APPENDIX A

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CITY OF LAKE ELSINORE

DRAFT GENERAL PLAN UPDATE

JUNE 2026





Community Development Department
130 S Main Street, Lake Elsinore, CA 92530

CITY OF LAKE ELSINORE
DREAM EXTREME

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Lake Elsinore Draft General Plan Update

2026

City of Lake Elsinore

Community Development Department
Contact: Damaris Abraham
130 S Main Street
Lake Elsinore, CA 92530



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Acknowledgments

City Council

Brian Tisdale, Council Member
Robert 'Bob' Magee, Mayor
Timothy J. Sheridan, Mayor Pro Tem
Brian Tisdale, Council Member
Michael Carroll, Council Member
Steve Manos, Council Member

Planning Commission

Jodi Peters, Chair
Jason Devor, Vice Chair
John Gray, Commissioner
Andrew Pease, Commissioner
Kyle Martin, Commissioner

City Staff

Jason Simpson, City Manager
Damaris Abraham, Community Development Director
Barbara Leibold, City Attorney
Yu Tagai, City Engineer
Nancy Huynh, Principal Planner
Carlos Serna, Associate Planner
Tamara Harrison, Contract Planner

Consultant Team

MIG, Urban and Environmental Planning, Community Engagement

Lisa A. Brownfield, Principal
Andrew Parish, Project Associate/GIS
Emma-Quin Smith, Project Associate
Hudson Handel, Project Associate
Annette Martinez Arredondo, Project Assistant

Fehr & Peers, Transportation Planning/Engineering

Jason D. Pack, TE, Principal
Paul Herrmann, TE, Senior Associate
Marsha Phillips, Transportation Engineer/Planner

The Natelson Dale Group, Economic Development and Market Strategies

Roger Dale, Managing Principal

Albert A. Webb Associates, Infrastructure Existing Conditions Atlas

Bruce Davis, Senior Vice President
Jeff Hart, Deputy Director, Water Resources
Marco Gonzalez, Assistant Engineer

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LAKE COMMUNITY CENTER
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Introduction

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User's Guide

Administering the Plan

Introduction

The City's long history has shaped its development patterns and its culture. The purpose of the General Plan is to establish a blueprint for the City's future development and quality of life. The General Plan will provide a strategic framework to guide decision-making consistent with that vision.

The City surrounds Lake Elsinore, the largest freshwater lake in southern California. The City of Lake Elsinore is located approximately 30 miles south of downtown Riverside. Lake Elsinore is bordered by the cities of Wildomar, Canyon Lake, and Menifee, and unincorporated communities of Meadowbrook, Lakeland Village, Terra Cotta, and Alberhill. The Cleveland National Forest is to the southwest of the City. Los Angeles is approximately 60 miles northwest, Palm Springs 70 miles northeast, San Juan Capistrano 35 miles southwest, and San Diego 75 miles southwest.

Interstate 15 (I-15), also known as the Corona Freeway, runs northwest/southeast through Lake Elsinore's urbanized area connecting with nearby Corona and Murrieta. Ortega Highway (State Route 74 or SR-74) runs northeast/southwest connecting Lake Elsinore to Perris and Rancho Mission Viejo.

The City's Sphere of Influence (SOI) is unincorporated County land and covers a total of 72 square miles. The area within the corporate City limits and the SOI are collectively called the Planning Area (Figure I-1). While the City has no formal authority within the SOI, the State of California requires a jurisdiction to consider land use planning for areas that bear relation to the City's future. This planning approach provides cities with a means of shaping the future of areas may eventually be annexed.

Lake Elsinore land uses are a mix of residential, commercial, and manufacturing, with a concentration near I-15 and SR-74. The SOI is predominately vacant/open space with terrain that is highly sloped. The Lake is a popular recreational destination. Recreation activities include boating, waterboarding, fishing, camping, swimming, and sunbathing.

Originally, the Lake Elsinore Valley was within San Diego County. However, in 1893, Lake Elsinore Valley became a part of the newly created County of Riverside. Lake Elsinore incorporated as a city on April 20, 1888. Lake Elsinore is governed by five-member elected City Council (Council districts are shown in Figure I-2) and is under the Council-Manager form of government.

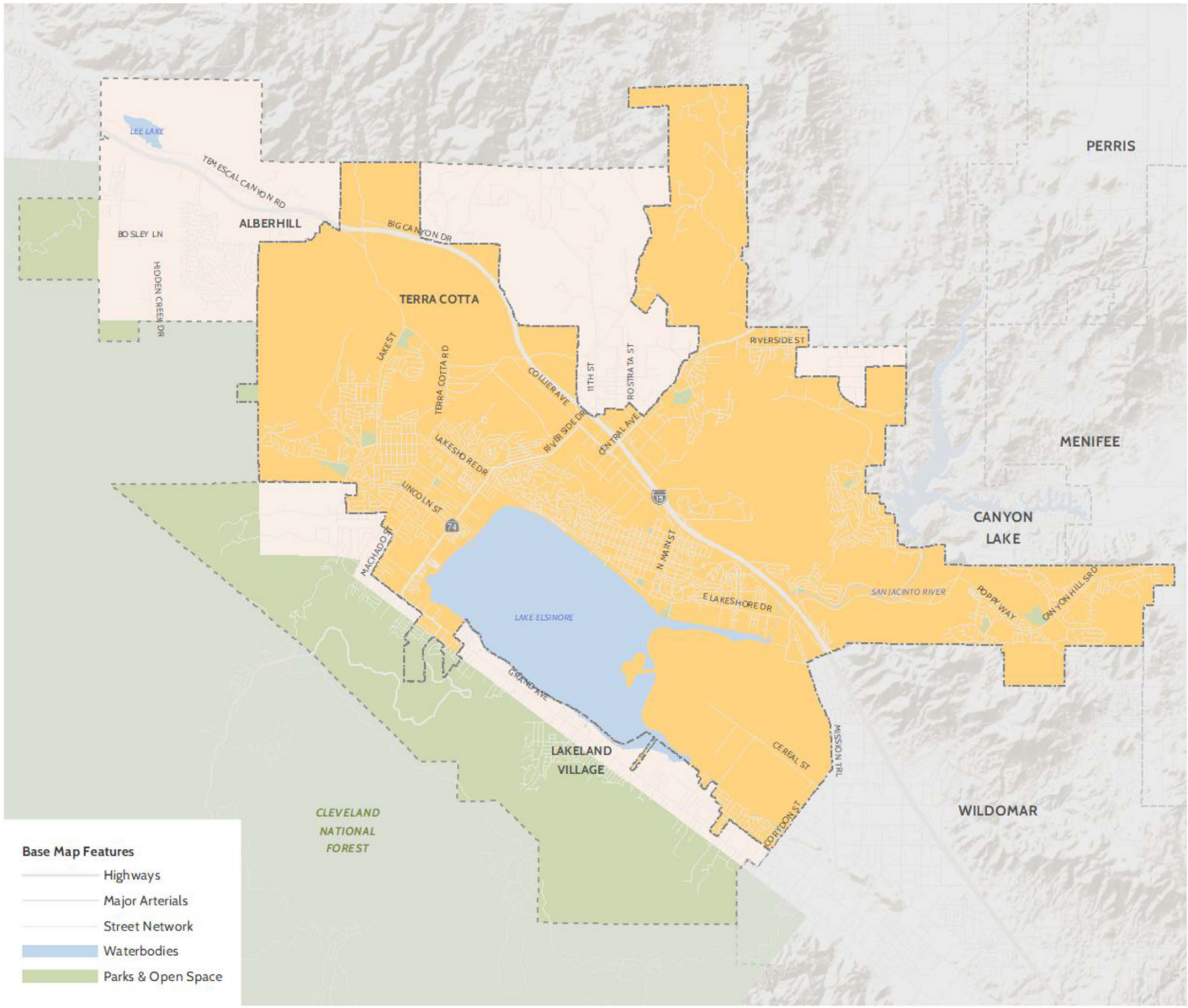
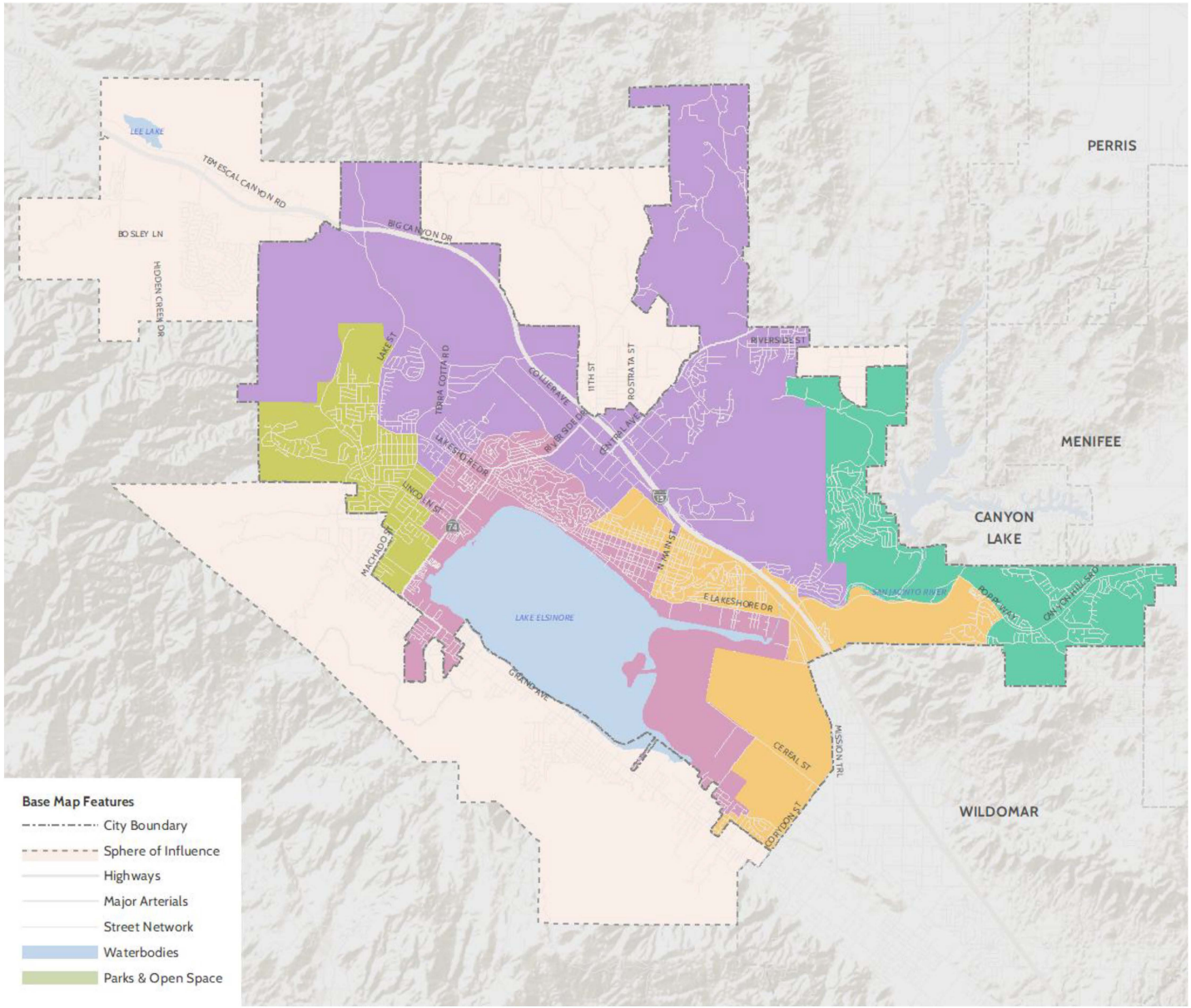


Figure I-1
PLANNING AREA

Planning Area
City Boundary
Sphere of Influence

Prepared by MIG, October 2023.
Source: City of Lake Elsinore, 2023

Miles
0 ¼ ½ 1 1½ 2


PERRIS
MENIFEE
CANYON LAKE
WILDOMAR
LAKE ELSINORE
LEE LAKE
TEMESCAL CANYON RD
BOSLEY LN
HIDDEN CREEK DR
BIG CANYON DR
LAKE ST
TERRA COTTA RD
COLLIER AVE
11TH ST
ROSITA ST
RIVERSIDE ST
RIVER ROAD DR
CENTRAL AVE
LAKESHORE DR
LINCOLN ST
MACHADO ST
74
15
H MAIN ST
E LAKESHORE DR
SAN JACINTO RIVER
TOMAHAWK
CANYON HILLS RD
GRAND AVE
CEREAL ST
MISSION TRL
NORTON ST
Base Map Features
City Boundary
Sphere of Influence
Highways
Major Arterials
Street Network
Waterbodies
Parks & Open Space
Figure I-2
CITY COUNCIL VOTING DISTRICTS
Voting Districts
Council District 1
Council District 2
Council District 3
Council District 4
Council District 5
Prepared by MIG, October 2023.
Source: City of Lake Elsinore, 2023
Miles
0 ¼ ½ 1 1½ 2

Community Effort

The City of Lake Elsinore understands that community building and public participation are the cornerstones of a thriving city. The public participation effort arose from the City's fundamental belief that an active resident population must be integrally involved in important policy discussions. The public participation program to inform the General Plan Update was multi-faceted and included the components described below. Detailed summaries of each of these engagement activities can be found on the City's website https://www.lake-elsinore.org/468/General-Plan-Update.

Stakeholder Interviews

The project team held two stakeholder interview sessions in November 2023. A diverse group of community members participated, including property owners, residents, and local organizations' representatives such as school boards, civic clubs, and homeowner associations. Specifically, the participants' organization affiliations are listed below. Interviews were conducted via videoconference and lasted approximately one hour. The participants responded to questions regarding current opportunities and challenges facing Lake Elsinore, and a future vision for the city.

- Animals Friends of the Valleys
- California Family Life Center/Plant Youth
- Riverside County Fire Department
- Copper Canyon Hill Homeowners Association
- Elsinore Valley Municipal Water District
- Lake Elsinore Historical Society
- Lake Elsinore Unified School District
- Rotary Club of Lake Elsinore

The following key themes emerged from the interviews:

- **Provide High-Quality Employment Opportunities.** The lack of higher-paying jobs makes attracting and retaining moderate-to-high-income households difficult. This has also caused an outflow of talented local adults, many of whom do not return to Lake Elsinore after completing college or university.
- **Support Extreme Sports and Recreation.** Participants noted that extreme sports were central to Lake Elsinore's identity and sense of place, while others noted a need to create a balance between passive and active recreational opportunities that are inclusive of people's tastes and abilities.
- **Emphasize the Lake as a Destination.** The Lake has long served as a focal point for the community. Participants discussed their desire to re-emphasize the Lake as a key destination.

- **Attract a Diverse Mix of Businesses.** Participants noted that Lake Elsinore lacks a diverse mix of businesses; Lake Elsinore needs more shopping, dining, and entertainment opportunities, especially in key areas such as around the Lake and downtown.
- **Incentivize Development and Growth.** Participants welcome Lake Elsinore's development and growth as they feel this is necessary to attract the types of jobs, businesses, and amenities they would like to see in the future.
- **Create A More Walkable and Bikeable Community.** Participants expressed a desire to have more biking and walking opportunities so that they can rely less on driving.
- **Maintain the Character of the Historic Downtown.** The Historic Downtown is a key community asset and participants want to maintain the historic feel by attracting the "right mix of businesses" such as small businesses/entrepreneurs.
- **Improve Neighborhood Aesthetics.** Participants mentioned that vacant properties and a lack of property upkeep negatively impacts the aesthetics of many neighborhoods.

City Council Focus Sessions



The Lake Elsinore General Plan Update process included City Council focus sessions to identify and discuss issues, consider alternatives and proposed plans, and provide input regarding other subjects throughout the planning process. The first Focus Session, convened on December 12, 2023, explored City Councilmembers' vision for the City's future. Councilmembers identified current development, environmental, transportation, and housing conditions, opportunities, and challenges facing Lake Elsinore.

City Councilmembers convened for two additional sessions on February 22, 2024 and March 14, 2024 to provide a more detailed input on the overall vision for the city's future growth and land use strategies. The sessions were highly interactive and included a series of mapping exercises to identify land use opportunities and challenges.

The following key themes were identified during the City Council sessions:

- Lake Elsinore's quality of life is defined by active recreation, access and connectivity, and a sense of community.
- Specific plans and zoning inconsistencies with General Plan land use designations and policies are critical concerns.
- Focus attention on or re-imagine older Lake Elsinore areas.
- Housing for all income levels and industrial development allowing for skilled job opportunities should be part of the ideal land use mix.

- The City has many opportunities to develop more residential, commercial, and industrial land uses.

The Lake Elsinore City Council convened at the Lake Elsinore Cultural Center on June 18, 2024 to discuss land use and transportation alternatives. Input received included:

- Create the opportunity for medical and hospital land uses, transition the Central Avenue commercial areas into a lively "uptown" district, retain the commercial viability of the Outlets at Lake Elsinore site, and support residential uses for all segments of the population.
- Develop right-of-way and street profiles that provide for:
  - Additional vehicular, bicycle, and pedestrian capacity on Riverside Drive without requiring significant land acquisition; and
  - Scenic multimodal corridor on Lakeshore Drive from Riverside Drive to the Temescal Wash.

