

# lake elsinore general plan

# safety element

## 6.0 SAFETY ELEMENT

### 6.1 Introduction

The safety and welfare of a community and its residents are vital to its growth and quality of life. This chapter of the General Plan addresses public safety issues, including fire and police/law enforcement, and hazards within the City and its Sphere of Influence (SOI). The City recognizes the importance of addressing seismic, wildfire, flooding and other hazards and the effect of climate change on those hazards and taking preventative measures including emergency preparedness to reduce their negative effects. The focus is on maintaining a healthy and safe physical environment and ensuring community welfare through access to effective and efficient high-quality public services.

#### 6.1.1 Authority for Element

Government Code Section 65302(g) requires that a General Plan include:

A safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, military installations, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards.

Government Code Section 65302(g) also includes content requirements related to flood hazards, fire hazards, climate adaptation and resiliency strategies, and emergency evacuation routes. Local governments are also required to “review and, if necessary, revise the safety element upon each revision of the housing element or local hazard mitigation plan, but not less than once every eight years, to identify new information relating to flood and fire hazards and climate adaptation and resiliency strategies applicable to the city or county that was not available during the previous revision of the safety element.”

## 6.1.2 Local Plans

### Local Hazard Mitigation Plan.

Public safety planning generally focuses on how an agency or community members will prepare for, respond to, and/or recover from a disaster. Hazard mitigation planning focuses on how the impact of a disaster might be lessened. On September 11, 2018, the Lake Elsinore City Council adopted the Lake Elsinore Local Hazard Mitigation Plan Annex (LHMP) to the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan.

The purpose of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan is to identify the County's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and man-made hazards. The Lake Elsinore Local Hazard Mitigation Plan Annex is to focus on these topics as they relate specifically to the City.

The plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to achieve eligibility and potentially secure mitigation funding through Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance, Pre-Disaster Mitigation, and Hazard Mitigation Grant Programs.

The LHMP includes an assessment of the City's risk related to natural hazard impacts such as seismic events, drought, wildfire, extreme heat, hazardous materials, and flooding. The LHMP also includes a comprehensive set of actions the City will complete to mitigate, or reduce, the impacts of those hazards. The mitigation actions in the LHMP are included in the General Plan as a subset of the Plan's overall implementation program. The current LHMP is incorporated into this Chapter by reference.

## 6.2 Geologic and Seismic Hazards

### 6.2.1 Geologic Setting

The City of Lake Elsinore and its SOI are located in the northern part of the Peninsular Ranges Province and includes parts of two structural blocks, or structural subdivisions of the province. The Peninsular Ranges province extends from the Santa Monica Mountains approximately 900 miles south to the tip of Baja California. It is located on the Pacific (tectonic or crustal) Plate, which is moving to the northwest relative to the adjacent North American Plate. The well-known San Andreas Fault forms the boundary between the Pacific and the North American Plates. As a result, the Southern California area contains numerous regional and local faults, and experiences substantial ground movement during frequent seismic events. The Elsinore fault zone is part of the same right-lateral crustal plate strain system as the San Andreas. In the City of Lake Elsinore, the majority of the Elsinore fault zone is located under the Lake.

The Elsinore fault consists of multiple strands, a number of which are recognized as active and zoned by the State of California under the Alquist-Priolo Act. Risk of surface rupture along these zoned active traces

is substantial. Although the County has zoned additional faults as active, none of the County-zoned traces is in the immediate vicinity of the City or SOI.

The Uniform Building Code recognizes the northern portion of the Elsinore fault as a Type B seismic source (International Council of Building Officials 1997). The Elsinore fault is believed to be capable of generating earthquakes with moment magnitudes in the range of 6.5–7.5, with a recurrence interval of approximately 250 years between major events. Smaller events may occur more frequently. Thus, the City and the SOI are likely to experience repeated moderate to strong ground shaking generated by the Elsinore fault in the foreseeable future. The City and surroundings also have the potential to experience significant ground shaking as a result of seismic activity on a number of the Peninsular Ranges’ other active faults, shown in Figure 6.1, Approximate Traces of Principal Active Faults of the Peninsular Ranges and Mojave Desert Near Lake Elsinore, and Figure 6.2, Seismic Hazards.

Although the State of California has not yet issued seismic hazards maps for the Lake Elsinore area, when completed, these maps will be required to delineate areas at risk from secondary seismic hazards. Both the County General Plan and the Elsinore Area Plan delineate areas susceptible to secondary seismic hazards. The City has high potential for damage due to liquefaction and slope failure in some areas.

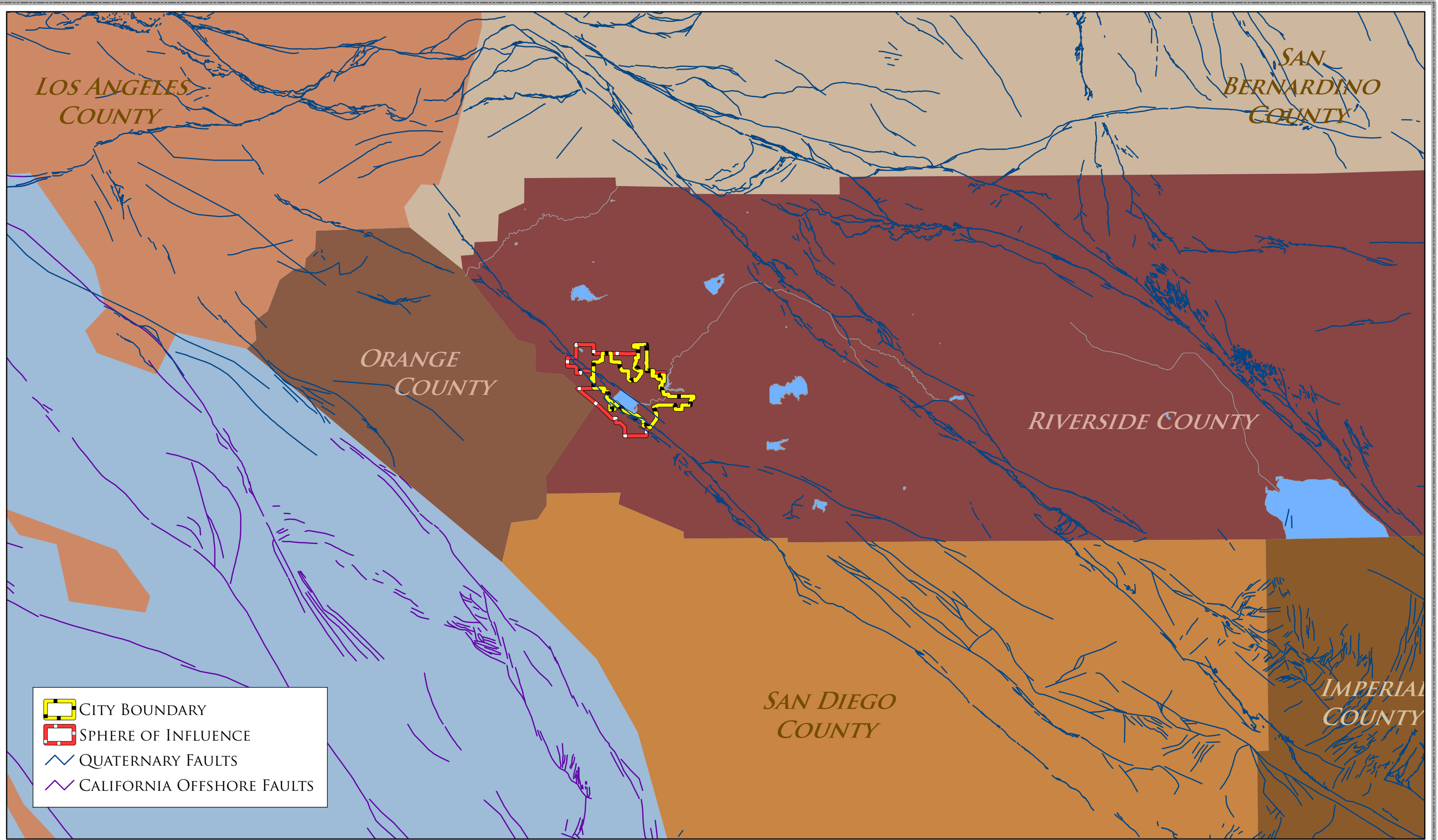
## **6.2.2 Regulatory Setting**

### **Alquist-Priolo Earthquake Fault Zoning Act (1972).**

The Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code Section 2621 et seq.) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Act requires the State Geologist to establish regulatory zones, known as “Earthquake Fault Zones,” around the surface traces of active faults and to issue appropriate maps. Earthquake Fault Zones were called “Special Studies Zones” prior to January 1, 1994. Local agencies must regulate most development projects within these zones. Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. A licensed geologist must prepare an evaluation and written report of the specific site. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (typically 50 feet setbacks are required).

### **Seismic Hazards Mapping Act (1990)**

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code Section 2690 et seq.) directs the Department of Conservation, California Geological Survey to identify and map areas prone to liquefaction, earthquake-induced landslides and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation and mitigation of seismic hazards. The State requires: (1) local governments to incorporate site-specific geotechnical hazard investigations and associated hazard mitigation, as part of the local construction permit approval process; and (2) the agent for a property seller or the seller if acting without an agent, must disclose to any prospective buyer if the property is located within a Seismic Hazard Zone.

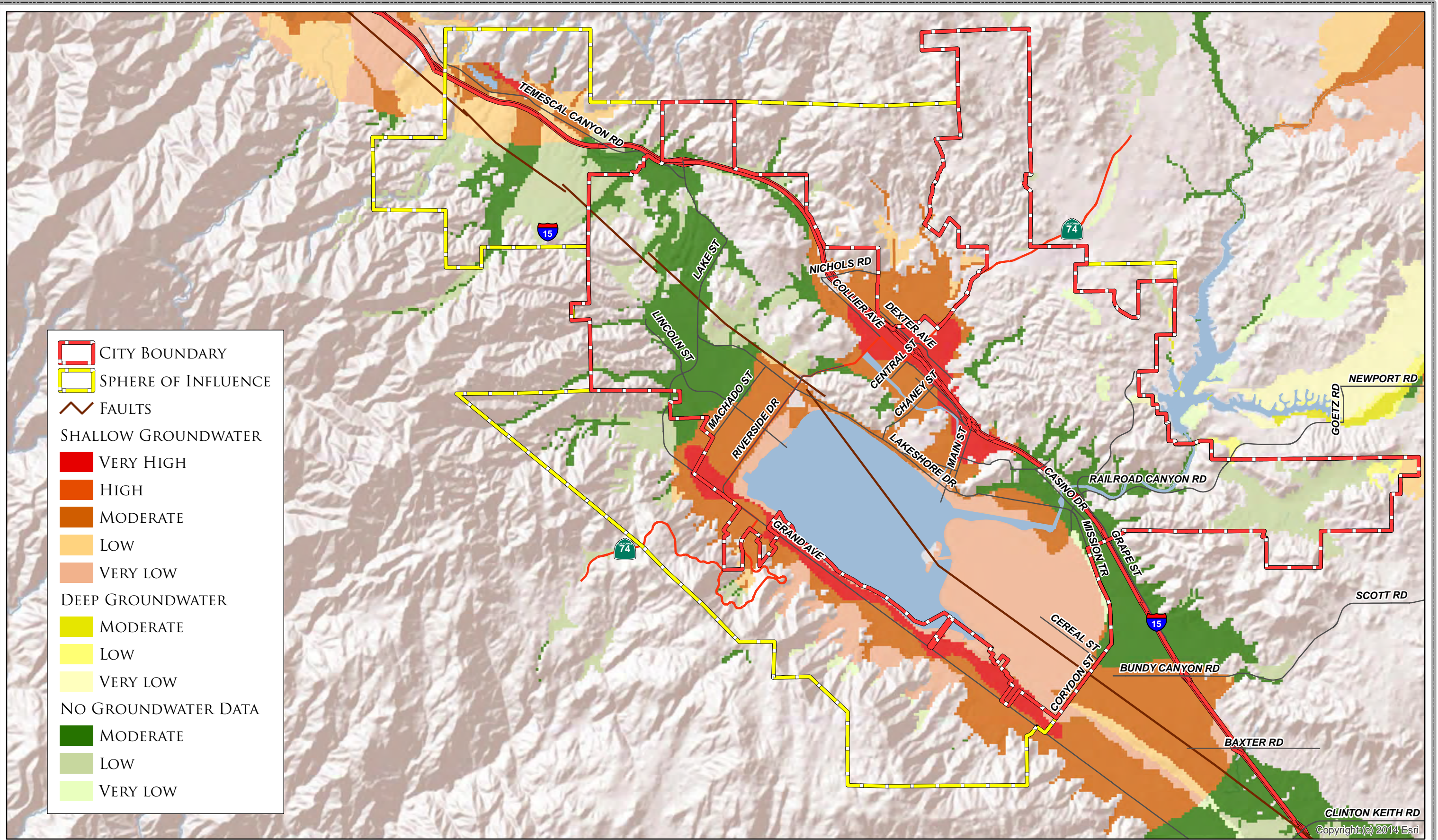


SOURCES: CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, USGS

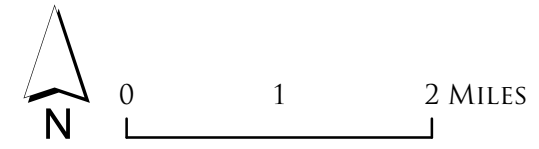


APPROXIMATE TRACES OF PRINCIPAL ACTIVE FAULTS OF THE PENINSULAR RANGES AND MOJAVE DESERT NEAR LAKE ELSINORE

FIGURE 6.1



SOURCES: CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE



CITY OF LAKE ELSINORE  
SEISMIC HAZARDS  
FIGURE 6.2

RPC 2(b)(ii)

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### 6.2.3 Secondary Seismic Hazards—Liquefaction and Ground Failure

The State of California has not yet issued seismic hazards maps for the Lake Elsinore area under the mapping program mandated by the Seismic Hazards Mapping Act. However, mapping has been completed for the adjacent Murrieta and Temecula quadrangles to the south and maps are planned for the Lake Elsinore and Wildomar quadrangles within the next decade.

