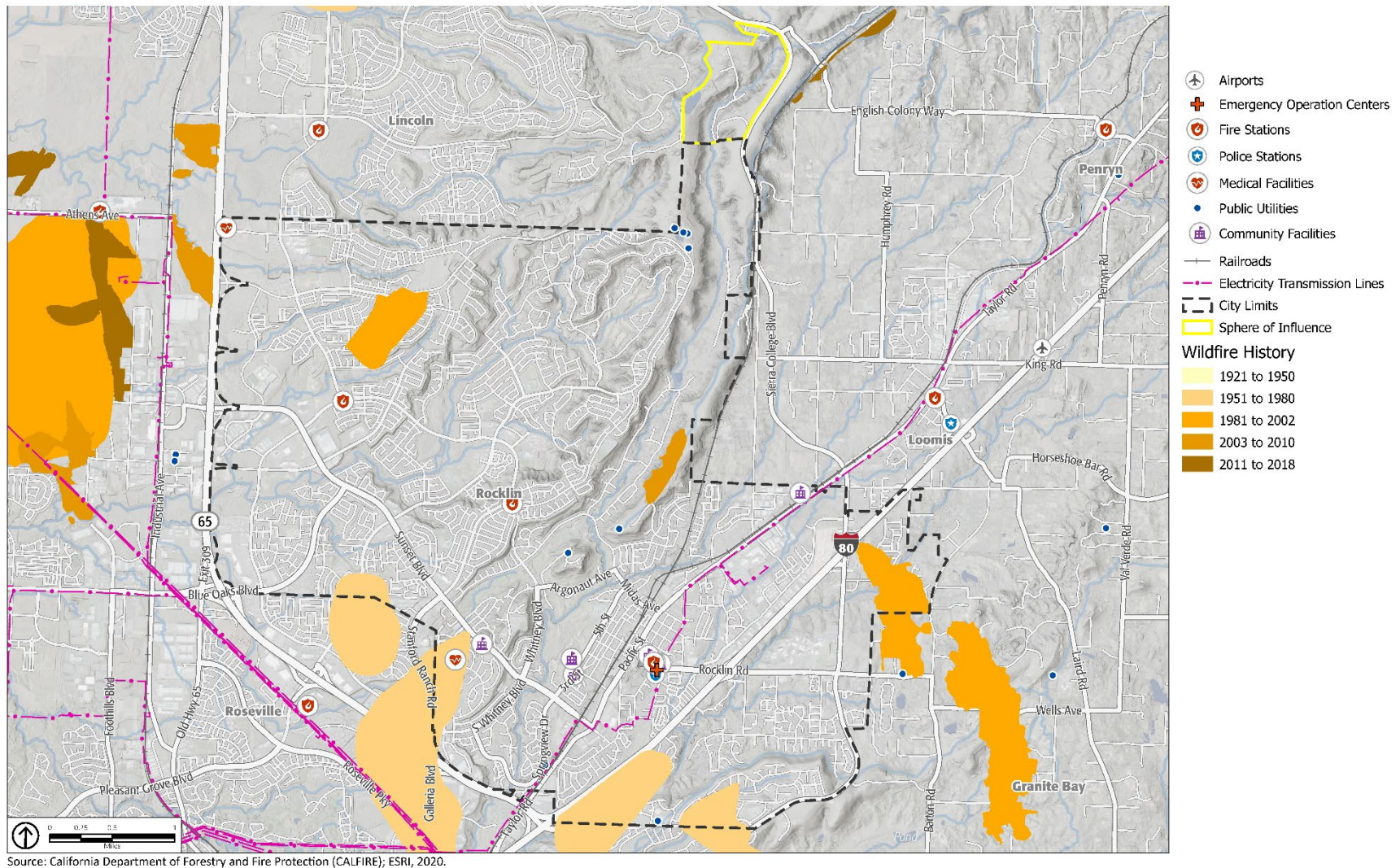


**2016 Trailhead Fire** – The Trailhead Fire burned 5,646 acres in the Middle Fork American River Canyon, spanning both Placer County and El Dorado County. The wildfire forced widespread evacuations and threatened over 2,600 structures. Two injuries were reported; however, no deaths were reported. No structures were destroyed or damaged.

**2018 Sunset Fire** – The Sunset Fire was a grass fire that occurred off Sunset Boulevard, northwest of Roseville in Placer County. Though no evacuations were ordered, the fire burned approximately 695 acres.