Visioning Pop-up Workshop

The Visioning Pop-Up Workshop was the first citywide community engagement event associated with the General Plan Update. It took place at the Diamond Stadium on May 11, 2024 from 9:00 a.m. to 11:00 a.m. The Workshop explored the participants' vision for the City's future. Community members shared their thoughts regarding current land use, environmental conditions, transportation opportunities, and challenges facing Lake Elsinore. They expressed their thoughts using a variety of interactive activities including a mapping exercise, priorities poster, and vision cards. The key themes identified at this event were:

- **Mobility.** The Lake Elsinore community is active and appreciates the existing recreational spaces. The ability to go to work, run errands, and go home on a bicycle is sought by some residents. Establishing safer streets for pedestrians, specifically along Terra Cotta Road, and developing safe bike lanes and trails were identified. Community members identified problematic traffic conditions in various areas throughout Lake Elsinore.
- **Specific Land Uses.** Some participants indicated interest in seeing a community college or trade school locating in the Lake Elsinore. However, a medical office/hospital was expressed as a top land use priority due to Lake Elsinore not having close proximity to a hospital. Affordable housing was expressed as a priority by some participants as well.
- **Enhance Retail and Dining Experience.** Improving the quality of retail and dining was one of the top three priorities expressed by the participants. Opportunities for restaurants and entertainment include activating or repurposing spaces such as the outlets and town centers. The participants would like to have a wider variety of retail and dining establishments. In particular, the participants would like to see smaller or locally owned businesses prioritized. Access to grocery stores closer to their homes was also one of the top priorities.
- **Enhancing the Lake Elsinore Experience.** Updating the "Welcome to Lake Elsinore" sign, including a digital marquee to inform the community of events, and re-establishing the Lake Elsinore pier were suggestions to enhance the community's experience.

- **Preserve the Appearance of the City.** The appearance of the Lake Elsinore community was important to some participants. Multiple participants expressed their dislike of car washes and dispensaries – sharing they would like to see these types of businesses limited. Of particular concern were the city's overall cleanliness, especially near the library and southwest of the Lake near Grand Avenue; code enforcement for unleashed dogs; and illicit activity near the library. Residents also shared a desire to preserve the existing density or the community's population by limiting development. Conservation/Open Space/Habitat was underlined as a priority for the purpose of ensuring natural spaces are not impacted by sprawling developments.

Land Use Alternatives Workshop & Questionnaire

A communitywide land use alternatives workshop and an online questionnaire gathered feedback about various land use options. The workshop was held on July 18, 2024 at a Live at the Lakefront event (a family-friendly summer concert series at Launch Pointe). Five interactive land use alternative boards were displayed, each highlighting a different development theme and possible areas for implementation. Participants reviewed land use descriptions, maps, photos of existing conditions, and illustrative examples of options. Using a dot-voting system, community members indicated whether they viewed each land use option as "awesome", "good", or "okay". Additional feedback was also shared through written post-it notes. In addition, an online questionnaire, asking the same questions as the workshop, was posted to the City's website from October 15, 2024 to October 29, 2024. Three-hundred and twelve (312) participants responded to the questionnaire, of which 144 participants responded to every question. The Land Use Alternatives workshop and questionnaire asked about five focus areas and possible land use themes for the areas:



1. Launch Pointe, North Elsinore, and Downtown: Opportunity sites to bolster economic vitality and livability.
2. Riverside Drive, Lakeshore Drive, and City Center: Opportunity sites to promote mixed use activities.
3. CA-74 opportunity sites: Create new commercial and industrial opportunities.
4. Uptown: Opportunity sites to facilitate a new uptown district along Central Avenue.
5. Nichols Road and Camino del Norte: Opportunity sites to create new commercial and industrial opportunities compatibility with surrounding areas.

The workshop and the online questionnaire allowed community members to provide valuable feedback about proposed General Plan land use alternatives and to receive information about the General Plan Update process.

Key Focus Area Themes and Voter Results at the Land Use Alternatives Workshop:





1. **Add Residential Uses Near Downtown, Launch Pointe, and Other Key Sites.** Community members showed the strongest support for Mixed-Use (MU) and Entertainment land uses, with MU (three story buildings with ground-floor retail) receiving the most dots in the "awesome" response category. Denser townhouse-style is the preferred residential use. General Commercial land use inspired mixed reactions, with dots spread across the categories.
2. **Focus Mixed Uses Along Key Corridors.** Participants strongly favored Small-Scale Mixed-Use development along Riverside Drive, Lakeshore Drive, and City Center, with all votes placed in the "awesome" category. Single-unit suburban housing drew only one supportive vote.
3. **Create New Commercial and Industrial Opportunities North Of CA-74.** General Commercial uses were popular in this area, with most votes being "awesome". Large-lot homes received support as well, particularly from participants who value open space as a key issue. Limited Industrial drew a more mixed response, with most votes in the "okay" category.



4. **Encourage A Modern Live, Work, Play "Uptown" District In North Lake Elsinore.** Participants favored Live/Work Units, which received the highest number of "awesome" votes overall. Entertainment uses also received some support, though opinions were more evenly split.
5. **Create New Commercial and Industrial Opportunities North of Nicholas Road and Camino Del Norte.** General Commercial uses (illustrated as outdoor shopping centers) received unanimous support in the "awesome" category. Limited Industrial (low-rise, tilt-up buildings) received little support, with just one "okay" vote.

6. **Other Community Priorities.** Participants expressed additional input not tied to a specific focus area, which focused on more across-the-board improvements. These included support for more safe, clean, and affordable senior hosing; improved diversity and quality of commercial uses (particularly dining and grocery, with mentions of breweries, Yard House-style restaurants, Sprouts, and Whole Foods); and preserving Lake Elsinore's character by protecting open space and minimizing environmental impacts from new development.



Key Focus Area Themes and Voter Results On The Online Questionnaire

1. **Bolstering economic vitality and livability in Launch Pointe, North Elsinore, and Downtown.** Entertainment land uses received the strongest support, with a 79% "awesome" rating. Mixed-Use and General Commercial both received about half "awesome" ratings, with Mixed-Use slightly more favored overall due to higher "good" ratings. Within the residential options, Mixed-Use again drew the most support from participants, followed by townhouse style homes. Participants supported the establishment of sit-down restaurants, family-friendly neighborhoods, and expressed interest in a small concert venue or amphitheater.
2. **Focus Mixed Uses Along Key Corridors.** Results for Riverside Drive, Lakeshore Drive, and City Center were more divided. Townhouse style homes received slightly more "awesome" ratings (36%) than Small Scale Mixed-Use (30%). Open comments showed differing views: some participants supported more apartments or mixed-use housing to attract young people, while others opposed additional residential uses in this area. Concerns about infrastructure and traffic were also raised, and several participants suggested locating commercial uses near Diamond Stadium and concentrating new growth in Lakeland Village or Launch Pointe.
3. **Create New Commercial And Industrial Opportunities North Of CA-74.** Large-lot single-unit land use received the highest share of "awesome" votes (58%), followed closely by townhouse style residential and General Commercial, both above 50%. When combining "awesome" and "good" votes, townhouse style residential emerged as the top choice (89%). Limited Industrial was the least popular, with most participants rating it "okay". Comments reflected concerns about warehouse uses near residential properties and schools, with suggestions to cluster industrial uses in one area of the city.
4. **Encourage A Modern Live, Work, Play "Uptown" District In North Lake Elsinore.** Entertainment again stood out as the most favored option, with 82% rating it "awesome". Mixed-Use (50%) and Live/Work units (44%) also received significant support, while large-lot single-unit residential drew less enthusiasm. Additional ideas offered included office/retail, affordable senior housing, and cultural attractions to enhance the vibrancy of the district.

5. **Create New Commercial And Industrial Opportunities North Of Nicholas Road And Cam Del Norte.** General Commercial was preferred, with 48% rating it "awesome," compared to 17% for Limited Industrial. Open-ended responses showed strong concern about warehouses and industrial uses near residential areas and schools, with health and long-term impacts cited as major issues. Some participants suggested a college or university, expanded open space, or more commercial uses to encourage local shopping and foster a lively town center.
6. **Other community priorities.** Additional comments emphasized the importance of investing in infrastructure—especially roads and traffic capacity—before further development. Participants also highlighted the need for more parks, open space, trails, and tree planting; a wider mix of businesses including sit-down restaurants and grocery diversity; discouraging more cannabis dispensaries, gas stations, and fast-food outlets; and addressing homelessness and safety concerns.

Native Nations Listening Sessions

Two "listening sessions" were conducted with the local Native American Tribe representatives and associated organizations during the planning process in Winter 2024 and Spring 2025. The sessions contributed to a more holistic understanding of the Native Nations concerns and integrated their perspectives into the General Plan Update and planning process, as feasible. The listening sessions served as a supplement to, not replacement for, Senate Bill (SB18) and Assembly Bill (AB52) processes.

Environmental Justice Workshop

An Environmental Justice public workshop was convened on February 26, 2026 at the Lake Elsinore Cultural Center, which focused on:

- Environmental justice concepts and issues
- Lake Elsinore's Disadvantaged Communities locations and identified issues impacting the communities
- Possible policies and programs to address and improve the Disadvantaged Communities environmental justice problems.

The workshop participants identified the following methods that may improve Disadvantaged Communities' residents' quality of life.

- Improve access to:
  - local Lake Elsinore parks
  - healthy foods
  - the lake and lake recreation facilities
- Encourage alternative energy sources for Disadvantaged Communities' structures/buildings
- Provide information to Disadvantaged Communities residents about healthy activities/choices and environmental issues.

Other Engagement

The City Council and Planning Commission convened a joint study session on (date) at the Lake Elsinore Cultural Center, which resulted in xxx.

As part of the public review and adoption process, the Planning Commission convened a publicly noticed Public Hearing on (date) at the Lake Elsinore Cultural Arts Center. The Planning Commission recommended the following to the City Council:

- _____ the Lake Elsinore General Plan Update Environmental Impact Report
- _____ the Lake Elsinore General Plan Update
- _____ the Lake Elsinore Zoning Code and Map Amendments

The Lake Elsinore City Council convened a publicly noticed Public Hearing on (date) at the Lake Elsinore Cultural Arts Center. The City Council

- _____ the Lake Elsinore General Plan Update Environmental Impact Report
- _____ the Lake Elsinore General Plan Update
- _____ the Lake Elsinore Zoning Code and Map Amendments

Note to Reader:

The text in this section will be updated to reflect the dates, locations, and results of the public meetings and hearings. The text provided here is an example of what may be written.

Guiding Principles

The Guiding Principles direct the development of the General Plan's goals and policies. They reflect the vision for Lake Elsinore, rather than describe Lake Elsinore as it exists today.

- Lake Elsinore facilitates a healthy and diverse economy that retains and attracts traditional and new industries, creates jobs, supports the local tax base, and sustains the ability to provide important services for existing and future residents, including expanded housing opportunities.
- Lake Elsinore encourages attractive neighborhood villages that provide residents with a diverse range of distinctive destinations, such as shopping areas, entertainment venues, dining experiences, and cultural spaces. These places may include small centers near established neighborhoods, more vibrant and dense centers in Downtown and Launch Pointe, and mixed-use villages along key corridors such as Lakeshore Drive or SR-74.
- Lake Elsinore maintains and increases the variety of high quality open and recreational spaces. It embraces its "Dream Extreme" identity of extreme action sports, while also providing opportunities for locally scaled recreational opportunities, such as small neighborhood parks, plazas, and community centers.
- Lake Elsinore fosters healthy communities for all residents by providing safe and convenient access to community services such as healthy food stores, health care, parks and open spaces, jobs, and educational opportunities.

- Lake Elsinore values and is committed to enhancing the environmental health and economic vitality of the Lake. Lake Elsinore ensures that the Lake is well maintained, attractive, and provides residents and visitors with opportunities for lakeside interaction.
- Lake Elsinore recognizes Downtown as its historic core with civic institutions, historic landmarks, and local businesses. The vitality of Downtown is supported by an increase in appropriately scaled housing and people-oriented streetscapes.
- Lake Elsinore offers attractive, convenient transportation options and provides walkable, bikeable, safer, and livable streets while continuing to strengthen access to the greater region. Community amenities are accessible by all residents.

User's Guide

The General Plan is a community document intended for use by Lake Elsinore residents, business owners and employees, decision-makers, and other interested people and businesses. As such, the General Plan is written and organized for ease of use. Tables, diagrams, and maps help readers understand planning concepts.

The General Plan's organization allows users to turn to the chapter (known as "Element") that interests them and quickly obtain a perspective of City policies on the subject. However, General Plan users should realize that the goals, policies, and programs throughout all elements are interrelated and should be examined comprehensively. These policy components must be considered together when making decisions.

The General Plan is intended to be both a long-term and a dynamic document and must be periodically updated to respond to changing community needs. Requests for amendments may be submitted by individuals or initiated by the City itself. Amendments may involve a land use designation change for a particular property, or policy/text change applicable to larger areas or the entire city. Proposed amendments will be publicly reviewed to ensure consistency with all General Plan Elements and the General Plan EIR. Per State law, General Plans may be amended up to four times per year. A city is under no obligation to process General Plan amendments, as it constitutes a legislative act. To facilitate a larger number of amendment requests, a jurisdiction may group together several amendment requests to process together as one General Plan amendment.

Administering the Plan

The Lake Elsinore City Council will implement this General Plan by establishing annual planning and budgeting goals based on the Plan, and by adopting implementing ordinances, regulations, and programs. City departments will use General Plan policies to guide their programming and planning and, importantly, to review development applications for consistency with the community's vision.

State law provides direction on how cities can maintain the general plan as a contemporary policy guide. California requires each planning department to annually report to its city council on "the status of the plan and progress in its implementation". Moreover, it is the Lake Elsinore City Council's policy to review the General Plan periodically to maintain the currency of its goals and policies, as well as its background and technical information. The Lake Elsinore General Plan has been adopted pursuant to this policy.

The City of Lake Elsinore regulates the use of property within its jurisdiction through the General Plan in conjunction with the zoning and specific plans, subdivision, building codes, and other municipal code sections. Following the General Plan's adoption, any regulations in zoning, subdivision, building, and other ordinances that are not consistent with the General Plan will be amended to ensure consistency. Until the other regulations and ordinances are amended, the General Plan policy will govern.

Lake Elsinore General Plan and State Mandated Elements

Table I-1 outlines how the Lake Elsinore General Plan incorporates and organizes all of the state-mandated general plan elements.

Table I-1: Lake Elsinore General Plan Compared to State-Mandated Elements

Elements of the Lake Elsinore General Plan Update	State-Mandated General Plan Elements
Land Use and Community Character	Land Use
Mobility and Infrastructure	Circulation
Conservation, Open Space, and Parks	Conservation Open Space
Historic, Cultural, and Tribal Cultural Resources	Historic, Cultural, and Tribal Cultural Resources
Public Safety, Noise, and Air Quality	Noise Safety
Housing Element[1]	Housing
Environmental Justice	Environmental Justice

Statutory Requirements

Every California jurisdiction is required to adopt a general plan and update it at regular intervals. The purpose of the general plan is to anticipate and plan for "the physical development of the county or city, and any land outside its boundaries which bears relation to its planning" (California Government Code §65300). A general plan must address many issues that are related to and influence land use decisions. Specifically, California law requires the general plan to address land use, circulation, housing, conservation of natural resources, preservation of open space, noise environment, public safety, and

[1] Housing Element is under a separate cover.

environmental justice (Government Code §65302). Jurisdictions may prepare and adopt other general plan elements or address any other topics of relevance or interest to that community, with the understanding that these optional elements must be implemented with the same vigor – and are subject to the same legal scrutiny – as the mandatory elements or topics.

Key Terminology

Goal

A goal is an ideal future end; it is a direction-setter. As such, a goal may be abstract in nature, and, generally, not quantifiable or time dependent.

Policy

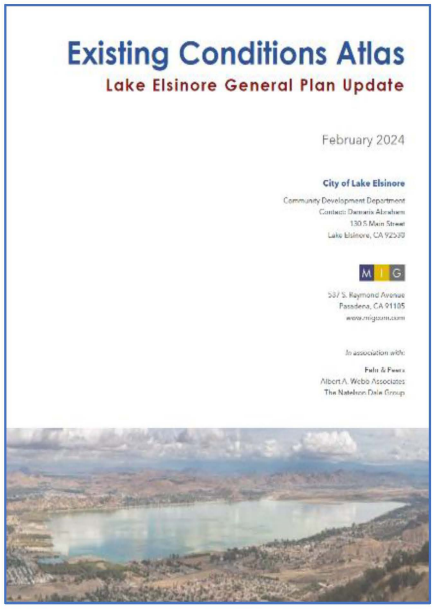
A policy is a specific statement that guides decision-making. It indicates the commitment of the City of Lake Elsinore City Council to a course of action. A policy implements a general plan's goal.

Program

A program is a coordinated set of specific measures and actions (e.g., zoning, subdivision procedures, and capital expenditures) that local government intends to use in carrying out the policies of the General Plan.

General Plan Reference Documents

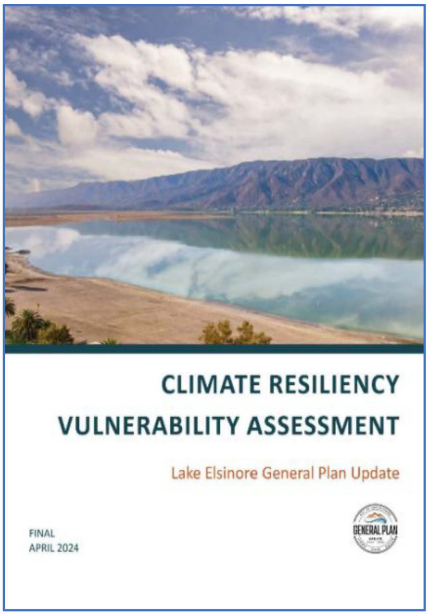
The General Plan is the result of thousands of hours of research and technical studies. It represents the collective efforts of the diversity of elected decision-makers, individuals, and agencies who cumulatively guide and shape land use development and natural resource conservation. A vital component of the General Plan is the engagement of numerous individuals throughout the community whose hopes and expectations for the City's future are solicited and guide the process.



Through the process, several related documents have been produced that will provide resource material for years to come. These include:

- Lake Elsinore General Plan Existing Conditions Atlas
- Lake Elsinore Climate Vulnerability Assessment

- Lake Elsinore General Plan Guiding Principles
- Public Engagement Summaries
  - Stakeholder Interviews Summary (2023)
  - City Council Focus Session #1 Summary (2023)
  - City Council Focus Sessions #2 & #3 Summary (2024)
  - City Council & Planning Commission Joint Study Session Summary (2024)
  - Pop-Up #1 Pet Walk Summary (Visioning Pop-Up Workshop) (2024)
  - Land Use Alternatives Workshop and Questionnaire Summary (2024)
  - Environmental Justice Workshop Summary (2026)
- General Plan Draft Environmental Impact Report
- Market Analysis for the Lake Elsinore General Plan Update (2024)



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Land Use and Community Character

In This Section

Introduction

Land Use

Land Use and Community Character Goals and Policies

Land Use and Community Character Element

Introduction

The land use types and distribution in Lake Elsinore affect the quality of life, health, and local experiences of residents, people who work here, and visitors to the City. By carefully shaping the interrelationship of uses and urban form—and the networks that connect the two—we can create distinct places, great streets, and complete neighborhoods. Together, these building blocks of a well-defined city can promote community pride, connect neighborhoods and districts, and support successful enterprises critical to a strong local economy.