The City recognizes the importance of addressing secondary seismic hazards, and has delineated areas of known and suspected liquefaction hazard. In general, liquefaction susceptibility ranges from very low in the former lake footprint to moderate on much of the remainder of the valley floor and very high in the valley floor corridor formerly occupied by the axial riverine drainage. Liquefaction potential is also very high along the area’s principal tributary drainages and on portions of the alluvial fans on the valley’s eastern margin. Figure 6.3, Liquefaction Susceptibility in Lake Elsinore Area, presents a generalized map of liquefaction potential based on data on file with the City.

### 6.2.4 Landslide and Other Slope Stability Hazards

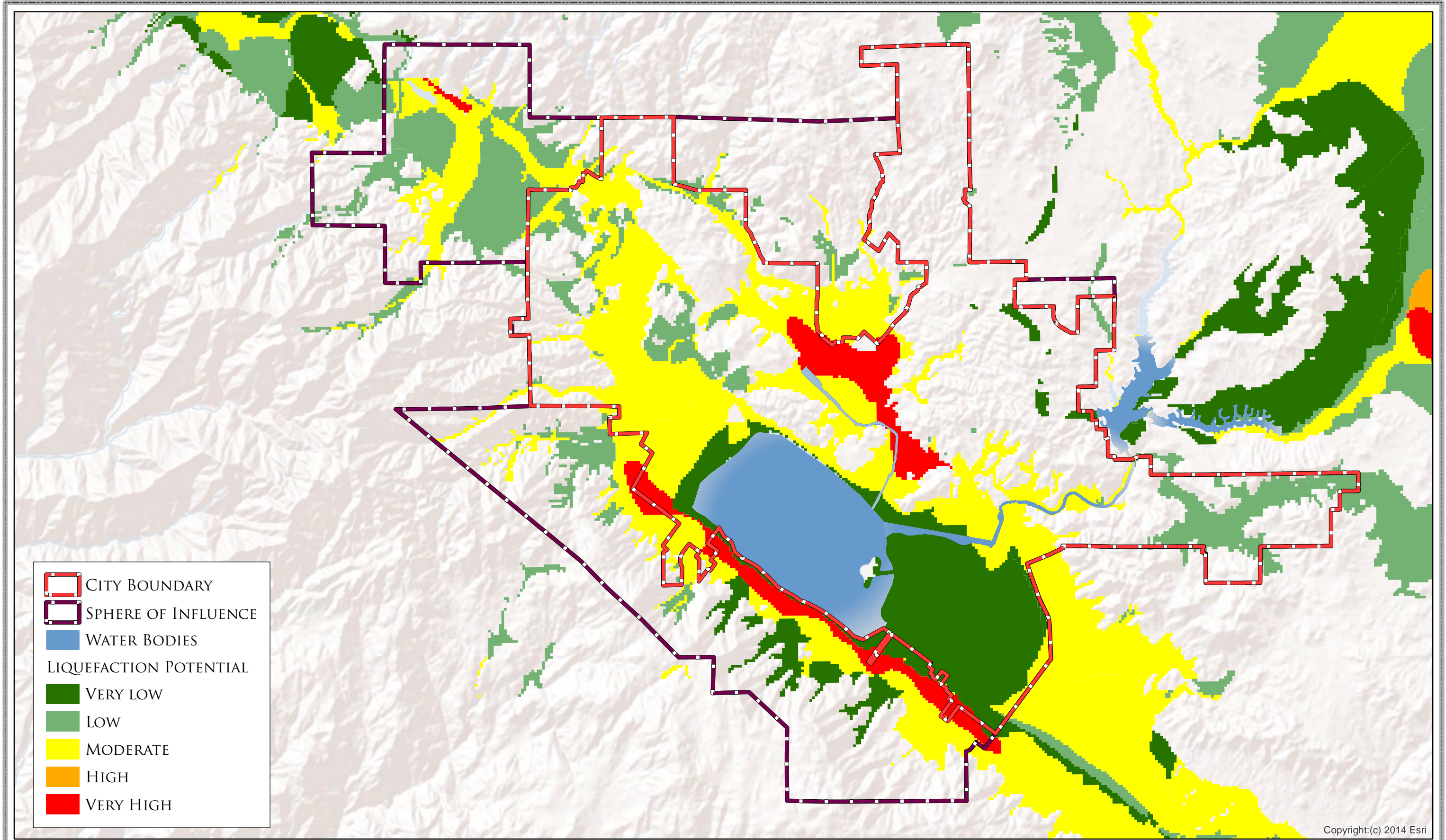
As discussed in the previous section, the State of California has not yet issued seismic hazards maps for the Lake Elsinore Area; when completed, these maps will be required to delineate areas at risk from seismically induced landslides. In the meantime, as shown in Figure 6.4, Percent Slope, a substantial proportion of the City, SOI, and surrounding area are located on slopes of 25%–35% or steeper, and much of the area is at substantial risk of seismically induced slope failure. Non-seismically induced slope failure is also a hazard in these areas, as evidenced by numerous existing landslides.









### 6.2.5 Geologic and Seismic Hazards Goal, Policies and Implementation Program

**Goal S 1** Minimize the risk of loss of life, injury, property damage, and economic and social displacement due to seismic and geological hazards resulting from earthquakes and geological constraints.

#### **Policies**

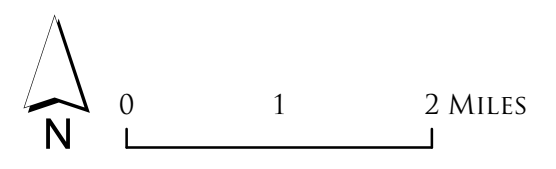
- S 1.1 Continue to make every effort to reduce earthquake-induced fire as a threat.
- S 1.2 Encourage the pursuit of federal and state programs that assist in the seismic upgrading of buildings to meet building and safety codes.



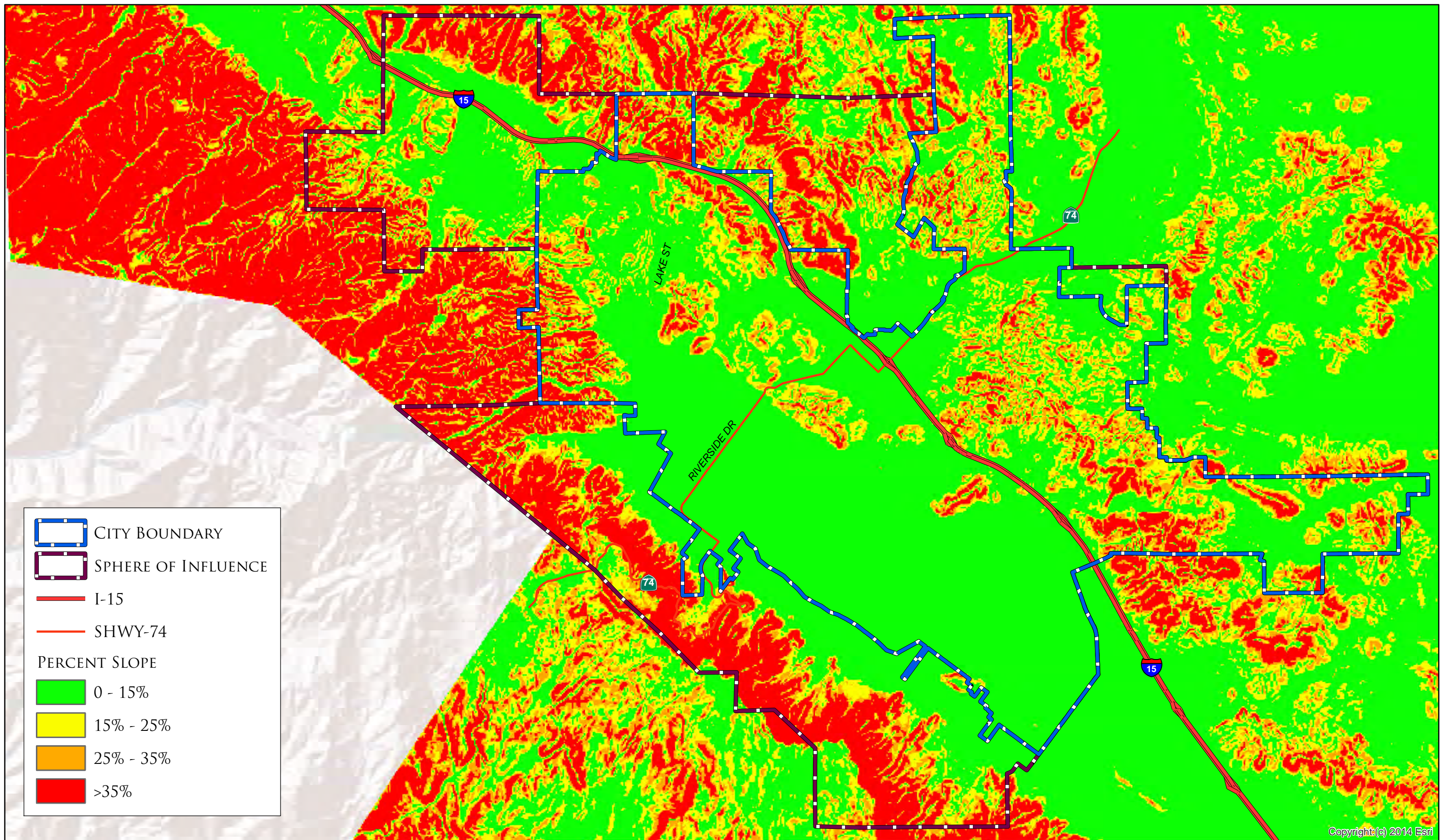
	CITY BOUNDARY
	SPHERE OF INFLUENCE
	WATER BODIES
LIQUEFACTION POTENTIAL	
	VERY LOW
	LOW
	MODERATE
	HIGH
	VERY HIGH

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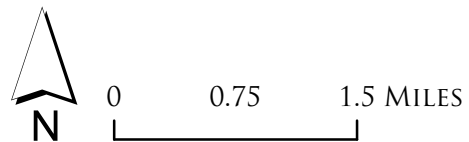
SOURCES: CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE



CITY OF LAKE ELSINORE  
 LIQUEFACTION SUSCEPTIBILITY  
 FIGURE 6.3  
 RPC 2(b)(ii)



SOURCES: CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE



CITY OF LAKE ELSINORE  
 PERCENT SLOPE  
 FIGURE 6.4

RPC 2(b)(ii)

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- S 1.3 Continue to require Alquist-Priolo and other seismic analyses be conducted for new development to identify the potential for ground shaking, liquefaction, slope failure, seismically induced landslides, expansion and settlement of soils, and other related geologic hazards for areas of new development in accordance with the Fault Rupture Hazard Overlay District adopted by the City of Lake Elsinore Zoning Code. The City may require site-specific remediation measures during permit review that may be implemented to minimize impacts in these areas.
- S 1.4 As new versions of the California Building Code (CCR Title 24, published triennially) are released, adopt and enforce the most recent codes that contain the most recent seismic requirements for structural design of new development and redevelopment to minimize damage from earthquakes and other geologic activity.

Implementation Program Through project review and the CEQA processes the City shall assess new development and reuse applications for potential hazards, and shall require compliance with Alquist-Priolo and other guidelines where appropriate.

Agency/Department Engineering and Building & Safety Departments

### 6.3 Wildfire Hazards

Much of the area to the southwest, west, and northwest within the SOI supports coastal shrub and chamise redshank chaparral. These are prime fuel sources for wildfire. As shown in Figure 6.6, Wildfire Susceptibility, the wildfire susceptibility in this area is defined as moderately high. The steep terrain in these areas also contributes to rapid spread of wildfire when one occurs.

The danger of damage to natural resources and structures from wildfire is high in California due to a generally dry climate and a preponderance of highly flammable vegetation over much of the state. From 2015 to 2019, wildfires within the jurisdiction of the California Department of Forestry and Fire (CAL FIRE), including local government contracts, averaged 5,791 fires per year and burned an average of 398,313 acres per year. However, when all wildfire firefighting agencies are considered, there was an average 7,915 fires per year and 1,059,051 acres burned per year in California during the same five-year period. The number of structures damaged during that 5-year span averaged about 7,781 per year, ranging from a low of 703 structures in 2019 to a high of 22,868 structures in 2018. Average annual monetary damages are estimated to be about \$4 billion. However, the 2020 California wildfire season was characterized by a record-setting year of wildfires that burned across the state of California as measured during the modern era of wildfire management and record keeping. A summary of all 2020 incidents, including those managed by CAL FIRE and other partner agencies, shows that there were 9,917 incidents with an estimated 4,257,863 acres burned, 10,488 damaged or destroyed structures and 33 fatalities. Damage was estimated at about \$950 million.