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Figure 4-13c: Rocklin Wildfire History



## Potential Changes to Fire Risk in Future Years

### Likelihood of Future Occurrence

Highly Likely — The wildfire season in the Sierra foothills typically lasts mid-June through early-October. Extreme weather conditions during periods of low humidity, low fuel moisture, and high winds also contribute to the severity of any potential wildfires. Fires occurring during these times typically burn hot and fast and are difficult to control unless initial suppression occurs immediately. While the major fire threat in the city is related to urban development, annexations in recent decades incorporated large areas of grassland and oak woodlands subject to wildfire. These areas include Clover Valley Lakes, the southern end of China Garden Road, portions of Whitney Oaks, the Croftwood/Dias Lane area, the Sunset Ranchos and various open-space easements and recreational properties. Dry grass in these areas are highly susceptible to wildfires that can move quickly if accompanied by a stiff breeze.

### Climate Change and Wildfire

Changing climate conditions are expected to increase the wildfire risk in and around Rocklin. Warmer temperatures brought on by climate change can exacerbate drought conditions. Droughts can kill or dry out plants, creating more fuel for wildfires. Warmer temperatures are also expected to increase the number of pest outbreaks, such as the western pine beetle, creating more dead trees and increasing the fuel load. Due to warmer temperatures, the fire season is also likely to begin earlier in the year and extend later than it has historically.

## Fire Protection

Fire protection in the planning area is provided by the City of Rocklin Fire Department. Fire protection outside the planning area is provided by Placer County, under a contract with CAL FIRE.

The City of Rocklin Fire Department participates in the Western Placer County Fire Chief's Association Cooperative Response Agreement, where fire agencies have agreed to automatically support each other on incidents using the closest available resource concept. All Placer County fire agencies are signatory agencies to the agreement, with the closest to Rocklin being Roseville, Lincoln, South Placer, CAL FIRE (Placer County Fire), Penryn, Newcastle, and Auburn. In addition, the Rocklin Fire Department has separate automatic aid agreements with Roseville, Lincoln, South Placer, and CAL FIRE.

The Rocklin Fire Department provides fire protection, emergency medical services, and disaster preparedness and response. Administrative offices for the Fire Department are located at 4060 Rocklin Road. The Fire Department has three fire stations at the following locations:

- Fire Station No. 23 is located at 4060 Rocklin Road and houses the following emergency equipment:
  - Type 1 Structure Engine
  - Reserve Type I Structure Engine
  - Foam Unit
  - Type 3 Wildland Engine
  - Breathing Support Unit

- Fire Station No. 24 is located at 3401 Crest Drive and houses the following emergency equipment:
  - 100-foot Tractor Drawn Tiller Truck,
  - Reserve Ladder Truck.
  - Type 3 Wildland Engine
  - Reserve Type 1 Structure Engine
  - Battalion Chief
  - Reserve Battalion Chief Response vehicle
- Fire Station No. 25 is located at 2001 Wildcat Boulevard Drive and houses the following emergency equipment:
  - Type 1 Structure Engine
  - Type 3 Wildland Engine.

The City is currently analyzing the possible need for construction of a fourth station when it has adequate funding for construction and staff needs.

## DROUGHT

A drought is a long period when precipitation levels are well below normal. This makes less water available for people (especially if the local water supply depends on surface water) and natural systems. The City of Rocklin may experience water shortages during drought conditions, which could lead to mandatory water use restrictions. Farmers may need to cut back on irrigation activities, and ranchers may need to reduce their number of livestock, which may affect agricultural operations near Rocklin. Less snow falling in mountainous areas causes water levels in lakes and reservoirs to drop, which can affect water supplies and recreation activities. Local ecosystems that are not well adapted to drought conditions can be more easily harmed by it. During drought events, the flow of water in creeks and streams is reduced, creating more slow-moving or standing water. This can concentrate sediment and toxins in the low water levels, causing harm to plants and animals. Many fish species also prefer specific stream-flow speeds, especially for spawning and egg incubation, and changes to stream velocity and temperature as a result of drought conditions can affect reproduction. Droughts can also indirectly lead to more wildfires, and the stress caused by water shortages can weaken plants, making them more susceptible to pests and diseases.