This Land Use and Community Character Element directs Lake Elsinore's long-term growth and physical development through the year 2045 by designating the future use of land within the corporate City limits and Lake Elsinore's designated Sphere of Influence (SOI). This Element identifies the planned locations, types, and intensity of housing, businesses, industries, open spaces, public buildings, and institutions. Policies intertwine land use and urban form by establishing building heights and orientation, design of the public realm (the space between buildings, including streets), and the relationship of those public spaces to adjacent buildings.

This Element frames all other General Plan Elements since the use of land affects:

- the design, location, and extent of the circulation system (Mobility and Infrastructure Element)
- where new housing development occurs (Housing Element)

Complete Neighborhoods

In Lake Elsinore, complete neighborhoods offer diverse housing options, intentional urban design, street trees, parks and open spaces, walkable streets, and convenient access to services.

Great Streets

At their most basic function, streets provide the connections between neighborhoods and destinations. However, streets are more than simply places to drive cars and place public utilities. The physical design of a street impacts how and how often people use it based on comfort, access and mobility, and activity. Streets can promote business activity, provide a front yard for residents, be a distinct place and attraction independent of the areas it connects, and provide a comfortable route for people using all travel modes—on foot, by bicycle, in a car, or using transit. The vitality of suburban life is tied to design approaches that celebrate the multifaceted roles that streets play.

Complete Networks

Building out complete networks for all modes—pedestrians, bicycles, transit, autos, and goods movement—is essential to moving and connecting people throughout Lake Elsinore and activating urban streets. See the Mobility and Infrastructure Element.

- the conservation and use of natural resources, including the allocation of parks, open space, and greenways resources (Conservation, Open Space, and Parks Element)
- quality of life indicators such as rates of chronic disease, local air quality, natural hazards, and exposure to contaminants (Public Safety, Noise, Air Quality Element)
- extent of urban services and utilities (Mobility and Infrastructure Element)

In this Element, the definition of each land use category includes not just the land use intent but also the three-dimensional aspects of development required to implement the vision for a district or neighborhood. For example, some of Lake Elsinore is planned to accommodate mixed-use development at varying densities and uses, dependent upon location. To implement the vision for an integrated, visually and physically connected mix of uses and attractive streetscape, the land use designations indicate the required urban design approaches.

Figure LUCC-2 illustrates the urban design framework for Lake Elsinore including focal activity areas and catalyst sites, City landmarks, and gateways.

Defining Physical Space

Built Environment (synonymous with Urban Form or Built Form) refers to the configuration of a place's physical components.

The Public Realm consists of all things within the public right-of-way between private buildings. This includes travel lanes, sidewalks, paseos, plazas, parks, recreational corridors, and other outdoor places available, without charge, for everyone to use.

Figure LUCC-1: Components of the Public Realm

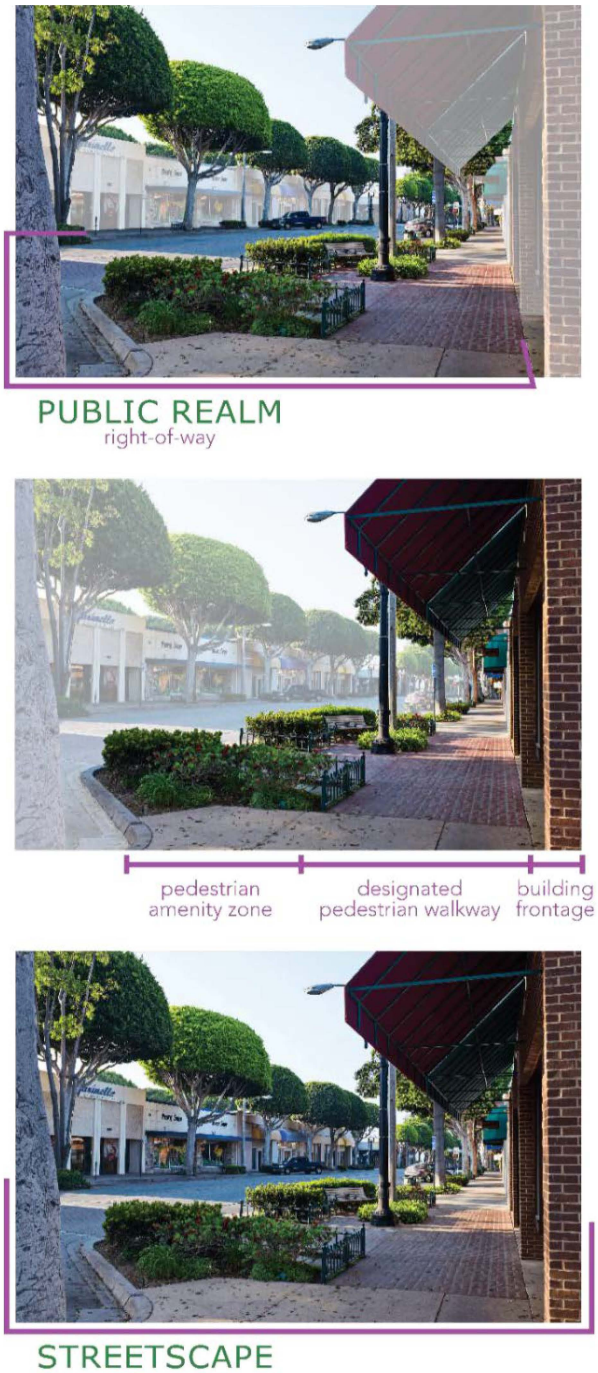
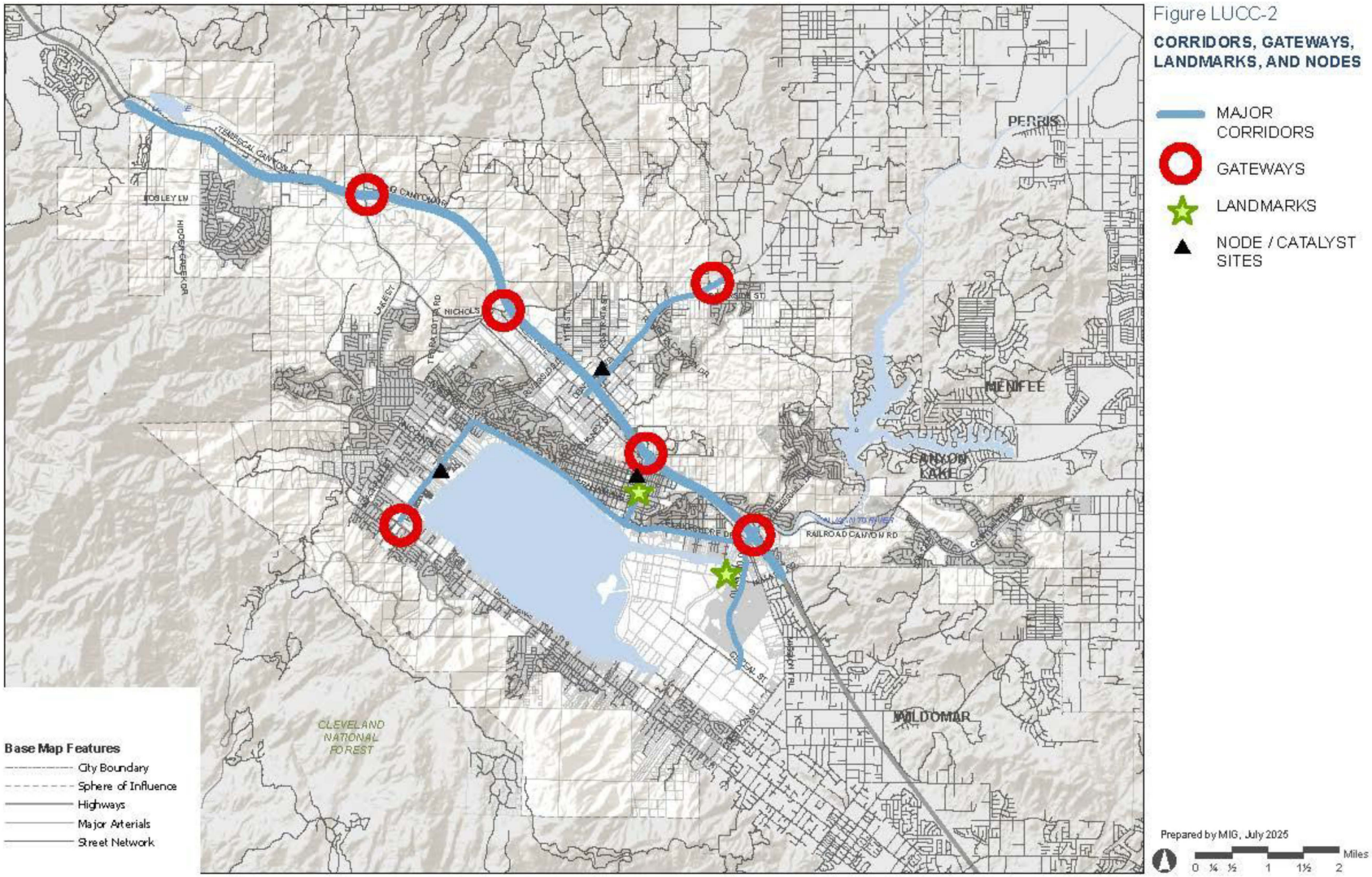


Figure LUCC-2

CORRIDORS, GATEWAYS, LANDMARKS, AND NODES



An enjoyable pedestrian experience is different for each user and based on many factors. Encouraging Lake Elsinore residents to walk as part of their everyday routine can be achieved by providing the physical framework and making that space inviting. Sidewalks must be recognized not only as a pedestrian amenity, but as a foundation in Lake Elsinore's transportation network. To encourage people to linger, sidewalks need to be safe, comfortable, shaded, and attractive, with facilities that accommodate people of all ages and abilities, as well as wide enough to allow for a variety of activities to occur simultaneously. Transforming sidewalks into public spaces requires intentional design of the following basic components, illustrated to the right:

- **Building Frontage** (or Street Frontage) is the primary defining feature of a street. Vibrant urban thoroughfares are largely defined by the design and architectural details of buildings that make up the street edge and activate the street with windows, entries, and engaging ground floor uses. It is critical that the design of both the streetscape and adjacent buildings mutually reinforce one other.
- **Walkways** enable everyone, including those who use mobility-assist devices, to access destinations. Walkways include sidewalks and street crossings. As all persons will be a pedestrian at some point, walkways are a fundamental component of the transportation system. Walkways are also critical to creating active, vibrant street level spaces.
- **Pedestrian Amenities** contribute to a high-quality transportation system including street trees and landscaping, bike racks, furniture (such as benches), fountains, paving material, wayfinding signs, and street lighting.

The **Streetscape** includes every individual component that makes up a street, both public and private. How those components work together define its character.

Big Ideas

- Community of Neighborhoods – Enhancing and creating pedestrian-first neighborhoods through high quality urban design, improved pedestrian and bicycle connections, new open space opportunities through the adaption of urban infrastructure into trails, parks, and natural areas, and building/site planning, community interfaces, pedestrian experience, and multimodal mobility.
- Central Avenue Uptown District – The Central Avenue area big box commercial area has transitioned into a vibrant mixed-use district including housing, smaller scale commercial, and urban public open space/recreation amenities in the expansive, often underutilized, parking lots.
- Mixed Use Designation – A new mixed-use designation allowing flexibility for the market to determine if a mixed-use, single-use residential, or single-use commercial development is appropriate for the site and community.

- Community Benefits – A density/intensity bonus program for mixed use and commercial developments that provide one or more community benefits (such as on-site childcare, urban open space, heightened design, etc.).
- Enhanced Connections with an activated Lake Elsinore – Land use, urban design, and mobility improvements that highlight access to the lake from Downtown, Launch Pointe, and along Riverside Drive.
- Greenways – Rethinking and expanding the natural habitat and traditional single-use flood control infrastructure including rivers, creeks, streams, flood corridors, riparian habitats, and other land that may accommodate floodwater for purposes of groundwater recharge and stormwater management, while allowing for wildlife connections.
- Urban Forest and Urban Agriculture – Land use policies encouraging the planting and maintenance of appropriate trees and the use of smaller parcels for homegrown produce to improve Lake Elsinore's environmental sustainability, residents' health, and reduce the community's heat islands.

Baseline Considerations

- **Cost and Shortage of Housing Options.** High housing costs concern many residents. All communities across California, including Lake Elsinore, face significant housing challenges: lack of supply, affordability, and a steady decrease in homeownership rates. Housing costs and supply issues particularly impact vulnerable populations that tend to have the lowest incomes and experience additional barriers to housing access. Lake Elsinore residents expressed concern that their children may not be able to afford homes in the city when the children are ready to purchase homes.
- **Aging Building Stock and Infrastructure.** Housing age often has a direct correlation to the quality and condition of housing units. Lake Elsinore's housing stock is relatively new; 67 percent is constructed after 1990 (per the City's Housing Element), with 33 percent of housing units in Lake Elsinore were built during or before the 1990s. Housing units 30 years old or older typically require rehabilitation to maintain compliance with building and safety codes. Older non-residential buildings with outdated systems (plumbing, ventilation, etc.) that may require significant repair are common along some commercial corridors. Some buildings have not been improved for quite some time and, therefore, do not encourage the tenants to make improvements. As these buildings age, the properties continue to degrade, thus demanding less rent and attracting marginal commercial uses, which results in reduced sales tax revenue.
- **Disparities in Disadvantaged Communities.** Several Lake Elsinore neighborhoods are considered Disadvantaged Communities per the definition established by the State. (The Environmental Justice Element identifies and locates Lake Elsinore's and the Sphere of Influence's Disadvantaged Communities, Figure EJ-1). Residents living in neighborhoods with elevated exposure to environmental hazards suffer most from a combination of economic, health, and environmental burdens. These burdens can include poverty, high unemployment, air and water

pollution, presence of hazardous waste, and high incidence of asthma and heart disease. Land use policies can address some of these conditions.

- **Poor "Walkability".** Lake Elsinore lies nestled against the Elsinore Mountains, a range of the larger Santa Ana Mountains. Shaped by the natural features and post-World War II priorities and values linked to housing, development patterns in portions of Lake Elsinore lend themselves largely to car travel. Development patterns—the separation of uses, expansive single-unit neighborhoods, wide thoroughfares with no sense of enclosure, and lack of street grid in some areas—discourage walking. When people cannot walk easily in their communities, they miss out on making connections with neighbors and opportunities to improve their health. Furthermore, the goals and policies within this General Plan encourage a more compact land use development pattern (specifically mixed-use land uses and commercial uses located adjacent to residential uses) that lend themselves to decreasing Vehicle Miles Traveled (VMT). It is important to note that Downtown Lake Elsinore has a land use and urban form pattern, which were established to create a sense of place and a community focus. This district is extremely walkable.
- **Underutilized Public Realm.** Cities are often defined and remembered through the quality of their streets because we structure our experiences and memories of a community by moving along its pathways. Tenets of good street design beyond engineering tell us that:
  - Streets are public spaces and should be designed as such.
  - Streets are channels for movement and should be designed to ensure that a wide variety of users—people walking, parking, shopping, bicycling, driving, resting, eating, etc.—have their own designated space and can cross paths safely and comfortably regardless of age, ability, or mode.
  - Streets are an economic asset as much as a functional element. Well-designed streets generate higher revenues for businesses and higher value for surrounding homeowners.
  - Streets should be designed as ecosystems where human-made systems interface with natural systems. From pervious pavements and bioswales that manage stormwater run-off, to street trees that provide shade and are critical to the health of cities, ecology has the potential to act as a driver for long-term, sustainable design.
- **Auto-Oriented Commercial Corridors.** Central Avenue (SR-74), Riverside Drive (also SR-74), and Auto Center Drive have developed much like a suburban commercial strip, resulting in scattered and unfocused auto-oriented retail and services, convenience and big-box uses, drive-through restaurants, and sporadic office and industrial uses. As one of the City's main commercial thoroughfare, Central Avenue presents an opportunity to evolve from commercial strips and big-box



Auto-Oriented Commercial Center

retail to a series of walkable mixed-use and employment districts, thus creating an "Uptown District".

- Concentrated activity hubs provide opportunities for clustering similar and compatible uses, supporting economic development and creating brand identity. Designated nodes and catalyst sites include but are not limited to (see Figure LUCC-2):
  - Central Avenue/Uptown District
  - Launch Pointe/Riverside Drive
  - Downtown/Historic Main Street
- **Distribution of Parks and Recreation.** While Lake Elsinore has the lake and well-used parks, establishing new green space in some areas will be difficult given the community's built-out character. As such, the City will need to rely on alternative solutions to provide open space in the Downtown and other older areas including adaptively reusing under-utilized public infrastructure rights-of-way, public plazas, and community gardens. In other areas of the city, residents indicate they have difficulty using their local park facilities because of regular organized sports tournaments using the local community spaces. While Lake Elsinore has easy access to the Cleveland National Forest, residents indicate they are interested in additional passive recreation trails and bicycle trails within the city itself.
- **Evolving Economy.** Lake Elsinore long relied on the economic success of the Outlets at Lake Elsinore and to a lesser extent, Downtown, to provide jobs and generate tax revenues. As businesses moved toward increased automation, the nature of retail shifted to online sales and the COVID-19 pandemic of 2020-21 demonstrated the ease with which many knowledge workers (versus skilled workers) can work from home. Lake Elsinore may need to increase capacity for businesses that sustain through economic transformations: healthcare, experiential retail, technology, and creative and maker industries at all scales.