There is a history of wildfires within the City and within the surround area. Table 6-1 contains a list of fires that have occurred within Lake Elsinore and its Sphere of Influence between 1950 and 2020. Table 6-1 shows the areas burned by historical fires within this area.

**Table 6-1, Fires in Lake Elsinore and its Sphere of Influence 1950 – 2020**

Fire Name	Alarm Date	Containment Date	Cause	Acreage
Morrell	8/5/1950	N/A	Unidentified	5,118
Jameson	8/30/1954	N/A	Unidentified	7,881
Gilbert	7/27/1955	N/A	Unidentified	486
Cornwell	9/11/1956	N/A	Unidentified	3,173
Sandia	9/12/1956	N/A	Unidentified	2,053
Pederson	6/17/1957	N/A	Unidentified	1,979
Fiasco	6/18/1957	N/A	Unidentified	7,310
Morey	9/14/1958	N/A	Unidentified	2,662
Decker	8/8/1959	N/A	Unidentified	1,485
Cow	4/28/1968	N/A	Unidentified	536
Terrace Hill	5/2/1970	N/A	Unidentified	1,848
Boundary	9/6/1970	N/A	Miscellaneous	1,416
Robb	7/5/1976	N/A	Unidentified	172
Estelle	7/21/1978	N/A	Unidentified	3,080
Lemon	8/23/1978	N/A	Unidentified	2,943
Turner	11/16/1980	N/A	Unidentified	31,447
Lake #2	11/16/1980	N/A	Unidentified	1,216
Indian	11/24/1980	N/A	Miscellaneous	28,940
Cottenwood	6/15/1981	N/A	Unidentified	1,279
Dawson	6/17/1981	N/A	Miscellaneous	8,000
Wasson	7/22/1981	N/A	Unidentified	356
Dexter	8/21/1981	N/A	Unidentified	1,350
N/A	7/17/1982	N/A	Arson	295
Rail	9/3/1982	N/A	Unidentified	476
Canyon	6/16/1983	N/A	Unidentified	1,231
Horse	7/11/1985	N/A	Unidentified	761
N/A	9/1/1986	N/A	Miscellaneous	53
Riverside	2/7/1987	N/A	Playing with Fire	330
N/A	8/20/1987	N/A	Playing with Fire	259

Fire Name	Alarm Date	Containment Date	Cause	Acreage
State 1587	10/3/1987	N/A	Equipment Use	3,276
Corona State #983	6/2/1988	N/A	Equipment Use	913
Rosa	9/5/1988	N/A	Campfire	632
Horsethief II	10/11/1988	N/A	Equipment Use	135
State #2428	12/9/1988	N/A	Equipment Use	1,446
Ortega	6/27/1989	7/5/1989	Miscellaneous	7,880
Nichols	7/2/1995	N/A	Vehicle	1,264
Dawson	7/20/1995	N/A	Playing with Fire	4,718
Short	6/1/1996	N/A	Equipment Use	683
Walker	8/24/1996	N/A	Arson	137
Lewin Fire	8/25/1998	N/A	Equipment Use	109
Zeller	1/2/1999	1/2/1999	Miscellaneous	10
State Fire	3/14/1999	N/A	Arson	127
Olive	7/11/2001	N/A	Unidentified	283
Indian	3/31/2002	3/31/2002	Miscellaneous	50
Holland	9/30/2003	9/30/2003	Arson	106
Gafford	5/2/2004	5/3/2004	Unidentified	450
Cerrito	5/3/2004	5/7/2004	Playing with Fire	16,460
Lakeview	7/13/2004	7/13/2004	Unidentified	350
Lookout 2	11/12/2006	11/13/2006	Miscellaneous	290
Laguna	9/12/2007	9/12/2007	Unidentified	12
Wright	10/6/2007	10/6/2007	Miscellaneous	31
Lake	6/3/2008	6/3/2008	Unidentified	146
Cedar	5/25/2012	5/26/2012	Miscellaneous	72
Lindell	6/18/2012	6/18/2012	Unidentified	21
Falls	8/5/2013	8/14/2013	Miscellaneous	1,383
Gillette	6/15/2014	6/15/2014	Unidentified	10
Evergreen 1	7/16/2016	7/16/2016	Unidentified	2
Evergreen 2	8/28/2016	8/28/2016	Arson	43
Rose	7/31/2017	8/3/2017	Equipment Use	20
Holy	8/6/2018	10/17/2018	Miscellaneous	23,025

Fire Name	Alarm Date	Containment Date	Cause	Acreage
Toro	8/5/2019	8/6/2019	Unidentified	94
South Main	3/6/2020	N/A	Escaped Prescribed Burn	13
Source: CAL FIRE Fire and Resource Assessment Program (FRAP) accessed at <a href="https://frap.fire.ca.gov/frap-projects/fire-perimeters/">https://frap.fire.ca.gov/frap-projects/fire-perimeters/</a> on 6.14.2021.				

In recognition of the risk proposed by fire, the City has adopted the High Fire Severity Zone Map (Figure 6.6). As shown on Figure 6.6, significant portions of the City and its Sphere of Influence are located within Very High Fire Severity Zone. Figure 6.7 and Figure 6.8 show the general distribution of existing land use (2019) and General Plan land use designations as they relate to the Very High Fire Severity Zone.

Wildfire susceptibility in the City of Lake Elsinore is defined as moderately high. The combination of Southern California’s Mediterranean climate, with its winter and spring rainfall and hot, dry summers, and the frequency of high wind velocity creates optimum conditions for wildfires. The annual rainfall pattern supports grasses, shrubs, and trees, and the hot arid summers result in dry vegetation. This readily combustible material can be easily ignited and will burn hot and fast, especially during high wind conditions. In fact, Southern California fires, which consumed more than 90% of the wildfire-burned acreage, were accompanied by high-velocity winds.

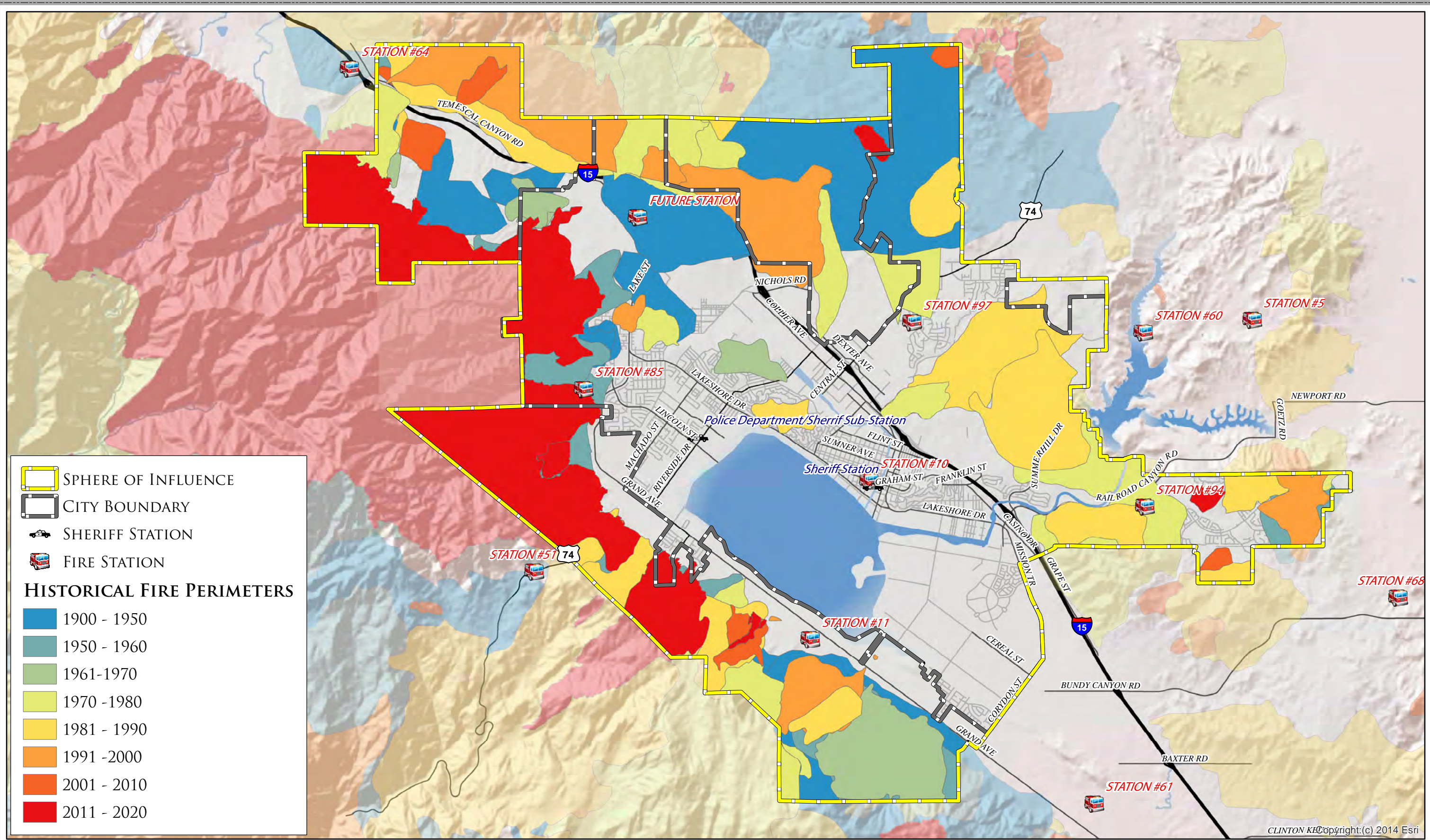
These factors contributed to the Holy Fire, which was reported on the west side of the Santa Ana Mountains in Orange County on August 6, 2018. Over 1,500 resources were dispatched to the fire, but due to high temperatures, steep rugged terrain, and very dry fuels aided it ultimately consumed 23,025 acres, including property in and adjacent to the City of Lake Elsinore or its Sphere of Influence, by the time it reached full containment. On October 17, 2018, the Holy Fire was declared 100% controlled.



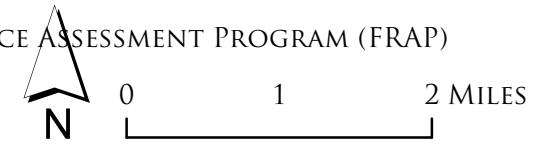
2018 Holy Fire  
 Photographer: Robyn Beck/AFP/Getty Images

Assessments of the Holy Fire burned area revealed numerous hazards, including the high potential for debris flow, flooding, mud flows, erosion, and rock fall, all of which could impact roads, trails, recreation areas, and long-term natural recovery.

The City of Lake Elsinore and the SOI are known for periodic high-velocity wind conditions through the Temescal Valley and the steep canyons to the northwest, west, and southwest portions of the SOI. Such winds are due mostly to the area’s topography, which forms a natural wind tunnel along the valley and through the canyons. The area is also subject to occasional Santa Ana conditions.

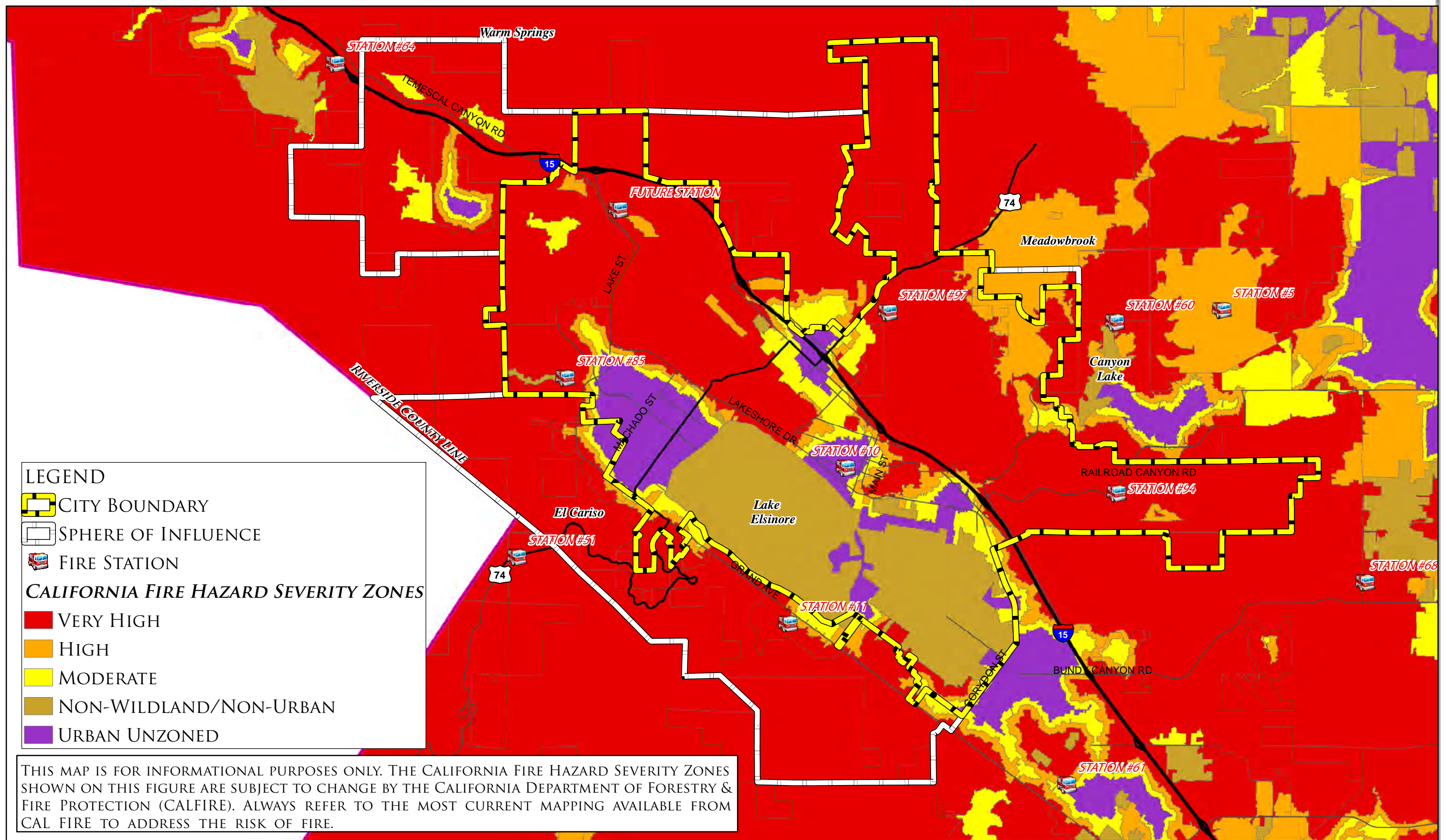


SOURCES: CITY OF LAKE ELSINORE GIS, COUNTY OF RIVERSIDE GIS  
 CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION'S FIRE AND RESOURCE ASSESSMENT PROGRAM (FRAP)