## Potential Changes to Drought in Future Years

### Likelihood of Future Occurrence

Likely — Drought is different than many of the other natural hazards in that it is not a distinct event and usually has a slow onset. Drought can severely impact a region both physically and economically. Drought affects different sectors in different ways and with varying intensities. Adequate water is the most critical issue for agricultural, manufacturing, tourism, recreation, and commercial and domestic use. As the population in the city continues to grow, so will the demand for water.

Droughts are regular events throughout California, although the periods of significant drought can vary in duration and frequency. Although an area may be under an extended dry period, determining when it becomes a drought is based on impacts to individual water users.



### Climate Change and Drought

Although droughts are a regular feature of California's climate, scientists expect that climate change will lead to more frequent and more intense droughts statewide. Overall, precipitation levels are expected to stay similar, and may even increase in some places. However, the state's current data say that there will be more years with extreme levels of precipitation, both high and low, as a result of climate change. This is expected to cause more frequent and intense droughts compared to historical norms. Higher air temperatures are expected to increase evaporation, causing more water loss from lakes and reservoirs, exacerbating drought conditions.

Drought conditions will also likely be made worse by changes to Placer County's snowpack, which is the level of accumulated snow that builds up in the Sierra Nevada. Usually this snow melts slowly over the year, helping to provide a regular supply of water during dry months. However, because of climate change, less precipitation is expected to fall as snow, leading to a smaller snowpack. More precipitation falling as rain and warmer temperatures over the course of the year are expected to cause the snowpack that does build up to melt faster. This may make water levels particularly low in late summer and early autumn, which are also often the hottest parts of the year.

### **SEVERE WEATHER**

Severe weather includes strong winds, hail, and lightning. Severe weather is usually caused by intense storm systems, although types of strong winds can occur without a storm. The types of dangers posed by severe weather vary widely and may include injuries or deaths, damage to buildings and structures, fallen trees, roads and railways blocked by debris, and fires sparked by lightning. In Placer County, most severe weather is linked to high winds. Hail events are rare, and there have been no reported injuries from hail in Rocklin. Lightning happens occasionally, although there has been no direct injury or damage from lightning reported in Rocklin.

### **Potential Changes to Severe Weather in Future Years**

#### Likelihood of Future Occurrence

Likely — Information is limited regarding the severe weather events that impact the City of Rocklin. In general, any severe storm that affects Placer County has local effects in Rocklin as well. Thunderstorms, high winds, hail, and lightning can each have localized impacts on infrastructure, properties, and public safety. Transportation, including freight shipping, faces increased congestion when severe storms occur.

### Climate Change and Severe Weather

Climate change is expected to cause an increase in intense rainfall, which is usually associated with strong storm systems. This means that Rocklin could see more intense storms in the coming years and decades. Such an increase may not affect all forms of severe weather and may not always be apparent. For example, hail is rare enough in Rocklin that even if it does become more common, the increase and any effects may not be apparent.



## EXTREME HEAT

While there is no universal definition of extreme heat, California's State Hazard Mitigation Plan identifies extreme heat as temperatures that are hotter than 98 percent of the historical high temperatures for the area, as measured between April and October of 1961 to 1990. Days that reach this level are called extreme heat days. An event with five extreme heat days in a row is called a heat wave. Extreme heat is any period when the temperatures are well above the usual level. This level is relative to the area. In Rocklin, the extreme heat threshold is 105 degrees Fahrenheit (°F).

Health impacts are the primary concern with this hazard, although economic impacts are also an issue. In a normal year, about 175 Americans succumb to the demands of summer heat. In the 40-year period from 1936 through 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the heat wave of 1980, more than 1,250 people died.

Elderly persons, small children, and persons with chronic health conditions are particularly susceptible to heat reactions. The elderly and individuals below the poverty level are the most vulnerable to extreme heat. Nursing homes and elder care facilities are especially vulnerable to extreme heat events if power outages occur and air conditioning is not available. In addition, individuals below the poverty level may be at increased risk to extreme heat if use of air conditioning is not affordable. Extreme heat can also affect the agricultural industry.

### Potential Changes to Extreme Heat in Future Years

#### Likelihood of Future Occurrence

Likely — Extreme heat occurs on an annual basis, most commonly at the peak of the summer season. As Rocklin is in the foothills of Placer County at relatively low elevation, extremely high temperatures will continue to be a more common occurrence than cold temperatures.