Land Use and Community Character

Lake Elsinore Land Use and Community Character Element has two primary components:

- Land use plan (including land use categories, policy map, land use implications and buildout) and
- Community Plans

Land Use Plan

This Land Use Plan guides the development, maintenance, and improvement of land and properties in Lake Elsinore. The Land Use Plan comprises the following components:

- **Land Use Designations** (Table LUCC-1): Establishes the general intent, character, built form, and development regulations for each land use designation
- **Land Use Plan** (Figures LUCC-3): Illustrates the planned distribution of land uses throughout the Planning Area

- **Implications and Buildout** (Table LUCC-4): Summarizes projected population growth and the capacity created for residential and non-residential development through 2045, assuming development at the permitted densities and intensities

Together, these components define how Lake Elsinore will achieve its vision.

The land use designations are implemented via the zones in the Zoning Code and specific plan regulations. More than one zone may implement a single General Plan land use designation. Zones and specific plan regulations are more detailed than the General Plan land use designations but, in all circumstances, development must be consistent with General Plan policies.

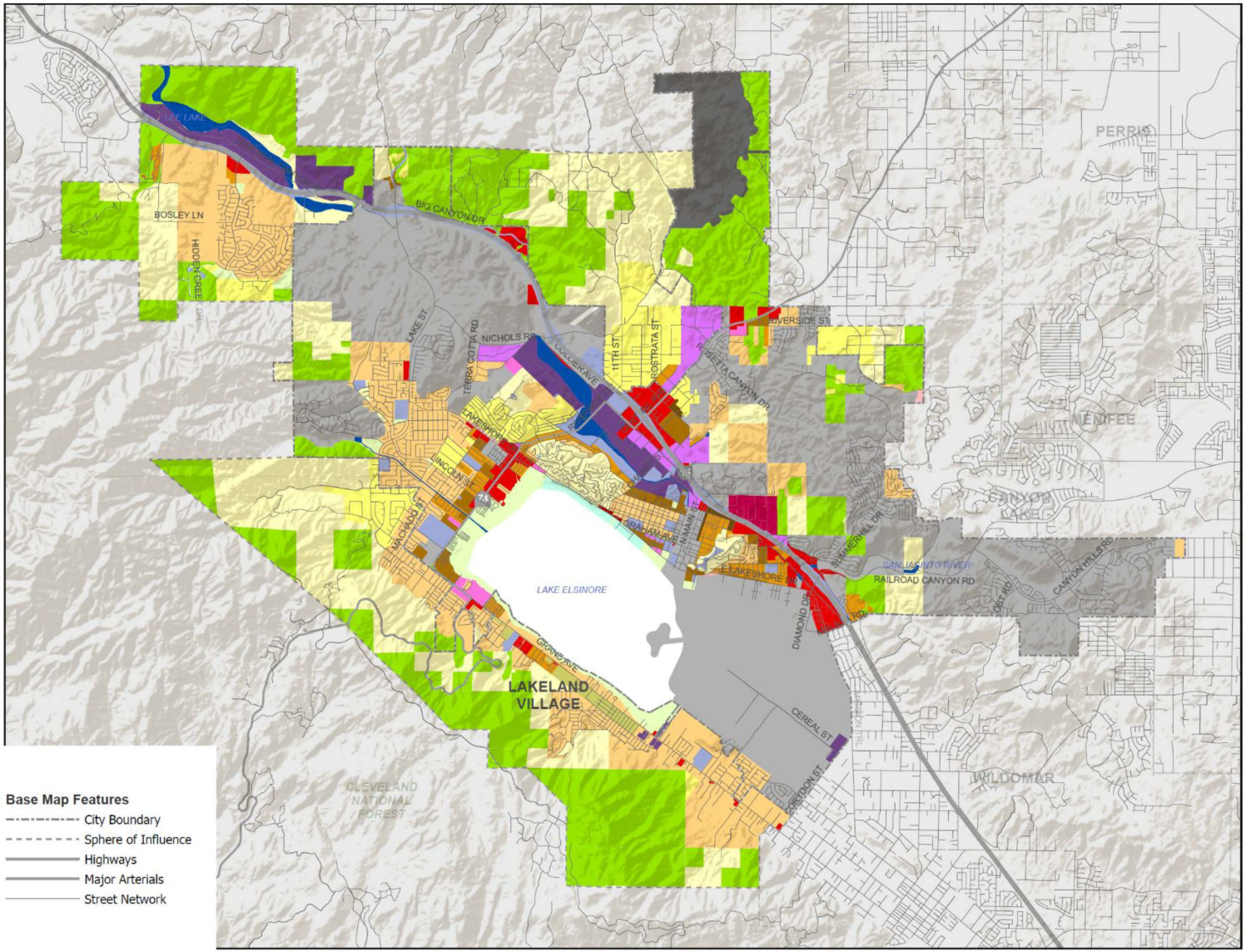
The Land Use Plan, Figure LUCC-3, identifies land use policy for properties within the Lake Elsinore corporate limits and the SOI. The land use designations on Figure LUCC-3 reflect designations from the Riverside County General Plan. If at any time a property is proposed for annexation to Lake Elsinore, the land use equivalencies shown in Table LUCC-1 will be used to apply City land use designations to the property(ies) being annexed.

Table LUCC-1: County/City Land Use Designation Equivalencies

Riverside County General Plan Land Use Designation	Corresponding City of Lake Elsinore General Plan Land Use Designation
Rural Community – Estate Density	Hillside Residential
Rural Community – Very Low Density	Hillside Residential
Very Low Density Residential	Hillside Residential
Low Density Residential	Very Low Density
Medium Density Residential	Low Density
Medium-High Density Residential	Medium-High Density
High Density Residential	Medium Density
Mixed Use	Mixed Use, Commercial Mixed Use, Residential Mixed Use
Commercial Retail	General Commercial
Business Park	Business Professional
Light Industrial	Limited Industrial
Open Space – Recreation	Recreational
Conservation Habitat	Open Space

Figure LUCC-3

LAND USE PLAN



Future Land Use Designations

Mixed Use
- Mixed Use
- Residential Mixed Use
- Commercial Mixed Use
- North Peak Flex

Residential
- Hilside Residential
- Lakeside Residential
- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- Medium-High Density Residential
- High Density Residential

Commercial
- General Commercial
- General Commercial - Auto Mall Overlay
- Neighborhood Commercial

Industrial
- Business Professional
- Limited Industrial

Other
- Specific Plan
- Recreational
- Floodway
- Open Space
- Public/Institutional

Base Map Features
- City Boundary
- Sphere of Influence
- Highways
- Major Arterials
- Street Network

Prepared by MIG, September 2025

0 ¼ ½ 1 1½ 2 Miles

Land Use Designations

The land use designations identify the general purpose of each district, maximum densities and intensities, and guidance for structure height, which is addressed in detail in the Zoning Code. The descriptions also define the intended character and built form in text and illustrations.

The descriptions apply to all new development proposals and substantial rehabilitation and alterations of existing land uses and structures, whether these actions are permitted as a matter of right or require discretionary approval by the City.

By defining intent, character, and the expected built form, the City establishes its desired urban design framework and expected design quality. The design quality of new development significantly impacts the overall character of Lake Elsinore's neighborhoods and business districts. Well-designed places invite people to interact with the spaces and others using the space. Well-designed buildings are more cost-effective to maintain, provide flexible spaces that can be easily adapted to meet the community's changing needs, and incorporate sustainable materials and practices.

Table LUCC-2: At a Glance: Land Use Designations

LAND USE DESIGNATION	MAXIMUM DENSITY/ INTENSITY
Lakeside	4 units/net acre
Hillside	1 unit/net acre
Very Low Density	3 units/net acre
Low Density	6 units/net acre
Medium Density	18 units/net acre
Medium-High Density	24 units/net acre
High Density	36 units/net acre
Mixed Use	36 units/net acre 1.2 FAR[1]
Commercial Mixed Use	18 units/net acre 0.8 FAR
Residential Mixed Use	24 units/net acre 1.0 FAR
North Peak Flex	3 units/net acre OR 0.3 FAR
General Commercial	0.4 FAR
Auto Mall Overlay[2]	0.4 FAR
Neighborhood Commercial	0.3 FAR
Business Professional	0.45 FAR
Limited Industrial	0.45 FAR
Public/Institutional	0.2 FAR
Specific Plan	See Specific Plans (under separate covers)
Recreation	0.2 FAR
Open Space	0.1 FAR
Floodway	N/A

1 Additional density may be allowed in Mixed Use zones through the Community Benefits program, as described in this element.

[2] The Auto Mall Overlay's base land use designation is General Commercial with a 0.4 FAR.

Residential Designations

Residential neighborhoods in Lake Elsinore are recognizable by their character and personality, unique architecture, varying densities, and street treatments. During the public engagement process for this General Plan, residents expressed the importance of preserving Lake Elsinore's small-town feel and strong community ties. They embrace the opportunities to connect residential neighborhoods to local pedestrian and bicycle path trails, shops and restaurants, and local businesses.

Seven residential designations accommodate a range of housing types and densities to reflect long-established development patterns and to allow new higher-density housing near commercial activity and corridors/hubs.

- Lakeside
- Hillside
- Very Low Density
- Low Density
- Medium Density
- Medium-High Density
- High Density

Within all residential neighborhoods, additionally allowed uses (subject to Zoning Code regulations) include public and private schools, religious institutions, and public facilities/infrastructure.



Lake Elsinore single-unit residential neighborhood, 2025

LAKESIDE RESIDENTIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity**	**Corresponding Zone**
0 - 4	Up to 12 ppl/ac	N/A	L

Intent and Character

- Support established development patterns, densities, and scale
- Likely to support custom single units with a lake orientation
- Scenic vistas to the lake should be maintained between homes



Lakeside residential illustrative

HILLSIDE RESIDENTIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity**	**Corresponding Zone**
0 - 1	Up to 3 ppl/ac	N/A	R-M-R, R-H

Intent and Character

- Very low-density single-unit homes built as custom homes or small-scale developments, which may be clustered on level topography to preserve steep slopes
- Small-scale agriculture uses are permitted in steep slope areas
- Development contingent on acceptable availability of sewage treatment facilities or individual septic systems
- Minimum parcel size and number of new lots based on site's average slope[3]:
  - Under 15% slope – 0.5 acre – 1 unit/acre; 0.5 acre permitted if parcel is served or is eligible to be served by sewage treatment plant
  - 15% - 25% slope – 1 unit/2 acres
  - 25% - 35% slope – 1 unit/5 acres
  - 35%+ slope – 1 unit/10 acres
- Fire-safe development approaches in wildland/urban interface areas





Hillside residential illustrative

[3] A site's average slope can be determined by a surveyor or calculated and verified by the City.

VERY LOW DENSITY RESIDENTIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity**	**Corresponding Zone**
1 - 3	Up to 9 ppl/ac	N/A	R-R, R-E

Intent and Character

- Maintain the predominance of single-unit detached residences
- Animal keeping and "hobby" farming permitted
- Maintain design character of established neighborhoods
- Fire-safe development approaches in wildland/urban interface areas



Very low density residential illustrative

LOW DENSITY RESIDENTIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity**	**Corresponding Zone**
1 - 6	Up to 18 ppl/ac	N/A	R-1, MC

Intent and Character

- Maintain the predominance of single-unit detached residences
- Support established development patterns, densities, and scale
- Maintain design character of established neighborhoods
- Fire-safe development approaches in wildland/urban interface areas



Low density residential illustrative

MEDIUM DENSITY RESIDENTIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity**	**Corresponding Zone**
7 -18	Up to 54 ppl/ac	N/A	R-2

Intent and Character

- Support established development patterns, densities, and scale
- Maintain character of established neighborhoods: single-unit detached and lower-scale multi-unit residential buildings, such as duplexes, triplexes, quadplexes, townhomes, and small-lot subdivisions
- Includes a combination of on-site private and common open spaces for multiple units
- Parking is well-integrated into building and site design rather than surface parking lots



Single-unit attached residences illustrative



Medium density multi-unit residences illustrative



Lake Elsinore single-unit detached residences, 2025

MEDIUM HIGH DENSITY RESIDENTIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity**	**Corresponding Zone**
19 - 24	Up to 72 ppl/ac	N/A	R-3

Intent and Character

- Variety of building forms, including units with direct access to a public street and units with common interior access
- Characterized by two- to three-story multi-unit residential buildings, including townhomes, small lot subdivisions, quadplexes, garden apartments, and stacked flats
- Residential units should have direct access to the street, where possible
- Includes a combination of on-site private and common open spaces
- Parking that is well-integrated into building design



Medium high density multi-unit residences illustrative

HIGH DENSITY RESIDENTIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity**	**Corresponding Zone**
25 -36	Up to 108 ppl/ac	N/A	R-4

Intent and Character

- Variety of building forms, largely with common interior access but with a clear interaction with the street
- Characterized by multi-unit residential buildings up to four stories
- Building heights transition to adjacent lower-density development using such approaches increased setbacks and tiered buildings
- Includes on-site private and common open spaces
- Parking facilities largely provided as shared facilities in structures rather than surface lots, either underground or as a wrapped podium and well-integrated into building design







High density multi-unit residences illustrative

Mixed Use Designations

Mixed-use development integrates residential, commercial, cultural, and institutional uses. Mixed-use development creates vibrant, compact, and walkable environments with comfortable pedestrian connections between neighborhoods and destinations and interesting, engaging, and place-distinctive urban design features, including public art. The availability of large lots in some commercial areas lends opportunities to create new smaller-scale mixed-use developments that can complement surrounding residential neighborhoods and/or commercial centers.

Two mixed-use land use designations, Commercial Mixed Use and Residential Mixed Use, require a mix of commercial and residential uses to occur on site. The Mixed Use designation encourages a mix of uses through additional permitted density and intensity, however, "stand-alone" or single use development is permitted as well.

To promote added amenities within commercial and mixed-use districts and developments, a tiered development system—a Community Benefits program—applies to the General Commercial and Mixed-Use designations. The Community Benefits program, to be defined in the Zoning Code, provides the City with the capacity and tools to shape how private development contributes to the urban fabric, ensuring that new development creates special places that enhance Lake Elsinore. A two-tier system of benefits allows developers to achieve higher densities and intensities when defined public realm and community-serving amenities are provided.

Residential, commercial goods and services, and entertainment/recreation businesses that mixed-use designations allow for compatible retail, entertainment, office, residential, hotel, civic, cultural, and recreation uses at varying context-sensitive development densities/intensities, ranging up to 36 dwelling units per acre and FARs up to 1.2, depending on the mixed-use designation. Regarding use, the intent for each area is similar: provide places to integrate housing with concentrated activity and business hubs in a walkable/bikeable environment.

Allowed uses within the Mixed Use designations include:

- Residential, commercial goods and services, and entertainment/recreation businesses that are compatible with residential use
- Public and private schools
- Religious institutions
- Public facilities/infrastructure

Specifically prohibited are industrial uses, freight and trucking operations, and warehousing/storage.

Community Benefits Program Framework

The Mixed Use and General Commercial designations allow for increased densities through a community benefits incentive system. Tier 1 and 2 densities may only be achieved with provision of community benefits in accordance with the program outlined in the Zoning Code. Any density and intensity bonuses

associated with the provision of community benefits are supplementary to density bonus provisions established by State law.

Development must provide a measurable and/or clearly identifiable community benefit in the form of affordable housing, jobs generation, parkland or open space, and/or other criteria established in the Zoning Code. Community benefits are not tied to income restrictions or senior housing. Examples include:

- Publicly accessible plazas, paseos, seating areas, playgrounds, parks, etc. along arterial roadways (Central Avenue, Riverside Drive, Lakeshore Drive, Main Street), particularly near larger residential and mixed-use developments and in underutilized parking areas within commercial centers
- Inclusion of arts and local culture, such as sculpture gardens, local art installations, and outdoor amphitheaters
- Onsite childcare facilities
- Affordable housing
- Innovative use of shared parking, including parking structures
- Sustainable, energy-efficient buildings beyond standard CALGreen requirements
- Lot consolidation/aggregated parcels
- Shuttle/transit hub, including shuttle stops and designated areas for people to gather (bike parking, seating options, trash receptacles, shade, etc.)
- Site located within:
  - 1,500 feet of a transit stop
  - 0.25 mile of a pharmacy
  - 0.5 mile of a public school, full-service grocery store, medical clinic, or hospital
  - 1 mile of a public library



Building design methods to define walkways illustrative



Softening landscape and building designs

MIXED USE			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
Mixed Use: 25 - 36 Single Use Residential: 19 - 24	Mixed Use: Up to 108 ppl/ac Single Use Residential: Up to 72 ppl/ac	Mixed Use: 1.2 Single Use Commercial: 0.6	MU
Tier 1 - Density Bonus with Community Benefits			
Mixed Use: 45 Single Use Residential: 36	Mixed Use: Up to 135 ppl/ac Single Use Residential: Up to 108 ppl/ac	Mixed Use: 1.5 Single Use Commercial: 1.0	MU
Tier 2 - Density Bonus with Community Benefits			
Mixed Use: 50 Single Use Residential: 40	Mixed Use: Up to 150 ppl/ac Single Use Residential: Up to 120 ppl/ac	Mixed Use: 1.7 Single Use Commercial: 1.2	MU

Intent and Character

- Variety of building forms, with reduced scale adjacent to lower-density neighborhoods
- Stand-alone residential and commercial development types are allowed
- Accommodates neighborhood-serving and general commercial storefronts
- Accommodates diverse housing types that provide opportunities for home ownership and appeal to a spectrum of household sizes and incomes
- Opportunity for highest density and intensity of mixed uses citywide
- Clear and distinct street edge with active ground floor uses, limited setbacks, and engaging facades (windows, entries, consistent signage and building materials that create visual continuity, etc.)