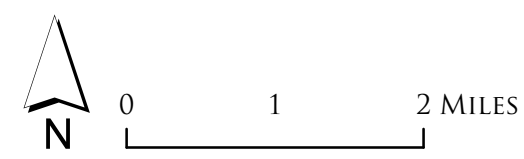


CITY OF LAKE ELSINORE  
 HISTORICAL FIRE PERIMETERS  
 FIGURE 6.5  
 RPC 2(b)(ii)

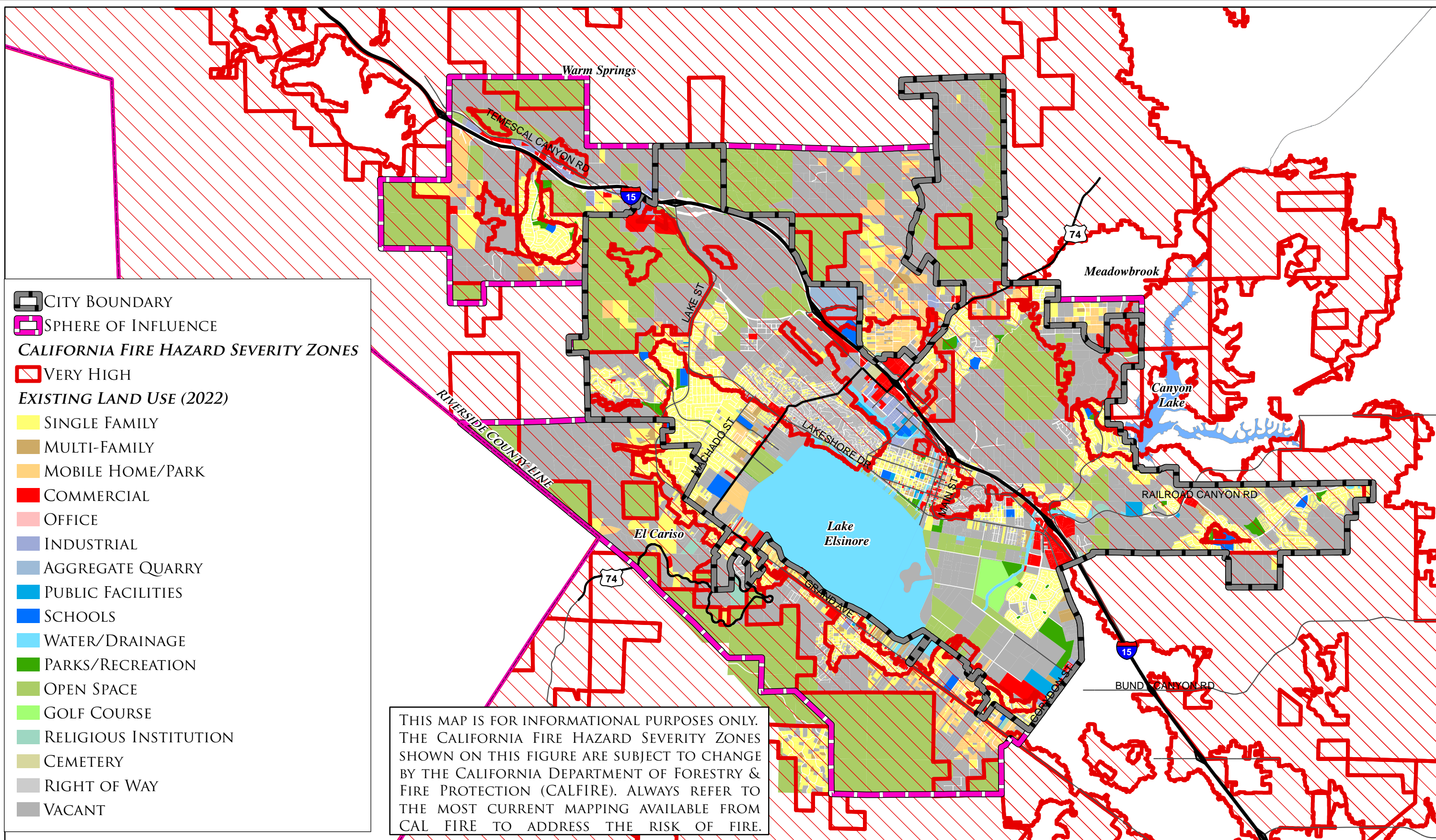
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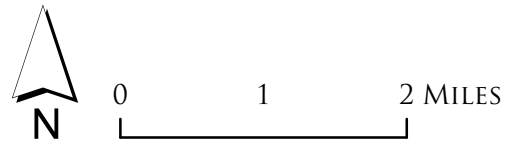
SOURCES: CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION



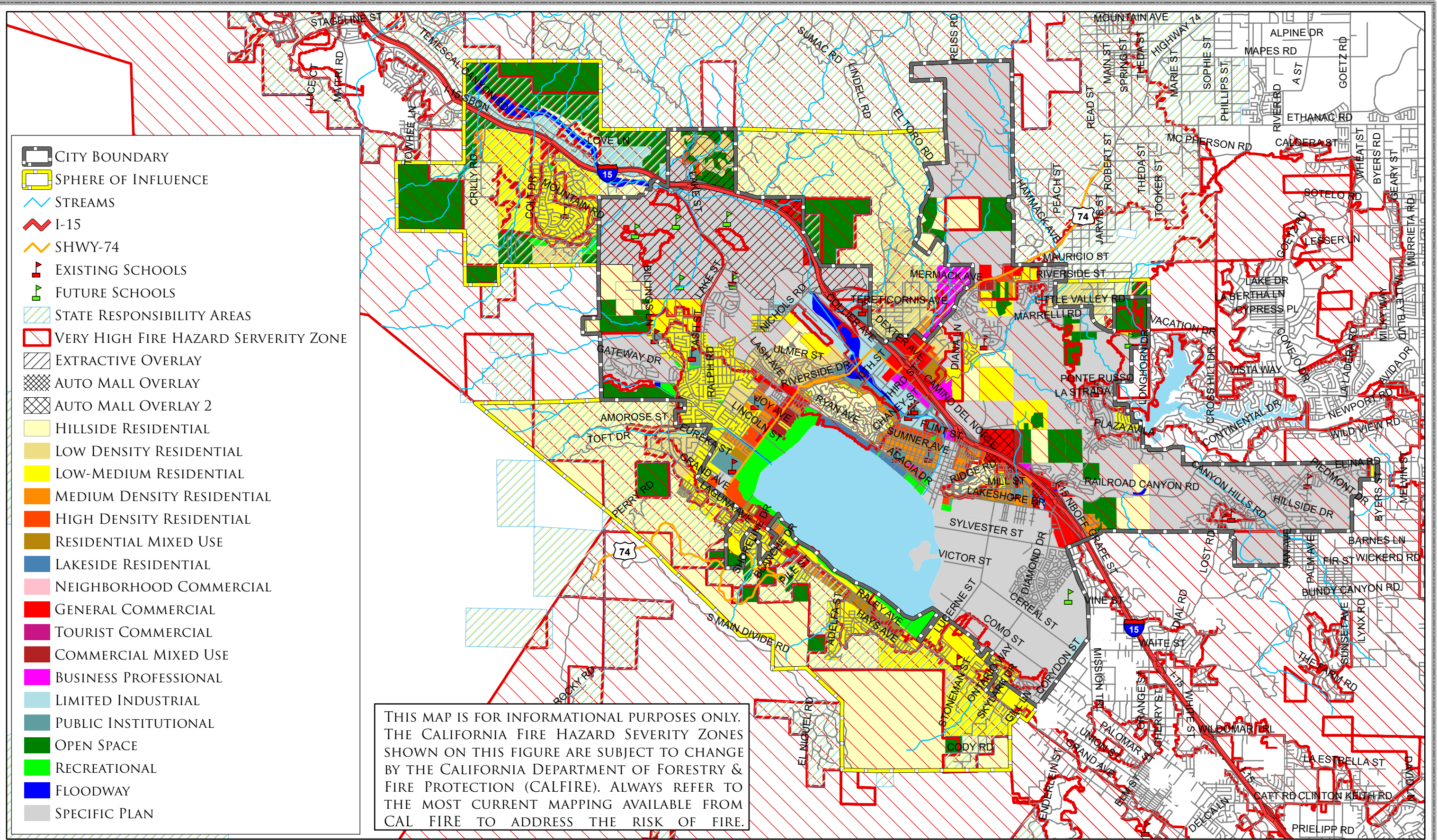
CITY OF LAKE ELSINORE  
WILDFIRE SUSCEPTIBILITY  
FIGURE 6.6



SOURCES: CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION, SCAG



CITY OF LAKE ELSINORE  
 VERY HIGH FIRE SEVERITY ZONE AND EXISTING LAND USES (2022)  
 FIGURE 6.7



VERY HIGH FIRE HAZARD SEVERITY ZONES  
 AND LAND USE PLAN  
 FIGURE 6.8  
 RPC 2(b)(ii)





Past fire management policy, mandated immediate fire suppression action for all fires, including those in wilderness areas, but also led to a long-term accumulation of vegetation (fuel) that can be easily ignited. Fire can spread quickly in high wind conditions, which poses a significant hazard in many areas, especially in forested and chaparral areas of rural Southern California. Much of the areas in the Cleveland National Forest and along the Ortega Highway (SR-74) contain large areas of chaparral and oak/pinyon plant communities that are highly flammable in the summer dry season and can promote the spread of wildfires over large distances, especially during high wind conditions. Chaparral in particular poses unique problems for fire prevention because its components (tough shrubs such as chemise, manzanita, and sage) are genetically predisposed to burn. Many of the plants in this community need fire to sprout their seeds; chaparral burns naturally every 30 to 100 years. Much of the area within the SOI supports this type of vegetation.

The heavy use of the Ortega Highway and the residences in the mountains pose additional fire risks. Traffic provides a potential ignition source because of tossed cigarettes and vehicle fires; residences provide other potential ignition sources, such as power equipment, barbeques, and residential fires.

### **6.3.1 Wildfire Hazards Goal, Policies and Implementation Program**

**Goal S 2** Adhere to an integrated approach to minimizing the threat of wildland fires to protect life and property using pre-fire management, suppression, and post-fire management.

#### **Policies**

- S 2.1 Require on-going brush clearance and establish low fuel landscaping policies to reduce combustible vegetation along the urban/wildland interface boundary.
- S 2.2 Create fuel modification zones around development within high hazard areas by thinning or clearing combustible vegetation around buildings and structures in accordance with applicable regulations and best practices. The size of the fuel modification zone may be altered with appropriate mitigations as approved by the Fire Department. The fuel modification zone may be replanted with fire-resistant material for aesthetics and erosion control.
- S 2.3 Establish fire resistant building techniques for new development such as non-combustible wall surfacing materials, fire-retardant treated wood, heavy timber construction, glazing, enclosed materials and features, insulation without paper-facing, and automatic fire sprinklers.
- S 2.4 Encourage programs that educate citizens about the threat of human wildfire origination from residential practices such as outdoor barbeques and from highway use such as cigarette littering.
- S 3.5 Coordinate with the Elsinore Valley Municipal Water District (EVMWD) to create emergency water supply procedures that identifies and maps existing and future reservoirs, tanks, and water wells

for fire suppression and that allows for immediate access to those facilities when needed for fire suppression purposes.

- S 2.6 Identify and map the most current Fire Hazard Severity Zones, as described and mapped by CAL FIRE, on an ongoing and as-needed basis.
- S 2.7 Identify existing developed areas within the City that have reduced or limited circulation access and develop an evacuation plan, and recommended improvements to ensure adequate evacuation capabilities.
- S 2.8 Coordinate with fire protection and emergency service providers and the Elsinore Valley Municipal Water District to reassess fire hazards and future availability of water supplies, after wildfire events to adjust fire prevention and suppression needs, as necessary, for both short- and long-term fire prevention needs.
- S 2.9 To the extent feasible and appropriate, locate new essential public facilities (e.g., health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities) outside of Very High Fire Hazard Severity Zones. If new essential public facilities are located in a State Responsibility Area or Very High Fire Hazard Zone, the facilities shall be constructed to meet or exceed the most current version of the California Building Codes and California Fire Code requirements, as adopted by the City, to allow them to continue to serve community needs during and after disaster events.
- S2.10 Work with CAL FIRE to develop and implement a Fire Safety Plan that identifies existing and future needs and recommendations to address hazards, road network, extent of fire emergency, and safety personnel capacity.