#### Climate Change and Extreme Heat

The warmer temperatures brought on by climate change are likely to cause an increase in extreme heat events. The number of extreme heat days is expected to rise. Rocklin historically experiences four days each year where temperatures meet or exceed the extreme heat threshold of 105°F. According to the state Cal-Adapt database, the number of annual extreme heat days in Rocklin is projected to increase to 24–32 days by the middle of the century, and as many as 50 days by the end of the century. Similarly, extreme heat days are expected to occur earlier and later in the year than they have historically. As temperatures increase, Rocklin will face increased risk of death from dehydration, heat stroke, heat exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

## CLIMATE CHANGE

Changes to the global climate system are expected to affect future occurrences of natural hazards in and around Rocklin. Many hazards are projected to become more frequent and more intense in coming years and decades, and in some cases, these trends have already begun. According to *California's Fourth Climate*

*Change Assessment*<sup>1</sup> and associated reports and the *Placer County Sustainability Plan*,<sup>2</sup> Rocklin can expect the following changes to natural hazard events:

- Both droughts and floods are expected to become more frequent as periods of very high and very low precipitation become more common. Warmer temperatures are expected to increase melting of snow in the Sierra during spring, which may also contribute to greater flooding at that time of year. This may also make less water available later in the year, increasing the risk of drought potential in the late summer and autumn.
- Warmer temperatures are projected to cause an increase in extreme heat events, which for Rocklin is any day where the high temperature exceeds 105°F. Historically, extreme heat days occur on average four times a year. By 2050, such events may occur 24 to 32 times each year on average and may occur more than 50 times annually by the end of the century.
- The area around Rocklin is expected to see an increase in wildfires due to hotter, drier weather. Although the risk is greatest in the forested areas of the Sierra Nevada and local foothills, Rocklin may still experience an increase in local wildfire activity. More frequent regional wildfires may also create poor air quality in Rocklin even if the community itself is not damaged by fire.
- Severe weather events, such as strong storms and high winds, may become more frequent and more intense due to climate change. Heavy rainfall may also contribute to an increased risk of minor landslides in the hills around Rocklin.
- Pests and diseases may be active for longer periods of time due to warmer temperatures. Changes in temperature and precipitation patterns may cause pests and diseases that have historically not been present in Rocklin to be more prominent in the community. This includes pests and diseases that are a threat to human health as well as those that may affect public and private landscaping and local wild ecosystems.

Under California law, the safety element is required to include a vulnerability assessment that looks at how people, buildings, infrastructure, and other key community assets may be affected by climate change. The City conducted a vulnerability assessment in the autumn of 2020, which built off the 2018 vulnerability assessment prepared for the *Placer County Sustainability Plan*, to analyze Rocklin's susceptibility to climate-related hazards. The City of Rocklin's vulnerability assessment, prepared in accord with the most recent available guidance in the *California Adaptation Planning Guide*, assesses how seven different climate-related hazards (drought, extreme heat, flooding, human health hazards, landslides and debris flows, severe weather, and wildfire) may affect 47 different population groups and community assets. Each population or asset received a score of V1 (minimal vulnerability) to V5 (severe vulnerability) for each climate-related hazard. Some of the key results of the vulnerability assessment are:

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<sup>1</sup> Bedsworth, Louise, Dan Cayan, Guido Franco, Leah Fisher, Sonya Ziaja. (California Governor's Office of Planning and Research, Scripps Institution of Oceanography, California Energy Commission, California Public Utilities Commission). 2018. *Statewide Summary Report. California's Fourth Climate Change Assessment*. Publication number: SUMCCCA4-2018-013.

<sup>2</sup> County of Placer. 2020. *Placer County Sustainability Plan*. Adopted January 28, 2020: Resolution 2020-019. Prepared by: Placer County Community Development and Resource Agency, PlaceWorks, Sierra Business Council, Fehr & Peers.