Built Form

Building Orientation

- Orient buildings toward the primary street corridor to define the public realm and concentrate pedestrian and retail activity by:
  - Creating a clear building frontage and designated pedestrian walkway
  - Framing the primary street corridor
  - Framing and enclosing gathering spaces, plazas, parks, etc. located along the primary street corridor

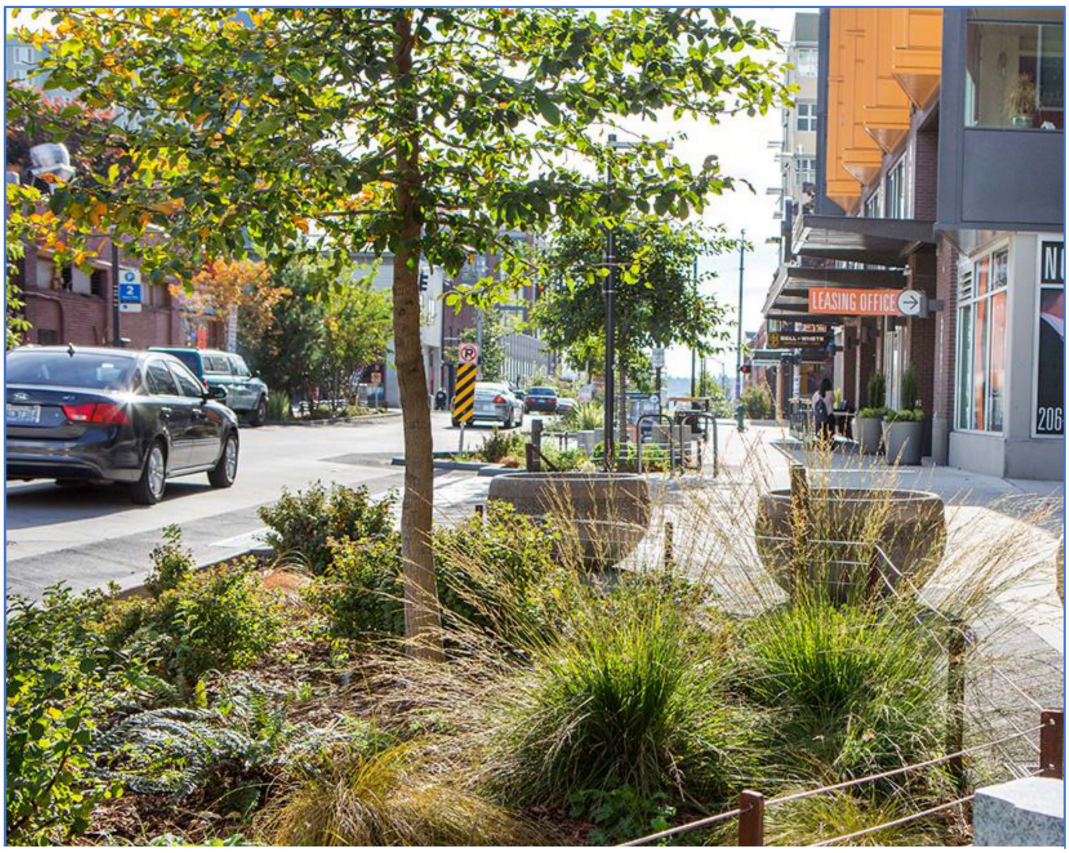
- Framing, and where appropriate, enclosing public spaces, plazas, parks, etc. oriented toward major frontage streets

Building Massing and Treatments

- Create articulation with intentional use of different materials and building form with such treatments as:
  - Variation in colors, materials, and textures
  - Vertical and horizontal projections (for example, columns or banding that help create a rhythm on the façade)
  - Base element/treatment
  - Four-sided architecture, with additional treatments on all street- and alley-facing elevations
  - Private open space (balconies, terraces, etc.)
  - Variation in roof forms and/or window composition
- Prohibit blank facades along corridors
- Require upper-level stepbacks to transition scale and intensity between land uses. Specifically, when a mixed-use or multistory commercial use abuts the Lakeside, Hillside, Very Low Density, and Low Density residential land use districts, upper-level stepbacks are required.
- Pedestrian circulation and amenities
  - Create a clear and distinct pedestrian corridor by defining minimum pedestrian walkway and amenity zone widths
  - Help distinguish zones with different use of pavement materials
- Provide landscaped buffers to separate pedestrians from the flow of traffic, pollution, and noise both adjacent to the I-15, higher volume transportation corridors, and stationary noise and air pollutant sources (refer to the Public Safety, Noise, and Air Quality Element for additional policy)
- Encourage consistent pedestrian amenities along street (size, shape, colors, materials, etc.) to establish a streetscape and identity
- Provide coordinated pedestrian amenities pursuant to master design plans: lighting, seating options, trash and recycling receptacles, information kiosks, planters, bike racks, etc.

Parking and Buffers

- Public parking structures and facilities, where provided, that are easily accessible and attractively designed
- Surface parking located along the side or at the rear of buildings to minimize visibility from public roadways
- Use of buffers (walls, fences, and landscaping) to separate pedestrians from any surface parking lot(s) along the streetscape
- Buffers designed to maintain building and site visibility
- Fences and walls consistent with style, materials, and design of buildings on the site



Building orientation to define pedestrian walkways illustrative

COMMERCIAL MIXED USE			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
7 - 18	Up to 54 ppl/ac	0.8	CMU
Tier 1 - Density Bonus with Community Benefits			
25	Up to 75 ppl/ac	1.0	CMU
Tier 2 - Density Bonus with Community Benefits			
30	Up to 90 ppl/ac	1.2	CMU

Intent and Character

- Variety of building forms, with reduced scale adjacent to lower-density neighborhoods
- Accommodates small-scale, neighborhood-serving commercial and general commercial storefronts and structures
- Encourages new retail activity, complementing well-established commercial districts and surrounding residential neighborhoods
- While allowed, residential uses are subordinate to commercial uses
- Clear and distinct street edge with active ground floor uses, limited setbacks, and engaging facades (windows, entries, consistent signage and building materials that create visual continuity, etc.)

Built Form

Building Orientation

- Orient buildings toward the primary street corridor to define the public realm and concentrate pedestrian and retail activity by:
  - Creating obvious building frontages and designated pedestrian walkways
  - Framing the primary street corridor
  - Framing public spaces, plazas, parks, etc. along the primary street corridor
- Align, arrange, and group buildings along major corridors toward the street so that their primary orientation creates a well-defined building frontage
- Framing, and where appropriate, enclosing public spaces, plazas, parks, etc. oriented toward major frontage streets

Building Massing

- Create articulation with intentional use of different materials and building form with such treatments as:
  - Variation in colors, materials, and textures
  - Vertical and horizontal projections (for example, columns or banding that create textures and variation on the façade)
  - Private open space (balconies, terraces, etc.)
  - Variation in roof forms and/or window composition

- Prohibit blank facades on all elevations
- Require upper level stepbacks or increased setbacks to transition scale and intensity between land uses

Pedestrian Circulation and Amenities

- Wide sidewalks with pedestrian amenities and protection zones (from traffic flow)
- Well-defined on-site pedestrian corridors distinguished by different pavement materials
- Maximize sightlines, activity, and access points along major corridors by creating pedestrian pass-throughs between properties, mid-block crossings, and reduced crossing distances at intersections
- Consider landscaped buffers to separate pedestrians from the flow of traffic, pollution, and noise
- Provide coordinated pedestrian amenities pursuant to master design plans: lighting, seating options, trash and recycling receptacles, information kiosks, planters, bike racks, etc.
- Pedestrian amenities to consider include lighting, seating options, trash and recycling receptacles, information kiosks, planters, bike racks, etc.

Parking and Buffers

- Parking structures and facilities that are easily accessible and attractively designed
- Surface parking located along the side or at the rear of buildings to minimize visibility from public roadways
- Use of buffers (walls, fences, and landscaping) to separate pedestrians from any surface parking lot(s) along the streetscape
- Buffers designed to maintain building and site visibility
- Fences and walls consistent with style, materials, and design of buildings on the site



Commercial mixed use illustrative

RESIDENTIAL MIXED USE			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
19 – 24	Up to 72 ppl/ac	1.0 Hospital: 1.2	RMU
30	Up to 90 ppl/ac	1.2	RMU
36	Up to 108 ppl/ac	1.5	RMU

Intent and Character

- Variety of building forms, with context-sensitive heights and site planning adjacent to lower-scale residential uses
- While allowed, commercial uses are subordinate to residential uses
- Accommodates small-scale, neighborhood-serving commercial and general commercial storefronts and structures subordinate to the residential uses
- Encourages new retail activity, complementing well-established commercial districts and surrounding residential neighborhoods
- Clear and distinct street edge with active ground floor uses, limited setbacks, and engaging facades (windows, entries, consistent signage and building materials that create visual continuity, etc.)

Built Form

Building Orientation

- Orient building frontages the primary street to define the public realm and concentrate pedestrian and retail activity by:
  - Creating well-defined building frontages and designated pedestrian walkways
  - Framing the building's relationship to major frontage streets
- Framing, and where appropriate, enclosing public spaces, plazas, parks, etc. oriented toward major frontage streets

Building Massing

- Create articulation with intentional use of different materials and building form, such as:
  - Variation in colors, materials, and textures
  - Vertical and horizontal projections (e.g., columns or banding that help create a rhythm on the façade)
  - Private open space (balconies, terraces, etc.)
  - Variation in roof forms and/or window composition
- Four-sided architectural treatments

Pedestrian Circulation and Amenities

- Wide sidewalks with pedestrian amenities and protection zones (from traffic flow on major corridors)
- Well-defined on-site pedestrian corridors distinguished by use of different pavement materials
- Maximize sightlines, activity, and access points by creating pedestrian pass-throughs between properties, mid-block crossings, and reducing crossing distances at intersections
- Use landscaped buffers to separate pedestrians from the flow of traffic, pollution, and noise
- Provide coordinated pedestrian amenities pursuant to master design plans: lighting, seating options, trash and recycling receptacles, information kiosks, planters, bike racks, etc.
- Pedestrian amenities to consider include lighting, seating options, trash and recycling receptacles, information kiosks, planters, bike racks, etc.

Parking and Buffers

- Parking structures and facilities that are easily accessible and attractively designed
- Locate surface parking along the side or at the rear of buildings
- Buffers (walls, fences, and landscaping) should be used to separate pedestrians from surface parking lot(s) that line the streetscape
- Buffers should be designed to maintain building and site visibility. Fences, walls, etc. should be consistent with style, materials, and design of buildings



Residential mixed use illustrative

NORTH PEAK FLEX			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity**	**Corresponding Zone**
0 - 3	Up to 3 ppl/ac	N/A	NPF
	OR		
		0.3	NPF

Intent and Character

- All future development applications must include an environmental impact report and specific plan in order to be considered and accepted, as appropriate, by the City of Lake Elsinore
- The entire North Peak area shall be a single land use category — either residential OR industrial

If residential…

- Residential units may be clustered on level topography to preserve steep slopes.
- No more than 1,000 units within the entire North Peak area may be developed during the life of this General Plan.

OR

If industrial…

- Development is encouraged to be sited to preserve steep slopes.
- No more than 3.5 million square feet is permitted in the entire North Peak area during the life of this General Plan.

If one or more specific plans are prepared for the North Peak area, no more than 1,000 residential units in total OR no more than 3.5 million square feet of industrial use in total is permitted.

- Development is contingent on acceptable availability of all infrastructure including roadways, water, sewer, storm drainage, power, and others
- Fire-safe development approaches in wildland/urban interface areas
- All structures are to be designed to minimize visual impact from other areas in Lake Elsinore



North Peak, 2025

Commercial and Industrial Designations

Lake Elsinore's commercial and industrial designations provide places for businesses of all varieties to thrive and opportunities for people to work in diverse professions. The City looks to attract and retain businesses that contribute substantially to the local tax base, offer jobs for people of all skills and education levels, and provide complementary goods and services. The City recognizes that industries constantly change, particularly due to advances in automation, changing shopping habits, and work-at-home options. Thus, flexible land use regulations are critical to allow commercial and industrial spaces to be adapted over time. While economic development and diversity are key City goals, the City will also focus on ensuring compatibility of commercial/industrial uses and districts with adjacent residential neighborhoods. The City will also focus on minimizing the transportation impacts associated with commercial and industrial uses (including logistics and warehouse uses). The commercial and industrial land use designations may be implemented by a series of zones, allowing for lower-intensity and lower-scale commercial uses to be integrated within neighborhoods and more intense uses to be focused along primary corridors.

In all designations, government facilities, utility operations, schools, and similar complementary uses are permitted where considered appropriate per zoning regulations.



Commercial and industrial development, 2025

NEIGHBORHOOD COMMERCIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
N/A	N/A	0.3	C-1, C-O

Intent, Character, and Built Form

- Allowed uses focused on low-impact businesses with operating characteristics compatible with adjacent residential uses, with an emphasis on local-serving uses
- Prohibited vehicle repair and servicing, public storage facilities, and any business with late-night hours of operation (10:00 p.m. – 7:00 a.m.)
- Lower-scale commercial buildings on small lots
- Site and building design that emphasize quality and timelessness
- Access and circulation that prioritize the needs of pedestrians and cyclists over cars
- Landscaping used to soften buildings and pavement treatments
- Surface parking located along the side or at the rear of buildings



Neighborhood commercial building designs, 2025

GENERAL COMMERCIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
N/A	N/A	0.4	C-2
Tier 1 - Density Bonus with Community Benefits[4]			
N/A	N/A	0.6	C-2
Tier 2 - Density Bonus with Community Benefits			
N/A	N/A	0.8	C-2

Intent, Character, and Built Form

- Allowed commercial uses include a full range of retail, service, office, entertainment, and automotive-related uses, but specifically exclude heavy-duty vehicle repair and warehousing/storage uses (including personal storage businesses)
- Commercial development scaled to reflect surrounding sites and buildings
- Businesses with operating characteristics compatible with adjacent residential uses
- Site and building design that emphasize quality and timelessness
- For sites on major travel corridors and/or truck routes,
  - access and circulation that accommodate cars while safely integrating the needs of pedestrians and cyclists
  - site design that provides noise and air quality buffers between the high-volume traffic corridors and truck routes from commercial and industrial uses, as appropriate
- Use of landscaping to soften buildings and pavement treatments
- Cohesively designed shopping centers, with buildings that relate well to each other and to on-site signage and landscaping
- Use of architectural design approaches that clearly distinguish the base, middle, and upper stories of higher-rise buildings, and that promote unique, memorable design
- Well-marked and safe pedestrian travel paths from parking lots to the main building entrance(s)
- Surface parking located along the side or at the rear of buildings

[4] Community Benefits program is outlined in detail under the Mixed Use (MU) land use category.



General commercial illustrative



Landscape designs to emphasize building and pedestrian corridors illustrative

AUTO MALL OVERLAY[5]			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
N/A	N/A	0.4	C-2. SP

Intent, Character, and Built Form

- Site and building design that decrease conflict between auto-oriented uses and surrounding residential and recreational uses
- Building standards mitigate impacts of issues like lighting and operating hours on surrounding uses
- Allowed commercial uses include a retail, service, office, and automotive-related uses, but specifically exclude heavy-duty vehicle repair and warehousing/storage
- For sites on major travel corridors and/or truck routes,
  - Access and circulation that accommodate cars while safely integrating the needs of pedestrians and cyclists
  - Site design that provides noise and air quality buffers between the high-volume traffic corridors and truck routes from commercial and industrial uses, as appropriate
  - Site design that accommodates freeway—oriented signage
- Well-marked and safe pedestrian travel paths from parking lots to the main building entrance(s)
- Surface parking located along the side or at the rear of buildings

[5] The base General Plan land use designation is General Commercial (GC).

BUSINESS PROFESSIONAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
N/A	N/A	0.45	C-M

Intent, Character, and Built Form

- Allowed uses are primarily offices for all types of businesses (professional, medical/dental, service), research and development; all characterized generally by low-intensity use throughout the day
- Mid-rise structures, with new construction, to include architectural detailing to distinguish the base floor from upper stories
- Use of architectural design approaches that clearly distinguish the base, middle, and upper stories of higher-rise buildings, and that promote unique, memorable design
- Building entrances limited to main entrance(s) from a street or parking lot, with doors to individual businesses on the interior
- Landscaping and signage coordinated with building architecture
- Use of landscaping to soften buildings and pavement treatments
- Well-marked and safe pedestrian travel paths from parking lots to the main building entrance(s)
- Minimized presence and public view of parking lots and structures, with landscaping and architectural treatments used to help disguise parking structures and surface parking located along the side or at the rear of buildings



Commercial building spaces with entrances from street and parking lots illustrative

LIMITED INDUSTRIAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
N/A	N/A	0.45	M-1, M-2, M-3

Intent and Character

- Allowed industrial uses are best characterized as light manufacturing and assembly businesses, and vehicle servicing and repair, as well as supportive commercial service uses and indoor recreation facilities.
- Trucking, freight uses, and warehousing/storage uses (including personal storage businesses) allowed on a limited basis
- May be developed as stand-alone buildings or master-planned business parks
- Buildings display design character through at least two complementary exterior finishing treatments
- Use of architectural design approaches that clearly distinguish the base, middle, and upper stories of higher-rise buildings, and that promote unique, memorable design
- Use of landscaping to accent buildings
- Use of landscaping and other buffers to decrease exposure to noise and air quality emissions generated from high-volume transportation corridors, truck routes, and stationary sources



Limited industrial uses, 2025

Open Space and Public Facilities Designations

Lake Elsinore's open spaces include parks, recreation facilities, golf courses, and natural habitats. Public facilities comprise government, civic, cultural, public school, and infrastructure uses that support community needs.