Implementation Program            The City will prepare and update annually a Fire Safety Plan.

Agency/Department    Administrative Services Department – Finance Division and Fire Prevention Division

Implementation Program            The City will coordinate with the California Department of Forestry and the County Fire Department supporting public fire education and prevention programs.

Agency/Department            City Fire Marshal and Public Works Department

Implementation Program            The City will work with developers to establish a Road and Bridge Benefit District (RBBD) or other funding mechanism to construct extensions of Summerhill Drive, and La Strada to provide secondary/emergency access to existing development.

Agency/Department            City Manager and Engineering Department

Implementation Program            The City shall work with the Elsinore Valley Municipal Water District to

maintain adequate water supply and fire flow, and identify areas lacking adequate water service for firefighting, including capacity for peak load under a reasonable worst-case wildland fire scenario, to be determined by CAL FIRE.

Agency/Department

City Manager, City Fire Marshal and Public Works Department

**Goal S 3** Minimize injury, loss of life property damage resulting from wildland fires.

**Policies**

S 3.1 Require development to contribute its fair share towards funding the provision of appropriate Law Enforcement, Fire and Paramedic Services necessary to address the fiscal impacts of the project on public safety operations and maintenance issues in the City.

S 3.2 Require that all new development located in a Very High Fire Hazard Severity Zone (VHFHSZ) or a State Responsibility Area (SRA), as most recently mapped by CAL FIRE, comply with the most current version of the California Building Codes and California Fire Code, as adopted by the City of Lake Elsinore.

S 3.3 Require all new development to have at least two access roads in order to provide for concurrent safe access of emergency equipment and civilian evacuation.

S 3.4 If new development is located in a State Responsibility Area or in a Very High Fire Hazard Severity Zone, require adequate infrastructure, including safe access for emergency response vehicles, visible street signs, and water supplies for fire suppression.

S 3.5 Require new development in VHFHSZs to prepare a Fire Protection Plan that minimizes risks by:

- Assessing site-specific characteristics such as topography, slope, vegetation type, wind patterns etc.;
- Siting and designing development to avoid hazardous locations (e.g. through fire breaks) to the extent feasible;
- Incorporating fuel modification and brush clearance techniques in accordance with applicable fire safety requirements and carried out in a manner that reduces impacts to environmentally sensitive habitat to the maximum feasible extent;
- Using fire-safe building materials and design features, consistent with the adopted Municipal Code and Fire and Building Code standards;
- Using fire- resistive, native plant species in landscaping; and
- Complying with established standards and specifications for fuel modification, defensible space, access, and water facilities.

S3.6 Require new development within VHFHSZs to enter into a long-term maintenance agreement for vegetation management in defensible space, fuel breaks, and roadside fuel reduction. The agreement shall specify who is responsible for maintenance of these areas and the fire safe

standards that will be implemented. As a project condition of approval, a copy of the executed agreement shall be provided to the City Fire Marshal and the Building and Safety Department.

- S 3.7 Require that all redevelopment of properties damaged or destroyed by a major wildfire comply with the most current version of the California Building Codes and California Fire Code, as adopted by the City of Lake Elsinore.
- S 3.8 Perform an evaluation of fire-related development standards should a major wildfire require portions of the City be rebuilt to ensure that redevelopment standards are as fire-safe as reasonably possible.

Implementation Program The City shall review each proposed project’s development plans to assure compliance with Fire Department requirements.

Agency/Department Building and Safety Division, City Fire Marshal, CAL FIRE

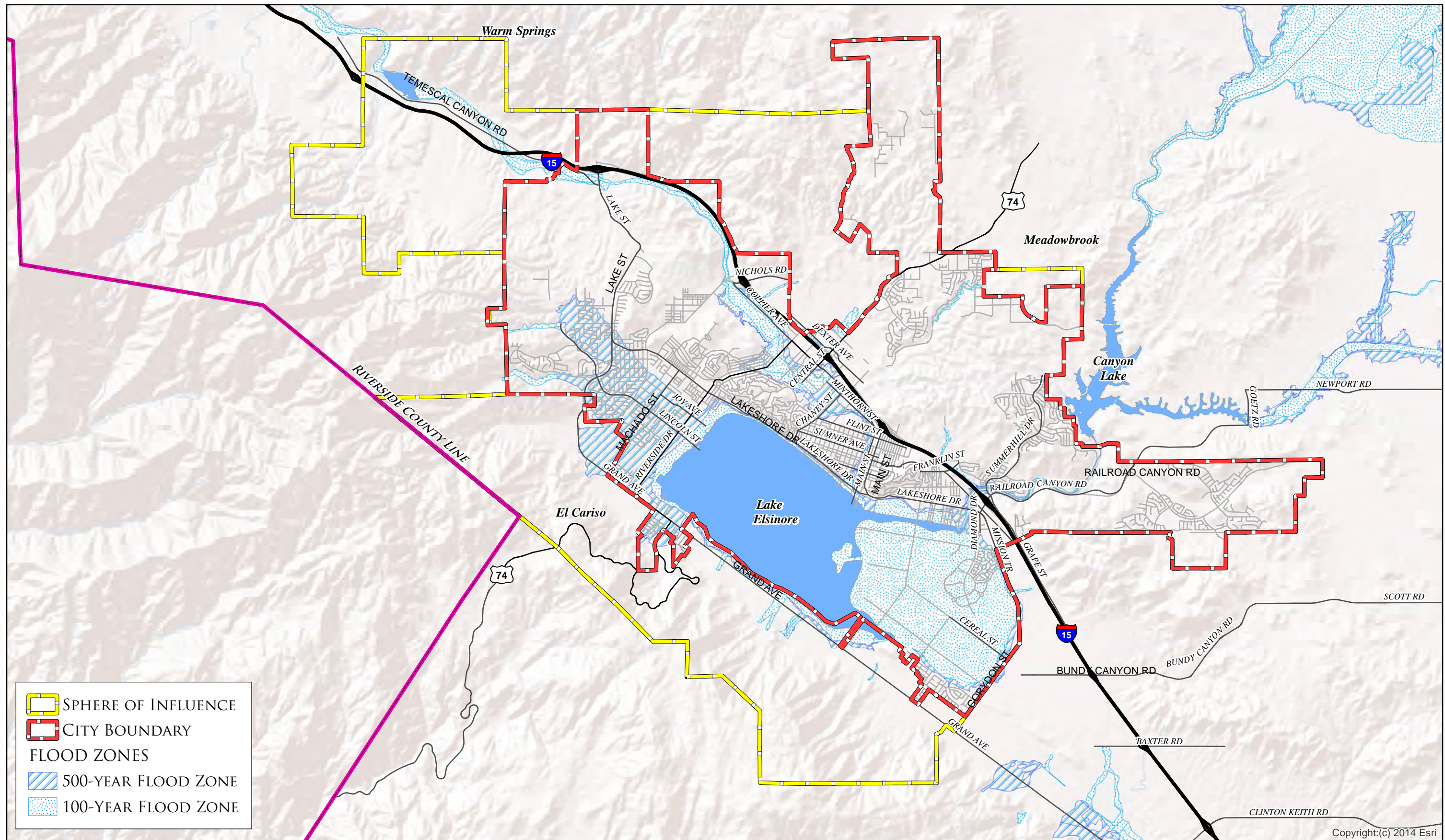
## 6.4 Flooding and Floodplains

Development in the 100-year floodplain can increase flooding hazards by raising water levels upstream and adding flow, velocity, and debris downstream. Floodplains are the low, flat, periodically flooded lands adjacent to rivers, lakes, and oceans inundated by the 100-year flood and composed of the floodway and the floodway fringe. The floodway is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface elevation more than one foot. The floodway fringe is that portion of the floodplain between the floodway and the limits of the existing 100-year floodplain.

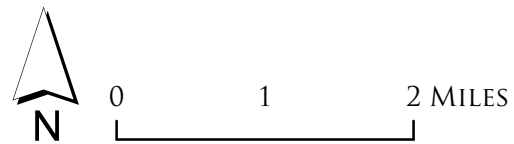
As shown in Figure 6.9, significant portions of the City and the SOI are located within the 100-year floodplain. The City of Lake Elsinore has identified flooding sources within the City that include Arroyo del Toro, Channel H, Elsinore Spillway Channel, Lake Elsinore, Leach Canyon Channel, Lime Street Channel, McVicker Canyon, Ortega Wash, Ortega Channel, Rice Canyon, San Jacinto River, Stovepipe Canyon Creek, Temescal Wash, Wash G, Wash I, Murrieta Creek, Wasson Canyon Creek, and potentially Railroad Canyon Dam if the incidence of failure occurs.



Flooding in Lake Elsinore 1988



SOURCES: CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, SCAG



CITY OF LAKE ELSINORE  
FLOODPLAINS  
FIGURE 6.9

The City places a high priority on preventing flood damage and requires new projects to consider flooding and storm drainage effects. Limited encroachment into the 100-year floodplain fringe is allowed in order to permit development of properties within this area. However, encroachment shall maintain a focus on public facilities such as roads, parks, sewer and water improvements, and pedestrian routes. No development of the floodway is allowed. The City will review development projects within the floodplain to ensure compliance with City, state, and federal floodplain development projects. The U.S. Army Corps of Engineers (USACE) and the California Department of Fish and Wildlife (CDFW) often have jurisdiction over areas that are located within floodplains.

USACE, through the authority of Section 404 of the Clean Water Act, is the primary agency involved in wetland regulation. The Environmental Protection Agency (EPA) has the authority to veto any decision by the USACE on Section 404-permit issuance because the EPA has the ultimate authority over enforcement of wetland regulations. Prior to the issuance of a Section 404 permit by the USACE, the Regional Water Quality Control Board (RWQCB) must issue a Section 401 water quality certification or waiver. In this way, the RWQCB regulates actions permitted by the USACE under Section 404 of the Clean Water Act (CWA). In addition, the U.S. Fish and Wildlife Service (USFWS) must be consulted and may take jurisdiction if any wetland impacts could affect federally endangered species.

The USACE has jurisdiction over “waters of the U.S.,” including wetlands as defined by Section 404 of the Clean Water Act. Not all waters of the U.S. are wetlands and not all wetlands are under USACE jurisdiction. The term “waters of the U.S.” covers many types of waters, including waters currently or historically used in interstate or foreign commerce (including all waters subject to the ebb and flow of tides); all interstate waters (including interstate wetlands); all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, etc., the use, degradation, or destruction of which could affect interstate or foreign commerce; all impoundments of waters otherwise defined as waters of the U.S.; tributaries of waters of the U.S.; territorial seas; and wetlands adjacent to waters of the U.S. Regulated waters of the U.S. do not include isolated waters. However, isolated waters may be regulated by the RWQCB and the CDFW under the Porter-Cologne Act and the California Fish and Game Code, respectively.

The CDFW has jurisdiction covering lakes, rivers, and streams. Jurisdiction extends across the bed, banks, and channel of these features and includes areas beneath a riparian canopy, even if the canopy areas are well away from the stream channel (such as in oak riparian areas). More typically, the jurisdiction over streambeds is applied from the top of one channel bank to the top of the opposite bank.

Regional flood control planning and facilities construction are within the jurisdiction of the Riverside County Flood Control and Water Quality Management District. The district is also responsible for the maintenance and operation of flood control facilities, including debris dams, storm channels, and storm drains. The City of Lake Elsinore owns and maintains certain flood control facilities in the City that are constructed generally as part of the drainage plans for individual projects.

## 6.4.1 Flooding and Floodplains Goal, Policies and Implementation Program

**Goal S 4** Minimize risk of injury to residents and visitors, and property damage due to flooding.

### Policies

- S 4.1 Continue to ensure that new construction in floodways and floodplains conforms to all applicable provisions of the National Flood Insurance Program in order to protect buildings and property from flooding.
- S 4.2 Continue to encourage floodway setbacks for greenways, trails, and recreation opportunities.
- S 4.3 Reduce the risk of flooding by creating floodway setbacks for greenways, trails, and recreation areas and by prohibiting development within the floodways.



- S 4.4 Encourage that new developments within the floodplain fringe shall preserve and enhance existing native riparian habitat.
- S 5.5 Continue to require the construction of channel improvements to allow conveyance of the 100-year flow without extensive flooding.
- S 5.6 Use FEMA regulations and mapping to ensure that flooding hazards are evaluated during the environmental review process, including placement of restrictions on development within designated floodplain areas.
- S 5.7 Promote drainage improvements that maintain a natural or semi-natural floodplain.
- S 5.8 Utilize the Capital Improvement Program for storm drainage projects and maintenance and improvement of local storm drain systems including channels, pipes, and inlets to ensure capacity for maximum runoff flows.

Implementation Program Through the project review and the CEQA processes the City shall assess new development and reuse applications for potential flood hazards, and shall require compliance with FEMA Special Flood Hazard Areas where appropriate.

Agency/Department Community Development Department and Engineering Department

Implementation Program In coordination with the Riverside County Flood Control and Water

Quality Management District annually inspect existing storm drainage facilities including channels and basins, and clean and maintain those facilities as needed.