- Persons who are already among the most vulnerable in society are expected to face the greatest hardship from climate-related hazards. This includes persons in poverty, persons experiencing homelessness, senior citizens living alone, and persons with chronic health conditions.
- Electrical transmission lines, bridges, and major roads and highways are the most vulnerable infrastructure systems. Transmission lines are most at risk from extreme heat, severe weather, and wildfire. Bridges and major roads and highways in Rocklin are highly vulnerable to flooding and severe weather.
- The buildings most at risk from climate-related hazards are private homes, which face the greatest threat from wildfires.
- While all sectors of the local economy can be disrupted by climate-related hazards, outdoor recreational activities face the greatest potential for harm, particularly from extreme heat and wildfire.
- Local riparian areas, wetlands and vernal pools, and oak woodlands are the ecosystems with the greatest potential for harm from climate change. Riparian areas and wetlands and vernal pools face a substantial threat from drought and extreme heat. Riparian areas are also threatened by severe weather, and oak woodlands may be substantially harmed by drought.
- Among the key community services in Rocklin, energy delivery services and emergency medical response, have the potential to face the more significant disruptions from climate-related hazards. Emergency medical response may be most harmed by human health hazards, while energy services face a threat from extreme heat, severe weather, and wildfire.

The CSE includes goals, policies, and actions to increase community resilience and help lower vulnerability scores, particularly for the populations and assets that received a score of V4 or V5 in the vulnerability assessment. **Appendix 4D-A-1** shows the full results of the vulnerability assessment for Rocklin.

### 3. COMMUNITY SAFETY ELEMENT GOALS AND POLICIES

**GOAL FOR COMMUNITY SAFETY:** To minimize danger from hazards and to protect residents and visitors from earthquake, fire, flood, other natural disasters, climate-related hazards, and human-created hazards such as train derailment, industrial accidents, acts of war or terrorism, and accidental release of hazardous materials.

#### GENERAL POLICIES

- S-1 Require engineering analyses of new development proposals in areas with possible soil instability, flooding, earthquake faults, or other hazards, and require that development in such areas are designed and built to minimize the risk to human health and property damage.
- S-2 Maintain a City Emergency Operations Plan to include the National Incident Management System (N.I.M.S.).
- S-3 Coordinate with local and State Emergency Management agencies using the Standardized Emergency Management System (S.E.M.S.) and National Incident Management System (N.I.M.S.) to facilitate multi-agency emergency response.
- S-4 Review identified evacuation routes and shelter locations for use in case of disasters or emergencies, and as needed revise the Emergency Operations Plan and other emergency planning efforts to ensure that evacuation routes and shelter locations continue to meet community needs.
- S-5 Maintain appropriate standards for minimum road widths and turnarounds.
- S-6 Coordinate with local, regional, state, and federal agencies regarding homeland security, recognizing the City's role as first responder to local incidents.
- S-7 Ensure that all public services, municipal operations, and critical facilities can continue operating during and after a hazard or emergency event to meet community needs to the greatest extent possible.
- S-8 Conduct public outreach and education efforts to inform people in Rocklin of the hazard risks, vulnerabilities, and threats in the community, and what steps community members should take to reduce their risks. Provide materials and information in languages other than English if requested.
- S-9 Coordinate with utility companies to minimize service interruptions, such as Public Safety Power Shutoffs, before, during, and after hazardous conditions, including options to harden and underground utility lines.
- S-10 Review and as needed update the Community Safety Element and associated emergency management and hazard mitigation plans regularly, at a minimum of every eight years, to incorporate updated science and other relevant information.

- S-11 Ensure that communication systems used by emergency responders and key City staff have sufficient redundancy and resiliency, including, but not limited to, cell phones and other technologies, to meet City needs during and after a hazard event.
- S-12 Ensure that the City uses and enforces the most up-to-date version of the California Building Code with applicable local amendments.
- S-13 Reinforce all City-owned assets and sets of infrastructure at risk of being impacted by current and future hazard risks.