RECREATION			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
N/A	N/A	0.2	R

Intent and Character

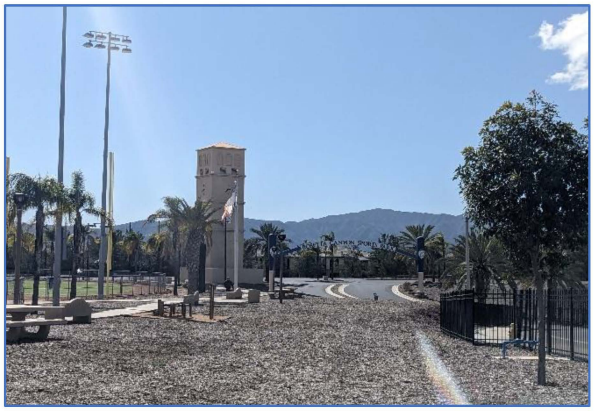
- Designates areas for active recreation use by all members of the public
- Improved open space with recreation fields and courts, play spaces, community buildings, public swimming pools, and trail amenities



Elm Grove Beach



Launch Pointe
Source: www.launch-point.com



Rosetta Canyon Sports Park

OPEN SPACE			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
N/A	N/A	0.1	OS

Intent and Character

- Generally, unimproved open space areas are established for purposes of preservation of natural resources, managed production of resources, outdoor recreation, health and safety, and scenic landscape protection
- Development is limited generally to trails, trailheads, and related support buildings



Open Space: Walker Canyon



Open spaces to promote recreational activities illustrative

PUBLIC/INSTITUTIONAL			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
N/A	N/A	0.2	PI

Intent and Character

- Applies to land uses operated and maintained for public administration and welfare
- Accommodates government, civic, cultural, schools, public library, post offices, public utility, public parking, religious institution, and infrastructure uses that support community need
- Development scale that is compatible with surrounding neighborhood and districts



Public utility, 2025



Lake Elsinore Cultural Center, 2025



Lake Elsinore Public Library,2025

FLOODWAY			
Density Range (units/net acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
N/A	N/A	N/A	F

Intent and Character

- River or other water course channel and adjacent land areas reserved for the flood control purposes



Temescal Wash, 2025

SPECIFIC PLAN			
Density Range (units/acre)	**Population Density**	**Maximum Intensity (FAR)**	**Corresponding Zone**
See the individual specific plans for additional information			

Intent and Character

- Specific plans implement the City's General Plan by establishing detailed regulations for a defined geographic area. Specific plans are put in place to regulate distinct character areas that cannot be regulated through general development ordinances or citywide zoning. Specific plans can also be used to achieve creative design by providing flexibility in development standards beyond those contained in the Zoning Code. Table LUCC-3 and Figure LU-8 provide an overview of the City's adopted Specific Plans.

Table LUCC-3: Adopted Specific Plans

Specific Plan	Adoption Date	Location	District Plan	Goal	Status
Alberhill Ranch	1989, last amended in 1997	Northwest Lake Elsinore, bounded by I-15 to the north and east, Terra Cotta Road/Nichols Road to the south, El Toro Road to the east, and Robb Road/Lake Street to the west.	Alberhill District	Reclaim and develop a 100-year-old mining site into a master-planned community consisting of single-family and multi-family units, mixed uses, 41 acres of riparian resource area, a 207-acre golf course, and 103 acres of open space.	Partially developed
Alberhill Villages	2016, amended and restated in 2017	Northwest Lake Elsinore, located south of I-15 and west of Lake Street.	Alberhill District	Reclaim and develop a 100-year-old mining site and develop a 1,375-acre sustainable mixed-use planned community that acts as a northwestern gateway to the City over 35 years.	Not developed
Canyon Creek	Adopted 1984, last amended in 2005	East Lake Elsinore, north of I-15 and bounded by undeveloped hilly terrain to the north and the Railroad Canyon Wastewater Treatment Facility to the east.	Lake Elsinore Hills District	Development of 1,100 detached single-family units supported by commercial uses, community park areas, and open space. As of 2005, 638 units have been developed.	Partially developed
Canyon Hills	Adopted 1989, last amended in 2009	Northeast Lake Elsinore, south of Newport Road.	Lake Elsinore Hills District	Development of a mixed-use, master-planned community consisting of single-family detached and	Mostly developed

Table LUCC-3: Adopted Specific Plans

Specific Plan	Adoption Date	Location	District Plan	Goal	Status
				multi-family attached units, commercial, public facilities, schools, open space, and parks/recreation uses.	
Canyon Hills Estates	2006	Northeast Lake Elsinore, to the south of Canyon Hills Road.	Lake Elsinore Hills District	Development of a planned 246-acre community for 238 single-family detached units, 64 detached compact lot units, a neighborhood park, and open space.	Under Construction
Cape of Good Hope	1993	Northwest Lake Elsinore, directly south of the Alberhill Ranch Specific Plan area.	Lake View District	Development of a 40-acre private, gated residential community consisting of 67 lots and open space.	Not developed
Cottage Lane	2005	Southwest Lake Elsinore, located northwest of Riverside Avenue, southeast of Machado Street, and north of Grand Avenue.	Lake View District	Development of a 12-acre residential development consisting of 48 single-family detached lots and a park.	Fully built-out
Diamond	2010, amended in 2015	Southeast Lake Elsinore, located in the Ballpark District along Diamond Drive.	Ballpark District	Development of a mixed-use development that creates a unique sense of place and a regional destination venue surrounding the Diamond Stadium	Partially developed

Table LUCC-3: Adopted Specific Plans

Specific Plan	Adoption Date	Location	District Plan	Goal	Status
Downtown Elsinore	2018	Downtown Lake Elsinore, including Historic Downtown Lake Elsinore. Extends from Flint Street along its northern edge to the edge of Lake Elsinore. Bounded by Riley Street and the Lake Elsinore Outlet Channel to the west and Ellis Street and Chestnut Street to the East.	Historic District	To establish a vision, land use plan, and development standards to create a vibrant, livable, connected, and sustainable 178-acre downtown that acts as the heart of the city.	Partially developed
East Lake	1993, last amended in 2017	East Lake Elsinore, located along the eastern shore of Lake Elsinore.	East Lake District	Development of a 2,977-acre planned community consisting of a well-balanced and functional mix of action sports, tourism, residential, commercial, open space, recreational, institutional, and accessory industrial land uses are provided.	Partially developed
Elsinore City Center	1992, last amended in 2001	East Lake Elsinore, located directly to the north of I-15 and south of the Canyon Creek Special Plan area.	Lake Elsinore Hills District	Development of a 49.2-acre commercial center and multi-family residential area.	Mostly developed
Lake Elsinore Outlet Center	1990, last amended in 2000	West Lake Elsinore, located directly south of I-15 along Collier Avenue.	Business District	Development of a 46.78-acre commercial retail area.	Mostly developed

Table LUCC-3: Adopted Specific Plans

Specific Plan	Adoption Date	Location	District Plan	Goal	Status
La Laguna Estates	1998, amended in 2003	West Lake Elsinore, south of I-15 and directly east of the Cleveland National Forest.	Lake View District	Development of 660 single-family detached units and 140 acres of open space.	Fully built-out
Lakeshore Village	2003	West-central Lake Elsinore bounded by Lakeshore Drive to the northeast and Walnut Drive to the southwest	Lake View District	Infill development of a 37.7 acre planned mixed-use community with residences, recreational, and neighborhood commercial uses along with the improvement of street and infrastructure components.	Mostly developed
Murdock Alberhill Ranch	1998, last amended in 2008	Northwest Lake Elsinore	Alberhill District	Infill development of a 511 acre planned mixed-use community consisting of single-family detached units, multi-family units, recreational, and neighborhood commercial uses.	Partially developed
Nichols Ranch	2019	North Lake Elsinore, located north of I-15 and bounded by El Toro Road to the east.	Alberhill District and North Central Sphere	Development of a 72.5-acre master planned community that preserves Stovepipe Creek while establishing residential, commercial, and recreational uses.	Mostly Developed

Table LUCC-3: Adopted Specific Plans

Specific Plan	Adoption Date	Location	District Plan	Goal	Status
North Peak	1991, amended in 1999	North Lake Elsinore, located to the north of SR-74.	North Peak District	Development of a 1,964-acre planned community consisting of a mixture of open space, residential, commercial, and public uses.	Not yet developed
Ramsgate	2008	North Lake Elsinore, located to the north of I-15 and directly south of SR-74.	Lake Elsinore Hills District	Development of a 1,366-acre planned community consisting of a mixture of open space, residential and public uses.	Mostly developed
Spyglass Ranch	2008, amended in 2015	North of Downtown Lake Elsinore, located directly north of I-15.	Lake Elsinore Hills District	Development of a 259-acre planned community consisting of single-family detached units, multi-family units, and commercial, and open space uses.	Not yet developed, implementation applications currently under review
Terracina	2015	West Lake Elsinore, located southwest of I-15 and north of Lakeshore Drive between Dryden Street and Terra Cotta Road.	Alberhill District	Development of a 154-acre residential development consisting of single-family units (maximum of 452 dwelling units), open space, park lands, and graded slopes and basins.	Under construction

Table LUCC-3: Adopted Specific Plans

Specific Plan	Adoption Date	Location	District Plan	Goal	Status
Tuscany Hills	1990, amended in 2005	Northeast Lake Elsinore, located north of I-15, southeast of CA 74, west of Canyon Lake and south of Greenwald Street.	Lake Elsinore Hills District	Development of a 972.9-acre planned community consisting of single-family detached units, community parks, HOA parks, recreational facilities, and natural open space.	Partially developed
Village at Lakeshore	2006, amended in 2015	Southwest Lake Elsinore, located near the intersection of Riverside Drive and Grand Avenue.	Lake View District	Development of a 19.7-acre planned private residential community consisting of approximately 163 single-family detached condominium residential units, a recreational facility, an open space park area, and a detention basin.	Fully built-out

Source: City of Lake Elsinore

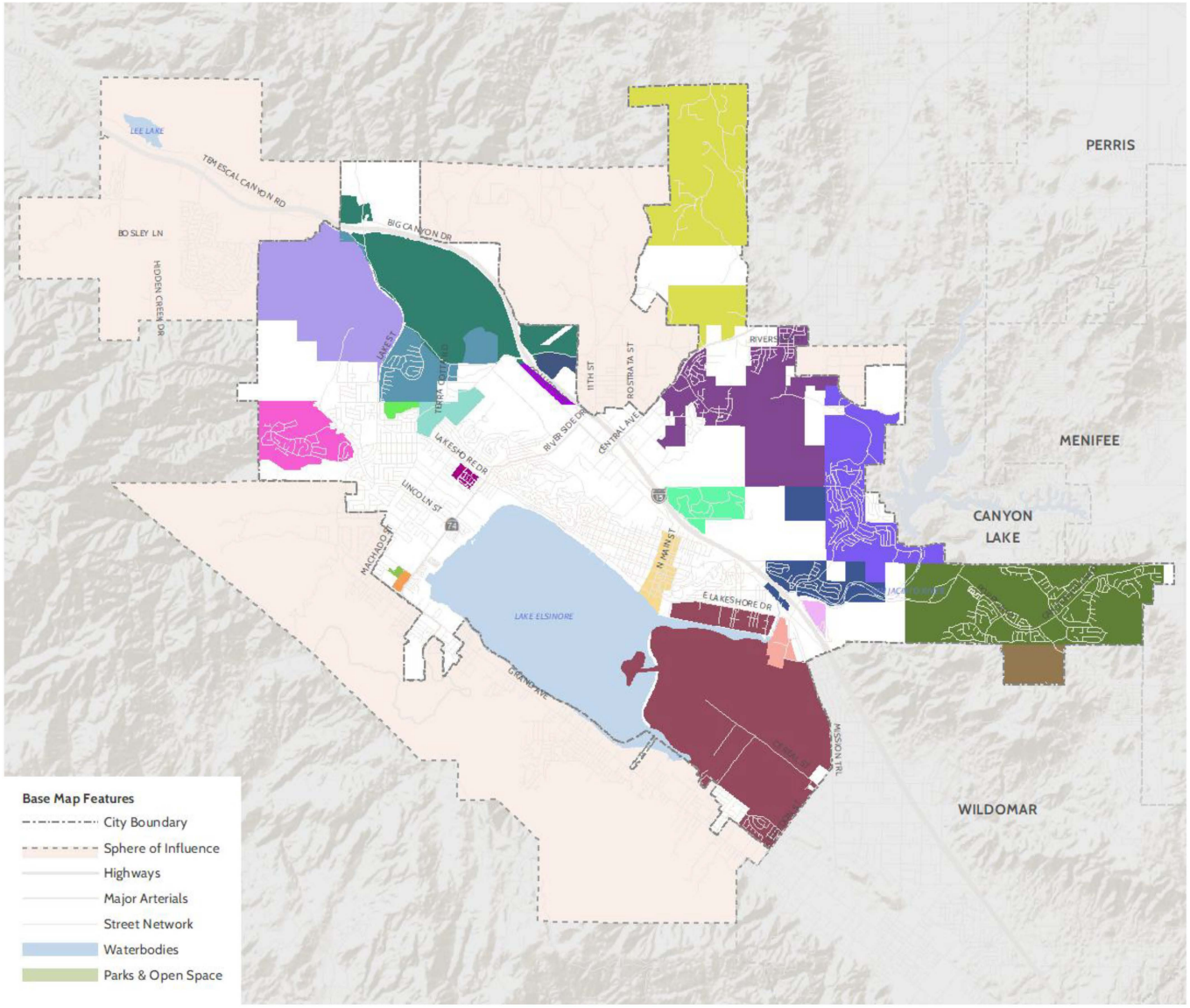


Figure LU-8

SPECIFIC PLANS

Specific Plans

- Alberhill Ranch
- Alberhill Villages
- Canyon Creek
- Canyon Estates
- Canyon Hills
- Cape of Good Hope
- Cottage Lane
- Diamond
- Downtown Elsinore
- East Lake
- Elsinore City Center
- La Laguna Estates
- Lakeshore Village
- Murdock Alberhill Ranch
- Nichols Ranch
- North Peak
- Outlet Center
- Ramsgate
- Spyglass Ranch
- Terracina
- The Village at Lakeshore
- Tuscany Hills

Prepared by MIG, October 2023.
Source: City of Lake Elsinore, 2023

0 ¼ ½ 1 1½ 2 Miles

Land Use Policy Implications and Buildout

Over time, as properties recycle to new development and uses, the distribution of uses within the community will change. Application of the Land Use Plan will facilitate the evolution toward the mix of uses Lake Elsinore envisions. Table LUCC-4 summarizes the capacity created for development through 2045. If Lake Elsinore is developed in accordance with this Land Use and Community Character Element at the densities and intensities permitted, the Planning Area is anticipated to have 46,610 dwelling units, 151,891 residents, approximately 26,385,778 square feet of nonresidential use, and 40,795 jobs.

Table LUCC-4: Land Use Plan Buildout, 2045 Projections

	Residential		Non-Residential	
	Units	**Population**	**Square Feet**	**Jobs**
City of Lake Elsinore	40,623	132,382	21, 219,257	32,741
Sphere of Influence	5,987	19,509	5,166,522	8,054
Planning Area (Lake Elsinore + SOI)	46,610	151,891	26,385,778	40,795

Source: City of Lake Elsinore Land Use and Community Character Element GIS data; California Department of Finance, 2020; Southern California Association of Governments, 2018 and 2019.

Note: 1) Nonresidential buildings include commercial, office, industrial, hotels/motels, and public facility structures.

Community Plans

In addition to the land use categories and policy map, Community Plans provide a more precise focus and recognize the unique and treasured assets of the individual areas in the City. Eight Community Plans occur throughout Lake Elsinore and its Sphere of Influence. Figure LUCC-9 and Table LUCC-5 provide an overview of the Community Plans and their related goals and policies.

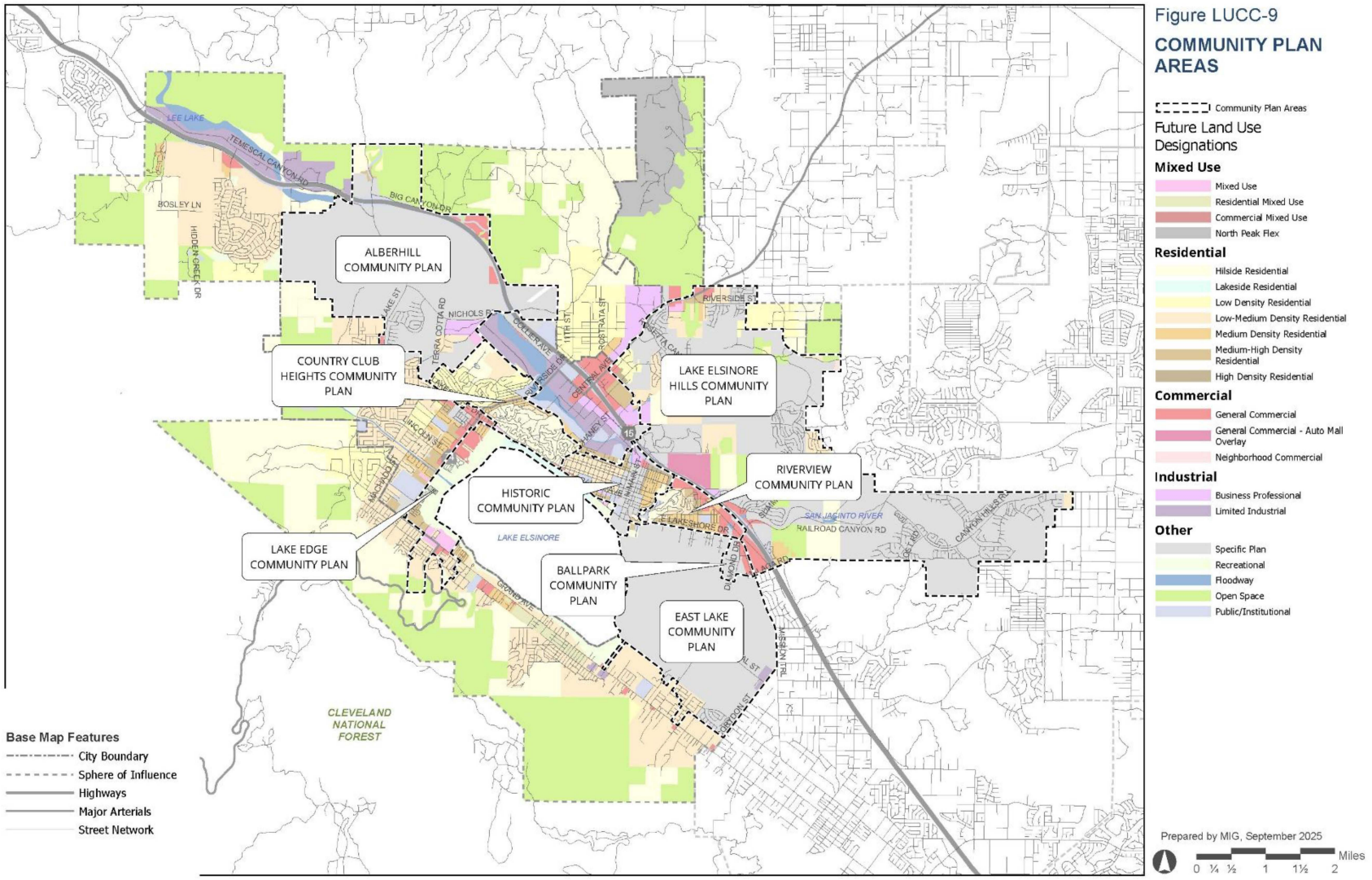

ALBERHILL COMMUNITY PLAN
COUNTRY CLUB HEIGHTS COMMUNITY PLAN
LAKE ELSINORE HILLS COMMUNITY PLAN
RIVERVIEW COMMUNITY PLAN
HISTORIC COMMUNITY PLAN
LAKE EDGE COMMUNITY PLAN
BALLPARK COMMUNITY PLAN
EAST LAKE COMMUNITY PLAN
CLEVELAND NATIONAL FOREST
LAKE ELSINORE
SAN JACINTO RIVER
LEE LAKE
TEMESCAL CANYON RD
BIG CANYON DR
BOSLEY LN
HIDDEN CREEK DR
NICHOLS RD
RIVERSIDE DR
CENTRAL AVE
GRAHAM AVE
LINCOLN ST
MACHADO ST
LAKESHORE DR
RAILROAD CANYON RD
CANYON HILLS DR
DIAMOND DR
GRAND AVE
MISSION TRL
Base Map Features
City Boundary
Sphere of Influence
Highways
Major Arterials
Street Network
Figure LUCC-9
COMMUNITY PLAN AREAS
Community Plan Areas
Future Land Use Designations
Mixed Use
Mixed Use
Residential Mixed Use
Commercial Mixed Use
North Peak Flex
Residential
Hilside Residential
Lakeside Residential
Low Density Residential
Low-Medium Density Residential
Medium Density Residential
Medium-High Density Residential
High Density Residential
Commercial
General Commercial
General Commercial - Auto Mall Overlay
Neighborhood Commercial
Industrial
Business Professional
Limited Industrial
Other
Specific Plan
Recreational
Floodway
Open Space
Public/Institutional
Prepared by MIG, September 2025
0 ¼ ½ 1 1½ 2 Miles