Agency/Department    Engineering Department and Public Works Department

## 6.5 Fire and Police Protection Services

City development and community welfare are dependent on a network of public facilities, infrastructure and services. These services provide the necessary components for quality life in the community. The goals and policies in this section to promote community welfare and to enhance the overall well-being of the City's residents and visitors through efficient and timely emergency response.

### 6.5.1 Fire and Police/Law Enforcement Baselines

Effective fire protection and law enforcement services are essential to the welfare of a community. Without adequate provision of these invaluable services, the safety of the community could be jeopardized with the rise in crime and risk of fire damage. Long-term effects could result in a decrease in immigration of new residents and a low quality of life for current residents. The following goals and policies are intended to ensure that the community that the City remains safe and protected by fire and police services.

#### Fire Protection

Through a Cooperative Agreement, the City of Lake Elsinore contracts with the Riverside County Fire Department (RCFD) through its Cooperative Fire Programs Fire Protection Reimbursement Agreement with the California Department of Forestry and Fire Protection (CAL FIRE), to provide the City with fire protection, hazardous materials mitigation, technical rescue response, fire marshal, medical emergency services, and public service assists. CAL FIRE and RCFD have primary responsibility for fire protection in the City. The City itself does not have agreements for fire protection with any other agencies. Portions of the SOI are designated State Responsibility Areas (SRA), where the State of California is financially responsible for the prevention and suppression of wildfires, while the Lake Elsinore Fire Department, which is operated jointly by RCFD and CAL FIRE, has primary responsibility for Local Responsibility Areas (LRA) within the City limit.



The RCFD operates 93 fire stations in 17 battalions, providing fire suppression, emergency medical, rescue, and fire prevention services. Equipment used by the department has the ability to respond to both urban and wildland emergency conditions. Battalion 2 in the Southwest Division of RCFD services the City of Lake Elsinore.



The following stations are located within city limits:

- Fire Station No. 10 (Elsinore), servicing the central area of the city, located on the northeast side of the lake at 410 W. Graham Ave. (Not funded as of July 1, 2017.)
- Fire Station No. 85, (McVicker Park), located to the north at McVicker Park, slightly east of the lake at 29405 Grand Avenue;
- Fire Station No. 94 (Canyon Hills), located in the southeast section of the City, at 21775 Railroad Canyon Road, east of the I-15.
- Fire Station No. 97 (Rosetta Canyon), located in the north section of the City on Rosetta Canyon Drive.

The following stations located outside city limits provide additional fire protection services to the City of Lake Elsinore, on as needed basis:

- Quail Valley Station No. 5
- Lakeland Village Station No. 11.
- El Cariso Station No. 51.
- Canyon Lake Station No. 60
- Wildomar Station No. 61.
- Sycamore Canyon Station No. 64
- Menifee Station No. 68
- Rancho Capistrano Station No. 74.

Although the fire stations are operated by RCFD, CAL FIRE staffs firefighters and stores firefighting equipment at stations throughout the City, particularly during peak fire season. Both agencies respond to all types of emergencies, depending on the need and equipment available. Emergencies range from wildland fires, residential/commercial structure fires, automobile accidents, medical aid of all types, search and rescue missions, hazardous material spills, floods, earthquakes, and more. Standard response times are established by RCFD guidelines. The response time goal is to arrive at any location within the City to be seven minutes, with the intent to reduce that time to five minutes.

Since October 2003, fire paramedics are required at each station. These specially trained firefighters are equipped to respond to medical emergencies and ride on all calls. Their arrival on the scene can ensure the timely start of emergency medical treatment until an ambulance arrives for patient transport. Each fire engine carries nearly \$35,000 worth of state-of-the-art emergency medic equipment.

### **Police Protection**

The City of Lake Elsinore contracts for police protection from the Riverside County Sheriff's Department. The Sheriff's Department operates in Lake Elsinore as the Lake Elsinore Police Department. The Sheriff's



Department has mutual aid agreements with all of the local law enforcement agencies within Riverside County. In addition, the Department coordinates with the State Office of Emergency Services to provide and receive statewide mutual aid when necessary. The Lake Elsinore Sheriff's Station is located at 333 Limited Avenue, adjacent to the western boundary of the Project Site. The Lake Elsinore Sheriff's Station serves an area of 241 square miles, including the City of Lake Elsinore, the City of Wildomar, and the unincorporated communities of Alberhill, El Cariso, Glen Eden Hot Springs, Glen Ivy Hot Springs, Good Hope,

Lakeland Village, Quail Valley, and Sedco Hills. The police department has various programs in place to deter crime, such as neighborhood watch, Crime-Free Multi-Housing program, and community-oriented policing. The police and fire stations are depicted in Figure 6.10, Police and Fire Stations.

The Lake Elsinore Police Department manages the Lake Patrol with Marine Safety trained police officers who patrol the lake, beaches and lake-adjacent parks. Officers enforce boating rules and regulations on the lake and assist stranded boaters. The Lake Patrol is augmented by a special group of volunteers known as Lake Elsinore Marine Search and Rescue (LEMSAR) who also patrol the lake and assist with boating collisions and stranded vessels. LEMSAR volunteers are trained in first aid and CPR and must complete a U.S. Coast Guard auxiliary boating and safety course. The Police Department also utilizes Reserve Police Officers. These volunteers are fully trained as police officers and offer an additional level of service and cost savings to the city of Lake Elsinore.

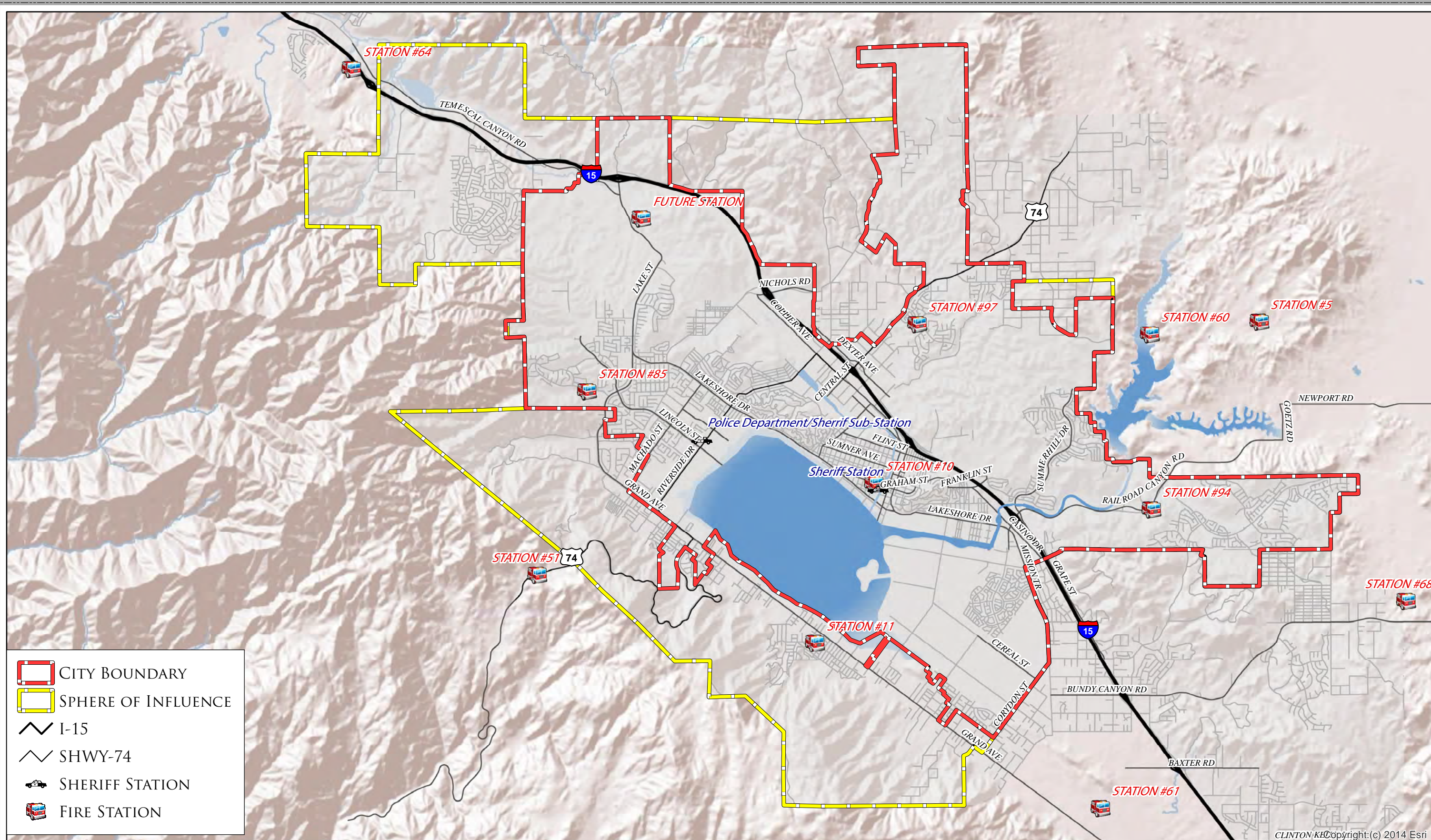


## 6.5.2 Fire and Police/Law Enforcement Goal, Policies and Implementation Program

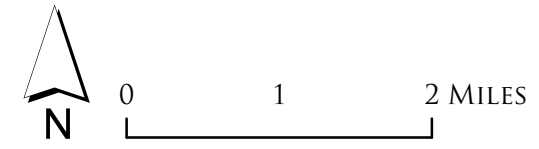
**Goal S 5** Provide efficient and effective public safety services for the community.

### Policies

- S 5.1 Coordinate with the Riverside County Fire Department to maintain adequate levels of service that meet or exceed County operational standards.
- S 5.2 Coordinate with the County of Riverside to provide adequate police service and staffing levels.
- S 5.3 Continue to provide Lake Patrol personnel who enforce boating rules and regulations, and perform rescue tactics.



SOURCES: CITY OF LAKE ELSINORE GIS, COUNTY OF RIVERSIDE GIS



CITY OF LAKE ELSINORE  
 POLICE AND FIRE STATIONS  
 FIGURE 6.10  
 RPC 2(b)(ii)

S 5.4 Promote the establishment of programs such as Neighborhood Watch and Crime-Free Multi-Housing in conjunction with law enforcement agencies to encourage community participation in the surveillance of neighborhoods.

S 5.5 Coordinate a periodic review with the Riverside County Sheriff’s Department and CAL FIRE to ensure that police and fire staff, resources and facilities keep pace with new, planned or proposed development.

Implementation Program The City shall annually evaluate fire and police levels of service.

Agency/Department City Manager

## 6.6 Hazards and Hazardous Materials

The City of Lake Elsinore has some businesses and activities that involve the transport, storage, or use of toxic or hazardous materials. Hazardous materials are defined as those that pose a potential threat to human health, having the capacity to cause serious illness or death. The term “hazardous materials” includes radioactive waste and explosives as well as substances such as gasoline, pesticides, and household cleaning products.



Hazardous Materials

While the use of hazardous materials is carefully regulated, the City seeks to reduce the potential for injury or damage in the event of accidents or spills.

There are currently no active enforcement actions or violations relating to hazardous materials in the City. The goals and policies in this section are intended to ensure that the appropriate agencies are adequately prepared to deal with a hazardous material emergency and that citizens are protected as much as possible from potential hazards.

### 6.6.1 Hazardous Sites

There are large numbers of businesses and other entities within the City and the SOI that generate, transport, store, treat, or dispose of hazardous waste as defined by the Resource Conservation and Recovery Action (RCRA). Since almost all fuels, lubricants, solvents, and paints are considered hazardous materials under RCRA, businesses and institutions that use substantial quantities of such materials are required to adhere to very strict requirements in handling, transporting, and storing hazardous materials.