## FLOODING POLICIES

- S-14 Coordinate with the Placer County Flood Control and Water Conservation District and other appropriate entities to maintain locally and regionally effective strategies for the planning, construction, operation, and maintenance of drainage and flood-control facilities.
- S-15 Maintain and implement the City's Ordinance regarding "Flood Hazard Areas" (Chapter 15.16 of the Rocklin Municipal Code as of November 2020).
- S-16 Ensure that new development and infrastructure projects do not create or exacerbate flood risks elsewhere in Rocklin or in neighboring communities and that new development does not result in on-site flooding or increase flooding of off-site properties.
- S-17 Require that new development detain on-site drainage such that the rate of runoff flow is maintained at pre-development levels, except where detention is not recommended in plans and policies adopted by the Placer County Flood Control and Water Conservation District (PCFCWCD), and to require coordination with other projects' master plans to ensure no adverse cumulative effects. In lieu of detention, the City may require retention and/or off-site drainage improvements that are more beneficial to the community's overall drainage system.
- S-18 Require new development to annex into an existing drainage maintenance district where warranted.
- S-19 Require all new residential development to have the ground floor located above the 100-year flood base elevation.
- S-20 Encourage development to incorporate environmental design features to reduce flood risks with natural drainage as well as groundwater replenishment, such as the use of permeable ground surfaces (e.g., pavers, bricks, permeable concrete, landscaping with water-absorbing plant specimens) in new developments as well as city-owned land uses, as feasible.
- S-21 Locate new public facilities and pieces of infrastructure outside of identified floodplain areas and move existing facilities and infrastructure out of floodplain areas to the greatest extent possible. If facilities and infrastructure cannot be located or moved outside of floodplain areas, the City shall design these structures to protect against flood risks.

## HAZARDOUS MATERIALS/CONTAMINATED SITES POLICIES

- S-22 Require existing and new commercial and industrial uses involving the use, handling, transport, or disposal of hazardous materials within the City to disclose their activities in accordance with local guidelines and the requirements of State law. From among these facilities, identify which of these exist within identified hazard areas. Require new facilities to be appropriately designed, sited, and constructed to minimize damage from a hazard event, and encourage existing facilities to do the same.
- S-23 Require that construction activities cease if contamination is discovered on construction projects until the contamination is reported, and its extent is assessed, delineated, and isolated, as appropriate. Remediation shall occur to the satisfaction of the appropriate responsible agency (such as the Placer County Environmental Health Services, the Central Valley Regional Water Quality Control Board, the Department of Toxic Substances Control, or the City of Rocklin, depending on the type of contamination).
- S-24 Require site-specific hazard investigations to be conducted, if determined to be necessary by the City, to confirm potentially contaminated soils prior to approval of new discretionary development projects.
- S-25 Identify the transportation routes used by vehicles transporting hazardous materials in the city and identify any critical facilities or assets whose access or operability could be compromised by a hazardous materials release event caused by a transportation incident involving hazardous materials.
- S-26 Ensure that any new facilities using, storing, or producing hazardous materials, particularly those located directly adjacent to existing residential or school uses, comply with all applicable handling, safety and disposal regulations.
- S-27 Work with Placer County Environmental Health Division to ensure that businesses prepare, file, and maintain Hazardous Materials Business Plans, as required.
- S-28 Compile and regularly update an inventory of all properties, facilities, or land uses in engaging with hazardous materials in the city, including their location, property owner's contact information, and quantities of hazardous materials on site.
- S-29 Encourage use of on-site green infrastructure to protect and enhance community water quality with landscape design (e.g., berms, grasslands, plantings) to either contain released hazardous materials or to process and/or absorb pollutants from infiltrating the soil or watershed.
- S-30 Require a risk analysis, as appropriate, when reviewing new projects located near bulk hazardous material facilities, bulk petroleum transmission pipelines, and railroad travel routes.

## FIRE HAZARD POLICIES

- S-31 Require new development and projects proposing land use changes to annex into existing or new Community Facilities Districts for fire prevention/suppression and medical response, or to create other financing mechanisms, as necessary.
- S-32 Require substantially vacant newly annexed areas containing wildland fire potential to bear additional costs associated with contracting to CAL FIRE for fire suppression or provide other means of mitigation approved by the Fire Department until such time as urban services become available.
- S-33 Incorporate fuel modification/fire hazard reduction planning (e.g., weed abatement, open space management plans, firebreaks, planting restrictions) on lands (both public and private) that contain terrain and vegetative features such as grass, woodlands, and severe slopes. Require fuel modification and fire hazard planning for new developments containing wildland fire potential.
- S-34 Maintain inter-jurisdictional cooperation and coordination, including automatic aid agreements with fire protection/suppression agencies in Placer County.
- S-35 Provide adequate firefighting infrastructure and safety design, including peak-load water supply, safe access routes for emergency vehicles, a minimum of two entry and exit points, or approved equivalent, in all residential communities, and legible street signs during all conditions across the city.
- S-36 Site all new public facilities in areas outside of identified fire hazard severity zones and wildland urban interface or fire threat areas, as feasible.