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
ALBERHILL COMMUNITY PLAN					
4,240 approximate acres Dominant Streets: Lake Street I-15	Country Club Heights Community Plan, County of Riverside.	• Alberhill Ranch Specific Plan • Alberhill Villages • Murdock Alberhill Ranch • Nichols Ranch • Terracina	Topography: • Rolling terrain • Higher elevations to the north, east, and southwest • Central area substantially altered due to extractive and mining operations *2025 land uses:* • Extractive uses • Vacant lands • Recent and ongoing residential and commercial use construction, community park	• Ongoing mining extraction since late 1880s with the founding of the Southern California Coal and Clay Company (SCCC). • SCCC became part of the Terra Cotta community, once considered one of the area's most important suburban town. • Atchison, Topeka, and Santa Fe Railroad (first in region) passed through the central area of Alberhill. Portions of Lake Street and Coal Road in Alberhill are, generally, aligned with the original rail tracks. • Historic ranching and homesteading sites are	Transition from a concentrated mining area into high quality residential, commercial, industrial, and mixed-use communities.

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
				within proximity of the railroad line. • Alberhill School, a locally recognized historic resource on Lake Street, served the area from 1912 to 1964. • Portion of the Alberhill Community Plan area is required to have a specific plan prepared for the Pacific Clay Products area.	
Goals and Policies					
Goal AH1: Support and maintain a healthy transition from extractive/mining activities to a network of residential communities with a balanced mix of residential, commercial, light industrial, business professional, and institutional/public uses that provide a sense of place and high quality of life.					
Policies:	AH1.1: Continue to encourage proper reclamation and enhancement of areas impacted by extractive/mining activities for the public's health, safety and welfare. AH1.2: Consider the preservation of vacant lands in areas with high elevations in the north, east and southwest in order to provide an adequate amount of conserved lands, open space, greenways, and wetland areas. AH1.3: Encourage proper land use compatibility between mining activities and surrounding uses.				
Goal AH2: Preserve and enhance the cultural and historical resources of the Alberhill Community Plan Area.					

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
Policies:	AH 2.1: Support the relocation and restoration of the Alberhill School as a 20,000 square foot community center promoting educational awareness of the Community Plan's cultural heritage including mining, homesteading, the railroad, and the Terra Cotta town. AH 2.2: Support educational awareness programs that inform residents and visitors of the Community Plan's cultural heritage. AH 2.3: Encourage the placemaking and wayfinding features to depict Alberhill's historical and cultural significance particularly along Lake Street and the adjacent recreational areas.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
BALLPARK COMMUNITY PLAN					
Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	• History/Unique Features	Anticipated Future Character or Land Use
123 approximate acres Dominant Streets: Lakeshore Drive, Mission Trail, Malaga Road, Diamond Drive San Jacinto River runs along the northern and western border, generally parallel to Diamond Drive	East Lake Community Plan Area, Lake Elsinore Hills Community Plan Area, Riverview Community Plan Area, City of Wildomar	Diamond Specific Plan	*Topography:* • Mostly flat *2025 land uses:* • Baseball stadium and supporting facilities • Commercial uses (tourist, entertainment, and general retail) uses	• Original site of the first Lake Elsinore train depot. • Diamond Stadium • Close proximity to recreational uses such as motocross, airstrip, gliders, hang gliding. • Close proximity to Historic Main Street	• Focus on regional recreation and entertainment uses. • Dynamic mix of commercial, • Entertainment (including recreational), and residential uses.
Goals and Policies					
Goal BP1: Redevelop the area into a vibrant "Dream Extreme" mixed-use entertainment, commercial, and residential Community Plan by capitalizing upon the opportunities associated with Diamond Stadium.					

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
Program:	Support land use applications consistent with the Diamond Specific Plan uses, design, development standards and guidelines, circulation, and public spaces.				
Goal BP2: Create a contemporary theme within the Ballpark Community Plan, by incorporating design elements that create a progressive entertainment image.					
Policies:	BP2.1: Create design guidelines for the Ballpark Community Plan that encourage pedestrian-oriented development. BP2.2: Encourage commercial and entertainment development in mixed-use areas along street frontages. BP2.3: Consider the installation of community gateway identification signs at the I-15 and Diamond Drive interchange and main points of entry to the "Ballpark Community Plan" and surrounding neighborhoods.				
Goal BP3: Promote the stadium, "Dream Extreme" sports activities, and other recreational opportunities in the Ballpark Community Plan and provide linkages to the Lake and other park and recreation amenities.					
Policies:	BP3.1: Encourage strong connections between usable recreational networks and facilities within the Ballpark Community Plan and surrounding communities such as Historic Main Street. BP3.2: Encourage recreational uses and attractions that contribute to a comprehensive network of pedestrian trails, providing access from the Ballpark Community Plan to Diamond Stadium, Lake Elsinore, the Lake Edge parkway and other nearby recreational facilities. BP3.3: Support land use applications that are consistent with the permitted uses and uses permitted by conditional use permit identified in the Specific Plan, and that incorporate the linkages, networks, trails and public spaces that are designed to connect the Specific Plan to surrounding communities, Lake Elsinore, and other nearby recreational facilities.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
COUNTRY CLUB HEIGHTS COMMUNITY PLAN					
Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	• History/Unique Features	Anticipated Future Character or Land Use
995 approximate acres Dominant Streets: Nichols Road, Chaney Street, Lakeshore Drive, SR-74/Riverside Drive	Alberhill Community Plan Area, Historic Community Plan Area, Lake Edge Community Plan Area	N/A	*Topography:* • Hilly and Steep topography in some areas • Steep topography views of the Lake *2025 land uses:* • Low density and hillside residential • Gunderson Street Pond located within a designated floodway	• Historic development schemes including the Mutual Benefit and Loan Society of Los Angeles subdivision (1912); Clevelin Realty Corporation (1923) subdivision • W.R. Covington and Associates (1925) subdivision including community amenities (pool, clubhouse), some of which were destroyed in 1940s fire • Bredlau Castle: social gathering location (1926) • Aimee's Castle: private home (1928)	• Future development may be constrained as a result of steep topography, public services shortage, and difficulty providing infrastructure/ services (including water and wastewater), limited access, and potential fire hazards. Adequate service provision needs to be addressed to

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
					allow for development. • Many of the Country Club Heights' ROWs cannot be developed due to terrain constraints. Recommended Country Club Heights guidelines for local streets include 34' minimum paving (below the City's standard of 40'), minimum radius of 250', 25 mph design speed, no street parking.
Goals and Policies					
Goal CCH1: Develop lower density residential estate neighborhood, maximizing the lake views and historical character of the area while preserving the integrity of the natural features.					
Policy:	CCH1.1: Consider the establishment development standards that create buildable residential lots.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
Goal CCH2: Encourage new development that preserves and enhances the distinct Country Club Heights Community Plan character.					
Policies:	CCH2.1: Consider the development of design guidelines that will integrate the historical character of the Country Club Heights Community Plan and ensure unique Community Plan design in all residential, landscape and roadway development. CCH2.2: Require conformance with hillside development policies to preserve the natural topography of the Country Club Heights Community Plan. CCH2.3: Encourage the installation and construction of community identification signs/gateway monuments and streetlamps at the main points of entry to the Country Club Heights Community Plan and neighborhoods. CCH2.4: Require lots have direct access to City maintained roadway(s) and to provide a private access-way with a width of no less than 16-feet. CCH2.5: Allow legal non-conforming lots to develop with appropriate setbacks, lot coverage, septic or sewage disposal systems, emergency vehicular access capabilities, and appropriate drainage techniques. CCH2.6: Require Country Club Heights Community Plan roadways to conform to the existing topography as much as possible to provide safe and adequate access yet maintain the country character.				
Goal CCH3: Restore and enhance the historical characteristics of the Country Club Heights Community Plan as development occurs.					
Policies:	CCH3.1: Encourage the restoration of the ornamental concrete streetlamps to working condition. New identical streetlamp features shall be fabricated and placed at key entrances to the Country Club Heights Community Plan Area. CCH3.2: Encourage the preservation of the integrity of the design, character and structure of Aimee's Castle as a locally significant historic resource.				
Goal CCH4: Provide a safe and comprehensive roadway network for vehicular, bicycle, and pedestrian traffic within the Country Club Heights Community Plan Area, with additional access points into/out of the area.					
Policies:	CCH4.1: Consider road cross-sections unique to the Country Club Heights Community Plan Area as necessary and used for local roadways in areas south of Riverside Drive to Chaney Street and the areas enclosed between Gunnerson and Riverside Drive.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
	CCH4.2: Consider a special roadway cross section for Lakeshore Drive between Riverside Drive and Chaney Street and locate intersections at Manning Street, Lawrence Way, and Wilson Way. CCH4.3: Consider a pedestrian sidewalk along Lakeshore Drive that integrates a multi-purpose trail along Lakeshore Drive. CCH4.4: Encourage a minimum sight-distance of 250 feet within the Country Club Heights Community Plan area. CCH4.5: Consider the roadway network to include one-way streets where ROW or buildable widths are limited. CCH4.6: Integrate roadway and other public services infrastructure as development occurs to create efficient use of land. CCH4.7: Consider the feasibility of assuming control of the entire segment of State Route 74, located within the Country Club Heights Community Plan Area.				
Goal CCH5a: Provide adequate, consistently responsive, efficient and customer-oriented public safety services and facilities. Goal CCH5b: Support private utility companies and public utility districts to provide adequate levels of utility services to the Country Club Heights Community Plan Area residents and businesses, and ensure that necessary infrastructure is constructed.					
Policy:	CCH5.1: Pursue innovative techniques to deliver adequate public services in a cost-effective and responsive manner.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
EAST LAKE COMMUNITY PLAN					
Key Characteristics 3,240 approximate acres Dominant Streets: Corydon Street Mission Trail Malaga Adjacent (east of) to Lake Elsinore	Adjacent Community Plan Areas and Other Jurisdictions Historic Community Plan Area, Riverview Community Plan Area, Ballpark Community Plan Area	East Lake Specific Plan	Topography and 2025 Land Uses *Topography:* • Generally flat • Much of the East Lake Community Plan area lies within 100-year floodplain and has flooded in the past.	• History/Unique Features • Portions of the East Lake Community Plan area were used by the Native American tribes in prehistoric times as flaking and grinding stations. • Historic ranching and homestead site located just outside of the Community Plan area adjacent to the Lakeland Village area.	Anticipated Future Character or Land Use • Cohesive environment with a mix of residential neighborhoods, commercial centers, recreational activities, floodplain, and open space including biological resources.

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
Within both the City and the Sphere of Influence			*2025 land uses:* • Mostly undeveloped • Residential • Commercial • Active recreation • Golf course • Open space (including runways for active recreation uses) • Wetlands • Riparian habitat • Floodway	• Motorcross, skydiving, parachuting, glider planes, and hang gliding business/ activities are located in the East Lake Community Plan area. • Lake Elsinore Management Project's components are located in this area (levee, pumping station, overflow weirs, wells, etc.)	• Floodplain and flood management practices may require Section 404 permitting from the Army Corps of Engineers (ACOE). • Smaller drainages may constitute jurisdictional wetlands.
Goals and Policies					
Goal EL1: Integrate future residential and commercial development with the recreational and open space land use framework to create a cohesive master planned community.					

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
Policies:	EL1.1: Require adequate noise buffers between residential, commercial, and active recreational facilities such as the airstrip and motocross. EL1.2: Implement an efficient street system in order to accommodate proposed development and recreational uses. EL1.3: Provide a variety of recreational opportunities in concert with the City's image as a recreational "Dream Extreme" destination. EL1.4: Strive to balance the recreational needs of local residents and visitors with the regional and local need for housing. EL1.5: Incorporate open space as an integral component of the overall community.				
Goal EL2a: Preserve the open space and recreational character of the area while developing the master planned community according to the goals and objectives of the East Lake Specific Plan and the goals and policies of the East Lake Community Plan.					
Goal EL2b: Establish a community with a unique sense of place within the context of surrounding development in the East Lake Community Plan master planned society.					
Policies:	EL2.1: Preserve MSHCP, wetlands, and other valuable environmental resources in the area consistent with the East Lake Specific Plan. EL2.2: Require the dedication of the wetland areas and important habitat to the Elsinore Area preserve of the MSHCP. EL2.3: Require development to create bikeway and pedestrian links between the built community and open space and recreational areas to provide direct access from the East Lake Community Plan area and surrounding community. EL2.4: Require development to create a comprehensive community image that is reflected in its land use, architectural, and landscape elements.				
Goal EL3: Enhance pedestrian circulation, particularly between higher density residential and commercial areas and active or passive recreational facilities. Develop a trail system that will join parks and recreational areas, schools, and commercial activity centers in the Community Plan area and link to the surrounding community including the Ballpark Community Plan area.					
Policies:	EL3.1: Incorporate strong linkages to the surrounding activities including Diamond Stadium located in the neighboring Ballpark Community Plan area into development design. EL3.2: Integrate and align future roadways with the built circulation infrastructure in order to provide for efficient use of land and traffic movement.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
	EL3.3: Conduct necessary studies in coordination with Riverside County and Caltrans to make the Olive Street/I-15 undercrossing an interchange to enhance circulation in the Community Plan area.				
Goal EL4: Provide an open space and recreational network visually and physically integrated to development areas and provide a balance between development and the conservation and preservation of areas with unique environmental or aesthetic value.					
Policies:	EL4.1: Support the enhancement of usable recreational networks throughout the East Lake Community Plan area by ensuring that connections between such community elements as open space, parks, schools, recreational facilities, and the residential and commercial areas are required during the development and CEQA processes. EL4.2: Encourage the enhancement of existing facilities such as the airstrip and motocross that are critical to the continuation of extreme sport activities. EL4.3: Require recreational activities oriented to local residents and visitors. EL4.4: Require an open space and park system to satisfy the active and passive recreational needs of the community. EL4.5: Preserve the southern shoreline of Lake Elsinore within the East Lake Community Plan area for public access and enjoyment.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
HISTORIC COMMUNITY PLAN					
Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Topography and 2025 Land Uses	• History/Unique Features	Anticipated Future Character or Land Use
474 approximate acres Dominant Streets: I-15 Main Street (designated as part of the Historic Highway 395) Graham Avenue Lakeshore Drive Adjacent to Lake Elsinore	Lake Elsinore Hills Community Plan Area, Riverview Community Plan Area	• Downtown Elsinore Specific Plan	*Topography:* • Generally flat, sloping towards Lake Elsinore *2025 land uses:* • Public and institutional • Residential • Neighborhood commercial • Industrial	• This is the physical and cultural heart of Lake Elsinore • The area underwent significant development in the late 1800s as the Atchison, Topeka, and Santa Fe Railroad connected the community to the larger region. Early residents and visitors came for mining job opportunities and recreational opportunities. • Several registered and non-registered historic buildings are located in the Historic Community	• Looking to be the City's premier destination for civic, commercial, and cultural activities. • Additional commercial and residential revitalization potential exists. • Future use mixed-use, residential, commercial, civic, and open space. • Serves as a gateway to Lake

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
				Plan area including: ○ *National Register of Historic Places:* Crescent Bath House/Chimes Building and the Grand Army of the Republic ○ *California Points of Historical Interest:* Elsinore Women's Club and Grand Army of the Republic ○ Riverside County General Plan significant resources: ○ Masonic Lodge, train depot, First Presbyterian Church, Pioneer Lumber Company, and Lake Theater. *Contributing to Downtown's history:* ○ City Park gazebo	Elsinore • Strong connections to Lake Edge and Riverview Community Plan areas

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
				○ Main Street is and will continue to be pedestrian friendly. Three block segment on Main Street is subject to urban design streetscape improvements. ○ Multiple civic buildings are in the area: City Hall, public library, Cultural Center, community center, fire station, post office, police station. ○ Recreation facilities include the "Channel Walk" (pedestrian trail along Temescal Wash), City Park, Swick & Matich Park, Yarbrough Park ○ Temescal Wash including a	