There is a wide range and variety of entities that deal with hazardous materials in the course of their activities. As indicated above, these include but are not limited to:

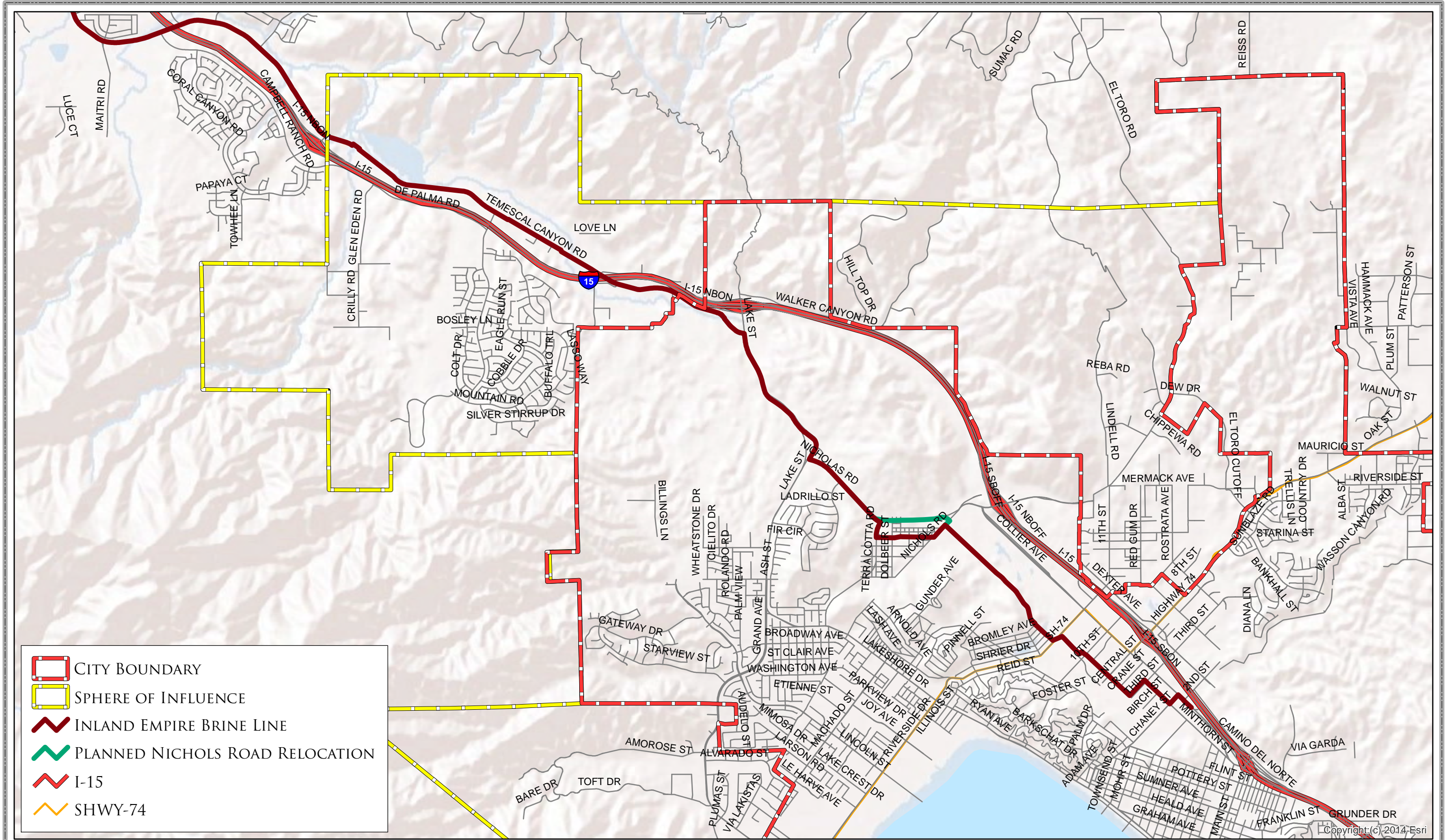
- Automobile repair facilities
- Gas stations
- Automobile service facilities
- Construction firms
- Manufacturing firms
- Painting contractors and paint suppliers
- Dry cleaning firms
- Schools
- Hospitals and medical facilities
- Trucking firms.







The City of Lake Elsinore Fire Department provides oversight of hazardous materials and regulates permits for the handling, storage, and use of any explosive or other hazardous material. These permits note the location of the user as well as the type of material used. This enables the City to be aware of locations where such uses occur and thus note areas where high concentrations of such uses occur, such as in industrial and manufacturing areas. Hazardous materials also occur in individual locations such as gas stations and dry cleaners.

### **6.6.2 Inland Empire Brine Line (SARI)**

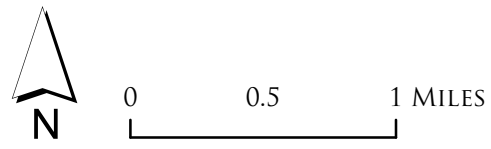
The Inland Empire Brine Line, previously referred to as The Santa Ana Regional Interceptor (SARI), is a regional pipeline constructed to protect the Santa Ana River Watershed from desalter concentrate and various saline wastes. It extends into the City of Lake Elsinore as shown on Figure 6.11. The Brine Line removes 500,000 pounds of salt per day from the watershed by transporting salty wastewater to a wastewater treatment plant operated by the Orange County Sanitation District. After treatment, the water is discharged into the Pacific Ocean. The purpose is to maintain the quality of water in the Santa Ana watershed by balancing the amount of salt in the basin. Increased salt in the watershed is caused mainly by industrial and agricultural uses and can affect all water users. Increased salinity in the water creates problems ranging from decreased effectiveness of laundry detergents to worn out plumbing fixtures and household appliances. It also affects the taste of the water.

A brine line is necessary because industrial and commercial users are able to dispose only a limited amount of saline waste into wastewater plants due to the difficulty of removing salts and minerals from water. Users that produce a lot of saline waste can go through an application process to make a connection to the Brine Line; the Santa Ana Watershed Protection Authority (SAWPA) establishes connection fees and monthly rates for using the SARI line. Businesses that do not generate a substantial flow and are not close enough to make a direct connection can haul the waste by truck to a SARI truck collection station. SAWPA has permit fees and fees based upon volume for indirect connection users.



-  CITY BOUNDARY
-  SPHERE OF INFLUENCE
-  INLAND EMPIRE BRINE LINE
-  PLANNED NICHOLS ROAD RELOCATION
-  I-15
-  SHWY-74

SOURCES: CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, SAWPA



CITY OF LAKE ELSINORE  
 INLAND EMPIRE BRINE LINE  
 FIGURE 6.11  
 RPC 2(b)(ii)

Copyright: (c) 2014, Esri

### 6.6.3 Hazards and Hazardous Materials Goal, Policies and Implementation Programs

**Goal S 6** Reduce the level of risk associated with the use, transport, treatment, and disposal of hazardous materials to protect the community's safety, health, and natural resources.

#### Policies

- S 6.1 Continue to require hazardous waste generators to implement a waste reduction program per the Riverside County Hazardous Waste Management Plan with necessary inspections per the Riverside County Hazardous Materials Handlers Program.
- S 6.2 Require any proposed development within close proximity to an active and/or inactive landfill to complete a technical analysis that focuses on public safety and hazard issues. The analysis shall be prepared by a professional consultant.
- S 6.3 Encourage the safe disposal of hazardous materials with County agencies to protect the City against a hazardous materials incident.
- S 6.4 Continue operating household hazardous waste education and collection programs in collaboration with the Riverside County Department of Environmental Health.
- S 6.5 Evaluate new development on or adjacent to the Inland Empire Brine Line, requiring extensive subsurface components or containing sensitive land uses such as schools on a project-by-project basis to determine impacts if an accident occurs.
- S 6.6 Comply with the Riverside County Underground Storage Tank Program, and Health and Safety Code Sections 25280-25289 and ensure adequate leak detection, maintenance of records, and reporting of spills.
- S 6.7 In the event of a petroleum or gas pipeline leak, the City shall ensure that all responsible parties comply with the standards set by the California Department of Fish & Wildlife Office of Spill Prevention and Response.

Implementation Program Through project review and the CEQA process the City shall assess new development and reuse applications for potential hazards, and shall require compliance with the County Hazardous Waste Management Plan and collaboration with its Department of Environmental Health.

Agency/Department                      Community Development Department

## 6.7 Emergency Preparedness and Evacuation

### 6.7.1 Introduction

The ability to anticipate and evaluate potential risks posed by natural and human-caused hazards is paramount to a city's longevity. Although this element specifically addresses natural and human-caused hazards, emergency preparedness involves many more considerations beyond identifying the hazards themselves. The Emergency Preparedness and Evacuation section addresses potential hazards and the City's response strategies.

### 6.7.2 Local Plans

#### Emergency Operations Plan

The City of Lake Elsinore Emergency Operations Plan (EOP), approved on March 27, 2007, addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting the City of Lake Elsinore. The EOP describes the operations of the City's Emergency Operations Center (EOC), which is the central location responsible for directing and coordinating the various City of Lake Elsinore Departments and other agencies in their emergency response activities.

#### Resilient IE

Resilient IE was developed by the Western Riverside Council of Governments (WRCOG) in collaboration with the San Bernardino County Transportation Authority (SBCTA) with funding from Caltrans. Resilient IE works to support regional and local efforts to prepare for and mitigate risks associated with climate adaptation on the region's transportation infrastructure with five primary project components. These components include community vulnerability assessments and city-level, climate-related transportation hazards and evacuation maps.

The following is a list of climate-related hazards that were identified as impacting the city of Lake Elsinore:

- **Air Quality** – The city of Lake Elsinore may experience more frequent days of unsafe levels of atmospheric ozone by 2050, creating or exacerbating health risks for some individuals.
- **Drought** – Water sources will likely experience more frequent and intense droughts, which can cause water shortages.
- **Extreme Heat** – Extreme heat incidents can strain the city's power delivery networks and can increase rates of heat-related illnesses, particularly in at-risk populations.
- **Flooding** – More intense flooding is expected to occur along the to the north and south of Lake Elsinore reservoir and along the Temescal Wash and San Jacinto River in the City of Lake Elsinore.
- **Human Health Hazards** – More frequent and severe wildfires near the city of Lake Elsinore could



worsen air quality, causing health impacts. Warmer conditions are also expected to increase the spread of vector-borne diseases carried by organisms like mosquitoes.

- **Landslides** – More frequent and intense rainfall could increase the chance that a landslide will likely occur in the city of Lake Elsinore. Deep-seated landslides could occur on steeper slopes throughout the city, especially near the mountains on the southern edge of the City.
- **Severe Weather** – Strong winds and heavy rains are expected to become more intense around the city of Lake Elsinore.
- **Wildfire** – Drought conditions, extreme heat, and extreme wind events can increase the frequency and intensity of wildfires in the WRCOG region, including the wildland-urban interface. The city of Lake Elsinore could experience more wildfires throughout the City, due to its location in the wildland-urban interface.

### Critical Assets

Table 6-2 is a list of critical assets that are vulnerable to any of the key climate-related hazards that are present in the region:

**Table 6-2, List of the City of Lake Elsinore’s Critical Assess by Type and Name**

Asset Type	Asset Name
Local and Regional Infrastructure	I-15, SR-74, major roadways, Lake Elsinore Reservoir, Skylark Field Airport, Lake Elsinore City Hall, Lakeside Library, Lake Elsinore Library, Lakeland Village Community Center, Lake Community Center, Lake Elsinore Senior Center, Dream Extreme Neighborhood Center, Lake Elsinore Cultural Center, Youth Opportunity Center, Victor Community Support, Elsinore Valley Municipal Water District, electrical transmission lines, Police stations, Fire stations
Major Commercial/Economic Hubs	Lake Elsinore Outlets, Pacific Aggregates, Lake Elsinore Square, Lakeside Center, Lake Elsinore Diamond Stadium, Lake Elsinore Town Center, Lake Elsinore Valley Center
Medical	Lake Elsinore Family Care Center, Total Care Family Medical Center, Vista Community Clinic, Lake Elsinore Primary Care Clinic, Lake Elsinore Dialysis
Parks	Alberhill Park, Channel Walk, Canyon Hills Community Park, Christensen Community Park, City Park, Creekside Park, Lakepoint Park, Lincoln Street Park, Linear Park, Machado Park, McVicker Canyon Park, Oak Tree Park, Rosetta Canyon Sports Park, Summerhill Park, Summerlake Park, Summerly Community Park, Tuscany Hills Park, Yarborough Park
Schools	Canyon Lake Middle, Cottonwood Canyon Elementary, Earl Warren Elementary, Keith McCarthy Academy, Temescal Canyon High, Valley Adult School, Tuscany Hills Elementary, Heald Academy, Herk Bouris Elementary, Elsinore Elementary, Elsinore Middle, Lakeland Village, Lakeside High, Machado Elementary, Ortega High, Railroad Canyon Elementary, Rice Canyon Elementary, Terra Cotta Middle, Withrow Elementary, Jeanette Ellis Center.

### Key Vulnerabilities

Table 6-3 shows which hazards in the city of Lake Elsinore may pose the greatest harm to vulnerable groups or assets in the city.

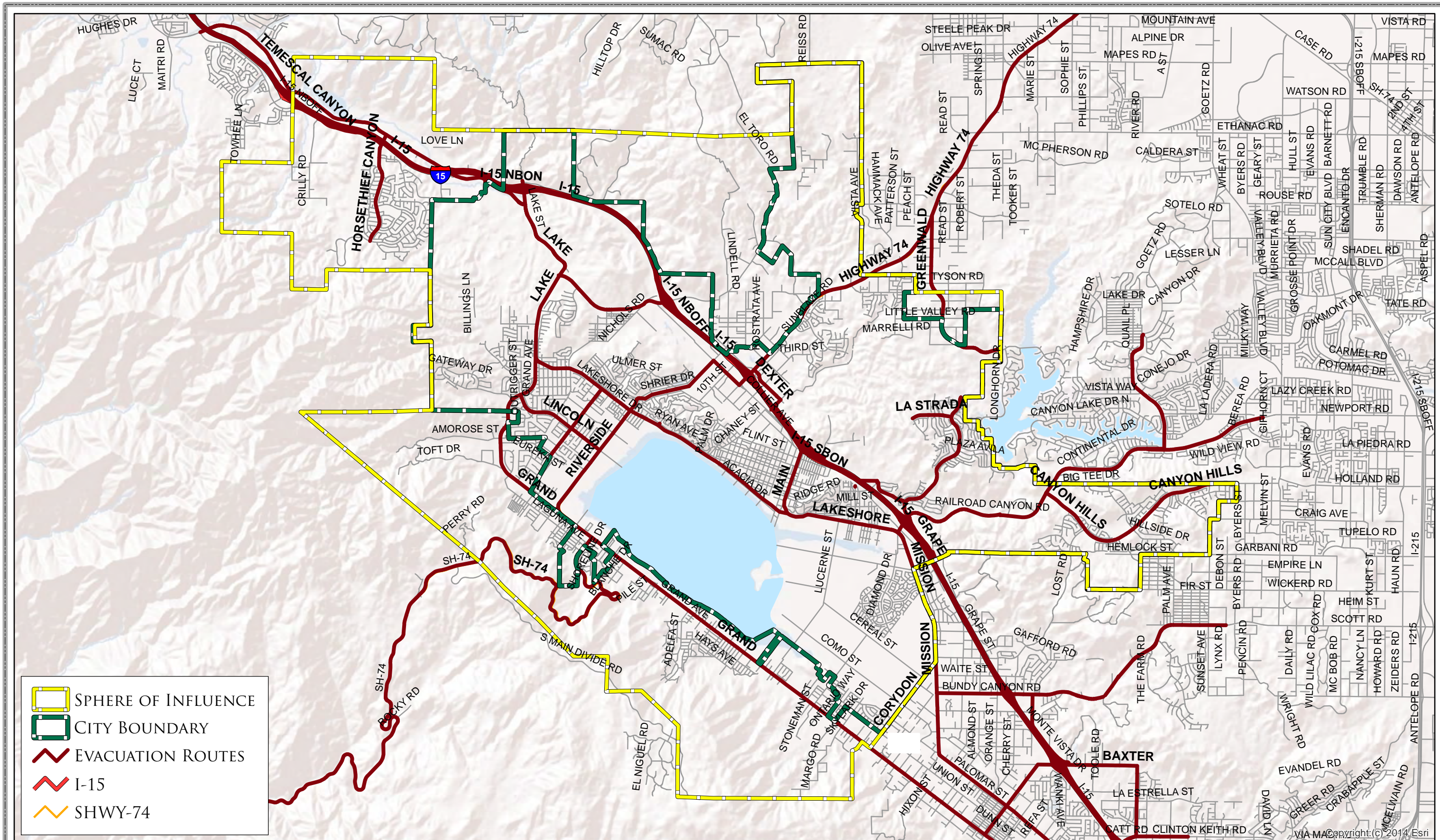
**Table 6-3, Key Vulnerabilities in City of Lake Elsinore by Applicable Hazard**