## SEISMIC AND GEOLOGIC HAZARD POLICIES

- S-37 Provide for seismic safety and structural integrity in residential, commercial, industrial, and public facilities through Building Code enforcement.
- S-38 Require site-specific geotechnical studies of development proposals in areas subject to landslide potential, erosion, and/or slope instability.

## CLIMATE-RELATED HAZARD POLICIES

- S-39 Collaborate with other cities, unincorporated communities, and special districts in Placer County as well as with Capital Region Climate Readiness Collaborative to develop and implement regional climate change adaptation and resilience initiatives.
- S-40 Use the reported data and findings of applicable local, regional, or state documents or plans pertaining to climate change and climate-related hazards to update the Community Safety Element and other appropriate planning efforts. Such documents or plans may include the California Climate Change Assessment, the California Adaptation Planning Guide, and the Safeguarding California plan.



- S-41 Develop a municipal network of resilience hubs, outside of any areas of elevated hazard risk to the greatest extent possible, that can serve as shelters and resource centers during and after hazard events (e.g., flood inundation, fire hazards, extreme heat days, etc.).
- S-42 Prepare for a reduced, long-term water supply resulting from more frequent and severe drought events.
- S-43 Engage with the Placer Mosquito and Vector Control District as well as the Placer County Department of Public Health to prepare for increased episodes of vector-borne diseases in Rocklin and the surrounding area.
- S-44 Renovate existing city-owned assets and design future facilities to incorporate renewable energy generation systems, battery storage systems, and energy-efficient design and features, as feasible.
- S-45 Encourage new developments and existing property owners to incorporate sustainable, energy-efficient, and environmentally regenerative features into their facilities, landscapes, and structures to reduce energy demands and improve on-site resilience.
- S-46 Work with appropriate entities to ensure that unhoused persons or groups in Rocklin have access to temporary and/or emergency housing, food, and other essential living materials to keep them safe during anticipated hazard events.
- S-47 Ensure that senior populations in Rocklin have access to information to help them improve their homes against certain hazards such as extreme heat or vector-borne diseases that threaten them particularly.
- S-48 Ensure that lower-income households have access to information regarding low-cost programs (e.g., subsidies for National Flood Insurance Program participation, air-conditioning, low-cost healthcare) to improve their homes and/or protect their wellbeing from climate-related hazards.
- S-49 Utilize natural resources and infrastructure to absorb the impacts of climate change, as feasible.

## OTHER HAZARD POLICIES

- S-50 Require quarry safety protection measures prior to the development of any property containing or bordering on an existing quarry. The quarry safety protection measures shall identify public safety hazards associated with quarries and shall specify the protection methods that will be implemented to ensure public safety.
- S-51 Reduce the exposure of sensitive receptors to potential health risks from toxic air contaminants (TACs).



## COMMUNITY SAFETY ELEMENT ACTION PLAN

Please refer to the City of Rocklin General Plan, Chapter II, *Summary of Goals and Policies and Action Plans*, for the Community Safety Element Action Plan.

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# PUBLIC REVIEW DRAFT COMMUNITY SAFETY ELEMENT

## APPENDIX 4D-A-1: VULNERABILITY ASSESSMENT RESULTS

The following table shows the results of the vulnerability assessment prepared for the City of Rocklin, in accordance with the requirements of Senate Bill 379. For each population or asset that may be vulnerable to each climate-related hazard, the population or asset is scored on a vulnerability scale of V1 to V5:

V1: Minimal vulnerability

V2: Low vulnerability

V3: Moderate vulnerability

V4: High vulnerability

V5: Severe vulnerability

The vulnerability scores reflect both the severity of climate-related impacts and the ability of populations and assets to resist and recover from these effects. Refer to the “Climate Change” section of the Community Safety Element for additional details on the vulnerability assessment method.