Vulnerability	Hazards							
	Air Quality	Drought	Extreme Heat	Flooding	Human Health Hazards	Landslides	Severe Weather	Wildfire
Households in poverty	✓	✓	✓	✓	✓		✓	✓
Persons experiencing homelessness	✓		✓	✓	✓		✓	✓
Chronically ill individuals	✓		✓		✓		✓	✓
Residential structures				✓		✓		✓
Energy delivery systems			✓				✓	✓
Water delivery systems		✓						✓

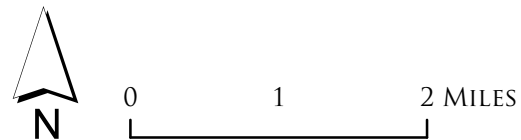
Source: Resilient IE, Community Vulnerability Profiles, February 2020, Page 35 (Accessed 6.4.2021 at <https://wrcog.us/285/Resilient-IE> )

### Evacuation Routes

Figure 6.12 shows the evacuation network for Lake Elsinore and the surrounding area. However, as listed in Table 6-4, significant portions of Lake Elsinore’s evacuation network pass through hazard-prone areas, and over bridges and water crossings.



SOURCES: CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE



CITY OF LAKE ELSINORE  
EVACUATION ROUTES  
FIGURE 6.12

RPC 2(b)(ii)

**Table 6-4, Hazard Impacts, Bridges, and Water Crossings for Lake Elsinore’s Evacuation Route Network**

	Miles and Quantity	Percent of City’s Network	
Evacuation Route Miles in Fire Hazard Zones	35	59%	
Evacuation Route Miles in Flood Hazard Zones	21	36%	
Evacuation Route Miles in Landslide Hazard Zones	45	77%	
City of Lake Elsinore’s Total Evacuation Network Miles	59	100%	3.1%*
Bridge Crossings in Lake Elsinore’s Evacuation Network	31		
Water Crossings in Lake Elsinore’s Evacuation Network	38		
*Indicates the percentage of city of Lake Elsinore’s total network as part of the larger Western Riverside County network.			
Source: Resilient IE, Community Vulnerability Profiles, February 2020 (Accessed 6.4.2021 at <a href="https://wrcog.us/285/Resilient-IE">https://wrcog.us/285/Resilient-IE</a> )			

### 6.7.3 Emergency Preparedness and Evacuation Goal, Policies and Implementation Program

**Goal S 7** Maintain an emergency response program consistent with State law, and coordinate with surrounding cities, Riverside County and other emergency response providers.

#### Policies

- S 7.1 Maintain participation in local, regional, state, and national mutual aid systems to ensure that appropriate resources are available for response and recovery during and following a disaster.
- S 7.2 Periodically review and test the City’s Emergency Operations Plan to address the City’s growth in population and built environment, as well as, to note any deficiencies and to incorporate new emergency response techniques.
- S 7.3 Coordinate all emergency preparedness and response plans with neighboring cities, the County of Riverside, local health care providers and utility purveyors, and the California Emergency Management Agency (CalEMA).
- S 7.4 Maintain a safe and secure, technologically advanced Emergency Operations Center allowing for room to expand as the City grows.
- S 7.5 Continue to train Emergency Operations Center and general city staff in our Emergency Operations Plan and the California Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and the Incident Command System (ICS).

- S 7.6 Continue coordinated training for City Emergency Response Team members, Community Emergency Response Team (CERT) volunteers, and related response agency personnel.
- S 7.7 Conduct public outreach to provide education programs and literature to Lake Elsinore’s residents, business people and property owners on earthquake preparedness, fire safety, flooding hazards, other emergencies and identified emergency access routes, including specific information targeted to at-risk populations such as the elderly, persons with disabilities and persons with limited transportation options.
- S 7.8 Incorporate the current Lake Elsinore Local Hazard Mitigation Plan Annex (LHMP) and the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan into this Chapter by reference.

Implementation Program        The Emergency Services Division will maintain emergency preparedness information and handouts at City Hall, the Senior Center and the Library, and will distributed the information at community events. Additionally, the City’s website and other media resources shall be utilized to inform and educate residents and business owners on emergency preparedness matters and emergency evacuation routes.

Implementation Program        The Emergency Services Division will continue to coordinate training for city staff and Community Emergency Response Team (CERT) volunteers, and publicize training sessions to the City’s residents and business owners.

Implementation Program        The Emergency Services Division will review and update the Lake Elsinore Local Hazard Mitigation Plan (LHMP) and the Emergency Operations Plan (EOP) a minimum of every 5 years to update emergency response, evaluation plans and evacuation routes to reflect current conditions and community needs.

Agency/Department            City Manager, Public Works Department

## 6.8 Climate Adaptation

Although climate change is not a hazard, variations in environmental conditions can impact some of the natural hazards affecting Lake Elsinore. Projections of future conditions include increased temperatures, increased extreme heat days, changes in precipitation, prolonged droughts, intensified flooding, and changes in the size and frequency of wildfire incidents.

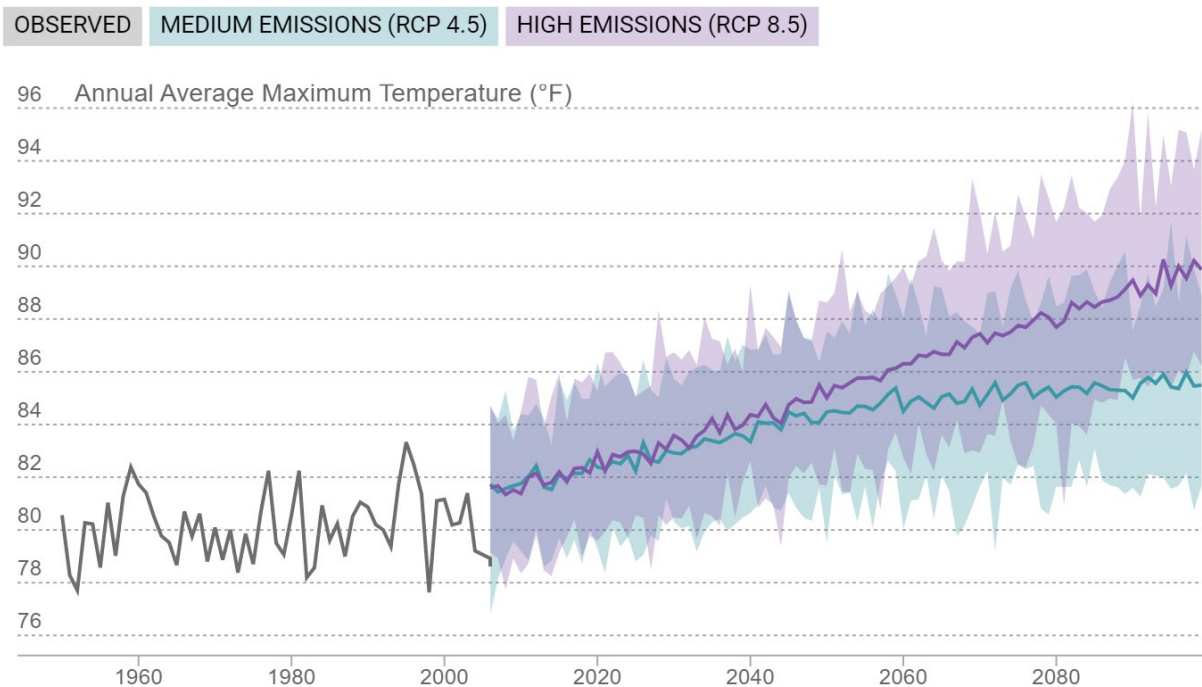
Increasing temperatures associated with climate change can act as a hazard multiplier. The State has developed the Cal-Adapt tool (<https://cal-adapt.org>) that provides projections of future climate conditions. By the end of the century, annual mean temperatures are projected to increase between five and nine degrees, impacting residents and businesses (Figure 6.13). These increases are also anticipated to increase the number of extreme heat days (103.8°F) in Lake Elsinore, increasing from four days per year to between 24 and 29 days by 2064 and up to 52 days by the end of the century (Table 6-5). These potential

temperature increases may adversely impact residents living in poorly insulated structures or structures that do not meet current code requirements. They could also lead to an increase in demand for power and water, taxing the power grid and water resources, leading to shortages of both.

**Figure 6.13, Annual Average Maximum Temperature**

## Annual Average Maximum Temperature

Average of all the hottest daily temperatures in a year.



**Table 6-5, Potential Climate Change Effects for Lake Elsinore**

Potential Climate Change Effect	Observed (1961-1990)	Mid-Century (2035-2064)	Future (2070-2099)
Annual Mean Maximum Temperature	78.6°F	82.5°F to 83.3°F	83.5°F to 86.7°F
Extreme Heat Days (103.8°F)	4 days per year	24 to 29 days per year	30 to 52 days per year
Annual Mean Precipitation	13.7 inches	13.1 to 13.2 inches <sup>1</sup>	13.0 to 13.5 inches
Annual Average Area Burned	616.5 acres	615.7 to 718.0 acres	527.2 to 659.3 acres

Source: Cal-Adapt (Accessed 9/19/2022 at <https://cal-adapt.org>)

While temperatures are anticipated to increase in the coming decades, climate change projections also suggest future rain events may be more intense than what is currently experienced within the City, which could increase flooding within the City. With changes in future precipitation, it is expected that changes

to local vegetation may occur, which could impact drainages and increase the need for wildfire management activities. Increased rainfall could increase the amount of flooding within the community or introduce flooding into areas that typically have not experienced flooding before. With fewer small and moderate precipitation events replaced by fewer but greater and more intense precipitation events, the City could also experience an increase in landslides/mudslides. Extreme precipitation events could destabilize hillsides and drainages, especially if vegetation growth has been reduced, resulting in more landslides/mudslides and/or erosion along natural stream courses, flood channels, and levees, impacting neighboring properties/structures and City drainage infrastructure.

With future temperature increases coupled with relatively similar precipitation amounts experienced today, future wildfire impacts are projected to be relatively consistent by the end of the century. The changes in precipitation events suggests that vegetation growth will experience an overall reduction. A reduction in vegetation could reduce future wildfire vulnerability due to reduced fuel quantities and an overall reduction in vegetation density. The City currently experiences an annual average of 616.5 acres burned; this value is projected to increase by only a small amount by the end of the century.

### 6.8.1 Climate Adaptation Goal, Policies and Implementation Program

**Goal S 8** Ensure that Lake Elsinore is adaptive to changing hazard conditions exacerbated by climate conditions.

#### Policies

- S 8.1 Incorporate climate resiliency principals into relevant planning and development policies and practices.
- S 8.2 Reduce and minimize the risk of future hazards associated with changing climatic conditions.
- S 8.3 Ensure critical facilities, particularly the community centers, schools, city facilities, and other buildings identified for public assembly during an emergency, are equipped to function as evacuation centers/emergency response.

Implementation Program The Emergency Services Division will review and update the Lake Elsinore Local Hazard Mitigation Plan (LHMP) and the Emergency Operations Plan (EOP) a minimum of every 5 years to incorporate new information related to climate change, as necessary.

Implementation Program Annually assess generator capabilities at City-owned facilities and equip facilities with generators or back up sources of power, with a focus on renewable sources of back-up power.

Implementation Program Continue cooperation between school districts and the City to identify school facilities that are suitable and will be available to function as evacuation centers.

Implementation Program Prepare and periodically update a Climate Action Plan that integrates climate adaptation and hazard mitigation information and analysis.

Implementation Program Monitor flooding conditions that occur outside of the 100-year floodplain to identify new areas of risk as future conditions change.

Agency/Department City Manager, Engineering Department, Community Development Department, Public Works Department, Emergency Services Manager