## Public Review Draft Community Safety Element

	Drought	Extreme Heat & Warm Nights	Flooding	Human Health Hazards
<b>Populations</b>				
Children (under 10)	-	V4	V3	V3
Cost-burdened households	V3	V3	V3	V3
Households in poverty	V4	V4	V5	V4
Immigrants and refugees	-	V4	V3	V4
Outdoor workers	V3	V4	-	V4
Persons experiencing homelessness	-	V5	V5	V5
Persons in overcrowded households	-	V2	V2	V3
Persons with chronic health problems	-	V4	V3	V4
Persons with disabilities	-	V3	V3	V3
Persons without access to lifelines	-	V3	V4	V3
Renters	-	V3	V3	V3
Senior citizens	-	V4	V3	V3
Senior citizens living alone	-	V5	V4	V4
<b>Infrastructure</b>				
Biking routes	V2	-	V2	-
Bridges	-	-	V5	-
Electrical substations	-	V3	-	-
Electrical transmission lines	-	V4	V2	-
Electric vehicle charging stations	-	-	-	-
Evacuation routes	-	V2	V4	-
Flood control infrastructure	-	-	V3	-
Major roads and highways	-	V2	V4	-
Natural gas facilities	-	-	V3	-
Parks and open space	V3	V1	V1	-
Rail lines	-	V3	V3	-
Transit stops	-	-	V1	-
Water and wastewater infrastructure	V2	V1	V3	-

## Public Review Draft Community Safety Element

	Drought	Extreme Heat & Warm Nights	Flooding	Human Health Hazards
<b>Buildings</b>				
Commercial Centers	-	V2	V2	-
Community facilities	-	V2	-	-
Government offices	-	V1	-	-
Homes	-	V3	V3	-
Library	-	V2	-	-
Medical facilities	-	V2	-	-
Public safety buildings	-	V1	-	-
Schools	-	V3	V3	-
<b>Important Economic Assets</b>				
Major employers	-	V2	V3	V3
Education services	-	V3	V3	V3
Outdoor recreation	V1	V4	V2	V2
<b>Ecosystems and Natural Resources</b>				
Grassland	V3	V2	V2	-
Oak woodlands and oak savannah	V3	V3	V2	-
Riparian and streams	V5	V4	V3	-
Wetlands	V4	V4	V1	-
<b>Key Community Services</b>				
Communication	-	V3	V1	-
Emergency medical response	-	V2	V3	V4
Energy delivery	V2	V4	V2	-
Freight and shipping	-	V1	V2	V3
Public safety response	-	V2	V3	V2
Water and wastewater	V3	V1	V2	-



## Public Review Draft Community Safety Element

	Landslides and Debris Flows	Severe Weather	Wildfire
<b>Populations</b>			
Children (under 10)	-	V3	V3
Cost-burdened households	V2	V2	V3
Households in poverty	V2	V4	V5
Immigrants and refugees	V2	V4	V3
Outdoor workers	-	V3	V4
Persons experiencing homelessness	-	V5	V5
Persons in overcrowded households	-	V3	V3
Persons with chronic health problems	V2	V4	V4
Persons with disabilities	V3	V3	V4
Persons without access to lifelines	V2	V3	V4
Renters	V2	V2	V2
Senior citizens	V2	V3	V4
Senior citizens living alone	V3	V4	V5
<b>Infrastructure</b>			
Biking routes	V3	V2	V3
Bridges	-	V4	V1
Electrical substations	-	V2	V2
Electrical transmission lines	-	V4	V4
Electric vehicle charging stations	-	V2	V3
Evacuation routes	V2	V3	V4
Flood control infrastructure	V1	V2	-
Major roads and highways	V2	V3	V4
Natural gas facilities	-	-	V4
Parks and open space	V3	V2	V3
Rail lines	V2	V3	V2
Transit stops	-	V2	V3
Water and wastewater infrastructure	V2	V2	V3

## Public Review Draft Community Safety Element

	Landslides and Debris Flows	Severe Weather	Wildfire
<b>Buildings</b>			
Commercial Centers	-	V3	V3
Community facilities	V2	V2	V2
Government offices	-	V2	V1
Homes	V2	V3	V4
Library	-	V2	V2
Medical facilities	-	V2	V1
Public safety buildings	V2	V2	V1
Schools	V2	V3	V3
<b>Important Economic Assets</b>			
Major employers	V2	V2	V3
Education services	V1	V1	V2
Outdoor recreation	V2	V2	V4
<b>Ecosystems and Natural Resources</b>			
Grassland	-	-	V3
Oak woodlands and oak savannah	-	-	V5
Riparian and streams	-	V4	V2
Wetlands	-	-	V2
<b>Key Community Services</b>			
Communication	V2	V3	V3
Emergency medical response	V3	V3	V2
Energy delivery	V2	V4	V4
Freight and shipping	V1	V2	V2
Public safety response	V3	V3	V3
Water and wastewater	V2	V1	V3

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