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
				pedestrian trail located northwest of Main Street	
Goals and Policies					
Goal HD1: Continue to restore and enhance the historical structures within the Historic Community Plan area as development occurs. Maintain the history of the Historic Community Plan area through restoration and expansion of existing historical structures. Educate and promote the significance of the Historic Community Plan area's structures.					
Policies:	HD1.1: Support the expansion of the Lake Elsinore Historical Society's Museum located along Main Street. HD1.2: Encourage new development to incorporate historical architectural features into building facades and require projects to conform/abide by the architectural design standards as defined in the Downtown Elsinore Specific Plan. HD1.3: Encourage the preservation of historic structures located within the Historic Community Plan area, including those located outside the core downtown area. HD1.4: Consider the development and adoption of specialized design guidelines particular to the Historic Community Plan overlay.				
Goal HD2: Support a recreational system that is accessible to the City's residents, employees, and visitors and ensures a variety of facilities for all ages.					
Policies:	HD2.1: Consider pedestrian linkages between the Channel Walk project and the Historic Community Plan area, commercial businesses, recreational facilities, major corridors, the Lake Edge Parkway, and the Lake. HD2.2: Expand and support facilities within the various community centers. HD2.3: Encourage and pursue the development of additional recreational facilities adjacent to new public development such as the future civic center plaza. HD2.4: Encourage residential development to incorporate common open spaces on-site, such as courtyards and terraces.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
LAKE EDGE COMMUNITY PLAN					
Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Topography and 2025 Land Uses	• History/Unique Features	Anticipated Future Character or Land Use
876 approximate acres Dominant Streets: Riverside Drive Lakeshore Drive Grand Avenue Adjacent to Lake Elsinore	Country Club Heights Community Plan Area, Historic Community Plan Area, Riverview Community Plan Area, East Lake Community Plan Area	N/A	*Topography:* • Varied *2025 land uses:* • Recreation • Custom homes • Single unit residential • Commercial • Mixed-Use • Open space • Recreation • Vacant	• This area incorporates the largest share of the Lake's shoreline with unique recreational amenities/activities. This includes Lake Point Park. • A portion of the Lake Edge Community Plan area is within the Santa Ana Mountains. • The Lake and mountains provide a scenic view. • Historically, the area has been a focal point for settlement. • Structures of interest are: Adobe Machado House (Lake Elsinore's	• Given proximity to the Lake, multiple challenges need to be addressed for development to occur, including: ACOE jurisdictional lines, floodway, and floodplains • Create additional opportunities for recreational uses and provide improved access to the

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
				oldest standing structure, 1858; it served as the Butterfield Stage Stop/post office) and the former Elsinore Naval Military Academy. • Creating a resort town became a goal shortly after the town of Elsinore's founding in 1883. In the early 20th Century multiple developments featured recreational resort amenities. None of the structures exist in 2025.	recreational and entertainment uses and the Lake.
Goals and Policies					
Goal LE1a: Encourage the development of a recreational destination that will bring local residents and visitors to the various recreational and entertainment facilities around the Lake.					
Goal LE1b: Enhance the accessibility of the recreational designated uses along the Lake's shores.					
Goal LE1c: Preserve a view corridor along Lakeshore Drive between Chaney and Iowa streets.					
Policies:	LE1.1: Encourage the development of recreation-serving commercial land uses and the revitalization of existing uses that strengthen the City's economic base and offer a range of enterprises that serve the needs of residents and visitors.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
	LE1.2: Support new development and redevelopment around the Lake that offers a range of housing, commercial, and entertainment opportunities and increased recreational activities for residents and tourists. LE1.3: Consider a pedestrian-oriented route (multi-purpose trail) along and within Lakeshore Drive and a multi-purpose trail that connects to the City Campground. LE1.4: Encourage the creation of a consistent and integrated development theme along the lake edge. LE1.5: Preserve sensitive environmental habitats and physiographic features, including wetlands and beaches.				
Goal LE2: Support a destination that provides a consistent and rich design motif and accessibility with a strong recreation oriented character and emphasis for recreational, residential, residential-mixed-use, and commercial uses along or within close proximity to Lake Edge Community Plan area's shorelines.					
Policies:	LE2.1: Support the pedestrian-scale development with an orientation towards the lake. LE2.2: Encourage the construction of community identification gateway signs at the main points of entry to the Lake Edge Community Plan area and at regular points along the Riverside Drive and Lakeshore Drive.				
Goal LE3: Support and promote the historical significance of the Lake as development occurs, along with preserving and maintaining the integrity of the Elsinore Naval Academy Building as locally recognized historic resources.					
Policies	LE3.1: Consider establishing a visitor's center at the Elsinore Naval Academy to promote the educational awareness of the Lake Edge Community Plan's historic legacies and the evolution of the development of the Lake's shoreline. LE3.2: Encourage the placement of signs depicting the historic evolution of the Lake and nearby areas within the Lake Edge Community Plan in popular recreational areas along the Lake's shores.				
Goal LE4: Enhance the primary circulation routes, points of entry, key intersections, and the Lake Edge Parkway by improving public access opportunities to the Lake and Lake Edge.					
Policies:	LE4.1: Consider assuming control of the entire segment of State Route 74, located within the Lake Edge Community Plan. LE4.2: Support the enhancement and/or creation of unifying streetscapes, road signage, and other design features along Lakeshore Drive. Encourage the construction of entry points from each of the adjacent community plan areas to the Lake Edge Community Plan area.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
	LE4.3: Ensure that main intersections along Grand Avenue at Riverside Drive and Ortega Highway are improved in order to reduce congestion and delay. Full improvement may impact the existing development on the southeast corner. LE4.4: When the traffic volume justifies, and as development continues, widen Riverside Drive to the full width as detailed in the General Plan. LE4.5: Apply the new special roadway cross section for Lakeshore Drive.				
Goal LE5: Create recreational opportunities for the City's residents that maximize access to and use of the lake.					
Policies:	LE5.1: Create a continuous multi-purpose trail designed and designated for pedestrian use (the "Lake Edge Parkway"), around the perimeter of the Lake Edge Community Plan. LE5.2: Encourage the establishment of pedestrian links between the neighboring districts and the multi-purpose trail.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
LAKE ELSINORE HILLS COMMUNITY PLAN					
Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Topography and 2025 Land Uses	• History/Unique Features	Anticipated Future Character or Land Use
7,486 approximate acres Dominant Streets: I-15 SR-74 Camino Del Norte Railroad Canyon Drive	Historic Community Plan, Riverview Community Plan, Ballpark Community Plan, City of Canyon Lake, City of Wildomar	• Canyon Hills Specific Plan • Canyon Hills Estates Specific Plan • Elsinore City Center Specific Plan • Spyglass Ranch Specific Plan • Ramsgate Specific Plan (Rosetta Canyon) • Canyon Creek "Summerhill" Specific Plan • Tuscany Hills Specific Plan	*Topography:* • Varied *2025 land uses:* • Residential • Commercial Open Space • Recreation • Vacant	• Lake Elsinore Hills has a large and diverse open space including sensitive habitat areas, riparian habitat, and watercourses. • Much of the area is not readily accessible or developable due to topography and biological resources. • Historic mining activities and historic ranching/ homesteading site are in this Community Plan area. • Many specific plans and tentative tract	• Create and maintain balanced communities promoting a high quality of life.

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
				maps are approved for development.	
Goals and Policies					
Goal LEH1: Enhance and maintain a network of residential communities that incorporates and protects the natural landscape and MSHCP conservation areas offering a high quality of life.					
Policies:	LEH1.1: Encourage land uses that are compatible with adjacent Automall Overlay areas at the western edge of the Lake Elsinore Hills Community Plan. LEH1.2: Encourage the clustering of development in order to preserve significant hillsides.				
Goal LEH2: Encourage the development of an adequate multi-modal transportation system including bus routes, bicycle lanes, hiking trails, and pedestrian oriented streets that provides adequate accessibility within the Lake Elsinore Hills Community Plan and to neighboring areas and roadways by establishing design standards that ensure a high quality circulation system throughout the Lake Elsinore Hills Community Plan area that incorporates the existing topography.					
Policies:	LEH2.1: Construct additional east/west roadways providing access from I-15 to the eastern areas of the Lake Elsinore Hills Community Plan wherever recommended by traffic studies. LEH2.2: Consider the development of a strategic plan with the City of Wildomar to ensure that Lost Road northeast of Grape Street to the existing specific plan street is constructed to a four-lane roadway. LEH2.3: Support completion of Canyon Estates Drive to Camino del Norte at Main Street and for Camino del Norte to continue to Cambern Avenue to finish the connection to SR- 74. LEH2.4: Complete improvements to Rosetta Canyon Road/Elsinore Hills Road from Camino del Norte to SR- 74 in order to provide additional access from one side of the Lake Elsinore Hills Community Plan to the other side. LEH2.5: Continue to pursue funding for improvements to both Central Avenue and Railroad Canyon Road, which will carry substantial future traffic volumes. LEH2.6: Continue to plan for the design and construction of the La Strada Road connection from Summerhill Drive to Camino del Norte.				
Goal LEH3: Enhance the natural character of the broad plains, rolling hills, steep slopes, sensitive habitats, and watercourses.					

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
Policies:	LEH3.1: Encourage the provision of pedestrian routes that connect existing and future developments with open space and recreation uses. LEH3.2: Support an extensive system of open space and MSHCP conservation areas throughout the Lake Elsinore Hills Community Plan to ensure a healthy balance between development and conservation of the area's natural environment. LEH3.3: Preserve a balanced amount of the Lake Elsinore Hills Community Plan area's natural landscape of valleys, peaks, rolling hills, watercourses, and sensitive habitats as existing specific plans and additional projects are developed.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
RIVERVIEW COMMUNITY PLAN					
Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Topography and 2025 Land Uses	• History/Unique Features	Anticipated Future Character or Land Use
432 approximate acres Dominant Streets:I-15 Railroad Canyon Road Franklin Street Auto Center Drive Lakeshore Drive San Jacinto River (floodway)	Historic Community Plan Lake Elsinore Hills Community Plan Ballpark Community Plan East Lake Community Plan	N/A	*Topography:* Combination of steep and flat nestled between steep slopes, watercourse, and Lake Elsinore *2025 land uses:* • Residential • Commercial • Public Facilities • Institutional • Recreation • Vacant	• Auto mall located at the eastern edge provides a significant source of tax revenue for the City	• A mixed-use and vibrant neighborhood with a variety of supporting uses, tourist commercial uses, and auto mall
Goals and Policies					
Goal RV1: Stimulate a mixed-use neighborhood with a variety of land uses that incorporate the area's natural amenities and surrounding uses					

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
Policies:	RV1.1: Encourage the redevelopment and/or rehabilitation of aging structures. RV1.2: Create strong linkages to recreational areas, the Lake, the river, and the Ballpark Community Plan. RV1.3: Ensure compatibility between the Riverview Community Plan's wide variety of uses. RV1.4: Encourage the establishment of auto sales enterprises along Auto Center Drive. RV1.5: Establish and maintain adequate buffers between auto sale lots and residential uses. RV1.6: Discourage the establishment of residentially sensitive uses adjacent to buffer existing auto sales lots.				
Goal RV2: Encourage rehabilitation, redevelopment, and new development that is integrated with and oriented towards the Riverview District's natural amenities and community-serving facilities in order to create a distinct mixed-use neighborhood with a variety of commercial uses.					
Policies:	RV2.1: Encourage rehabilitation, redevelopment, and new development to have an orientation towards the Riverview Community Plan's community amenities and natural features. RV2.2: Consider adopting urban design guidelines to support a rich and diverse mixed-use neighborhood with a variety of commercial activities that incorporate the area's amenities, community facilities, and topography. RV2.3: Incorporate a pedestrian-oriented design that provides public access from the Riverview District to adjacent recreational areas along the Lake and the River, and to development activities south of Lakeshore Drive.. RV2.4: Create a safe and attractive pedestrian connection along Lakeshore Drive that connects to the Historic Community Plan to the northwest and the Ballpark Community Plan to the southeast. Additional pedestrian routes with views of the River shall be established in a north-south direction to establish a strong connection between uses north and south of Lakeshore Drive. RV2.5: Place community identification signs or gateway monuments at the east and west ends of the Riverview Community Plan along Lakeshore Drive				
Goal RV3: A safe and comprehensive roadway network for vehicular, bicycle, pedestrian, and bus traffic throughout the Riverview Community Plan area and adjacent areas.					
Policies:	RV3.1: Improve the visual aspects of the roadways through enhanced landscaping and community identification features.				

Table LUCC-5: Overview of Community Plans

Key Characteristics	Adjacent Community Plan Areas and Other Jurisdictions	Specific Plans within the Community Plan Area	Character	History/Unique Features	Anticipated Future Character or Land Use
	RV3.2: Designate Lakeshore Drive as a scenic roadway with unifying streetscape features, road signs, and other design elements, which should be encouraged to be constructed the length of the Riverview Community Plan boundaries. RV3.3: Roadways, transit, and pedestrian routes shall be improved in order to accommodate new development and greater accessibility throughout the Riverview Community Plan area as recommended by traffic studies				
Goal RV4: Encourage the expansion or new facilities for recreation within the Riverview Community Plan to foster a stronger community character and active outdoor activities.					
Policies:	RV4.1: Provide additional public spaces and recreational facilities for the Riverview Community Plan's residents and visitors. RV4.2: Link the Riverview Community Plan area to other recreational activities along the Lake and the river. RV4.3: Pursue a joint-use facility with the Lake Elsinore Unified School District at the Railroad Canyon Elementary School facility. RV4.4: Ensure the provision of adequate additional park facilities as new residential development occurs.				

Land Use and Community Character Goals and Policies

GOAL LUCC-1: A CITY OF COMPLETE NEIGHBORHOODS

Policy LUCC-1: Retain the unique characters of long-established residential neighborhoods.

Policy LUCC-2: Maintain the higher quality and character of established housing stock.

Policy LUCC-3: Accommodate population growth and projected demographic shifts with a range of housing options.

Policy LUCC-4: Require new and infill development be sensitive to neighborhood context, building form, and scale.

Policy LUCC-5: Ensure all residential streets provide a safe, comfortable, and enjoyable pedestrian experience, with design elements to include street trees and sidewalks.

Policy LUCC-6: Identify transition areas between lower-density land uses adjacent to higher-intensity development to ensure new and infill development transitions well to established uses.

Policy LUCC-7: Encourage neighborhood beautification and residents' efforts to participate and take pride in their neighborhoods.

GOAL LUCC-2: A NETWORK OF GREAT STREETS AND PUBLIC SPACES THAT ENCOURAGE SOCIAL AND ECONOMIC ACTIVITY

Policy LUCC-8: Activate and improve the pedestrian experience along Riverside Drive, Lakeshore Drive, Central Avenue, and Main Street by applying the following:

- Separate potentially conflicting uses (vehicular, pedestrian, bicycle)
- Prioritize pedestrian facilities and amenities
- Implement designated land uses (scale, density/intensity, intent, character, and built form)

Policy LUCC-9: Establish a continuity of streetscapes along Main Street, Riverside Drive, Lakeshore Drive, and Central Avenue that define the public realm, are scaled to the pedestrian experience, and reflect the City's cultural identity through public art, street furniture, landscaping, architectural character, materials, and similar elements.

Policy LUCC-10: Concentrate mixed-use development at designated sites (see Figure LUCC-3) to provide opportunities for clustering similar and compatible uses, support economic development, create and maintain vibrant pedestrian-oriented spaces and experiences.

Policy LUCC-11: Encourage adaptive reuse of historic buildings, and compatible, transitional new development in the Historic Community Plan area.

GOAL LUCC-3: DISTINCTIVE AND SUCCESSFUL UPTOWN, DOWNTOWN, AND OTHER MIXED-USE DISTRICTS

Policy LUCC-12: Continue to encourage private and public investment in Downtown, with public improvements that support pedestrian activity, park-once strategies, and the enjoyment of being outdoors. Ensure land use policies for Downtown allow for a diversity of businesses and residential densities that meet housing needs for people in all life stages.

Policy LUCC-13: Create a mixed-use "Uptown" district along Central Avenue through new development and revitalizing/redesigning existing commercial centers. The Uptown district shall include mixed-use, residential, and public uses that supplement the commercial uses to create a lively destination/district.

Policy LUCC-14: Support the reinvention of aging commercial properties as mixed-use developments and districts that integrate housing, retail, dining, entertainment, and office in both vertical and horizontal configurations, and that provide connections among all uses within the developments/districts.

Policy LUCC-15: Encourage the growth of medical-related and health care businesses to create a regional center for medical care, research, and technology businesses.

GOAL LUCC-4: A DYNAMIC MIX OF BUSINESSES, USES, AND EMPLOYMENT THAT SUSTAINS A STRONG LOCAL ECONOMY, WITH DESIGN QUALITIES THAT CONTRIBUTE TO THEIR SUCCESS

Policy LUCC-16: Support retention of existing and encourage new local and small businesses.

Policy LUCC-17: Provide a balance of business opportunities and housing choices that make it easy for persons of all income ranges to live and work in Lake Elsinore.

Policy LUCC-18: Facilitate the growth of a diverse business sector resilient to change over time and compatible with a broad range of skills and workers.

Policy LUCC-19: Create concentrated employment centers along major corridors to provide opportunities for innovation, investment, and growth.

Policy LUCC-20: Require new and renovated employment center developments to:

- Allow for accessory uses such as public open space and/or trails, transit amenities, childcare facilities, and supportive retail uses based on the size and location of development.
- Include design features to accommodate safe and convenient walking, biking, and transit use, including:
  - Interconnected system of streets and walkable blocks with ample space for walking, a landscaped buffer protecting pedestrians from street activity, and street furniture and amenities
  - Innovative parking solutions that reduce surface parking lots, relocate parking away from the street edge, and encourage parking structures and shared parking programs
  - Buildings with primary entrances facing public streets and/or sited around public plazas, courtyards, walkways, parks, and open spaces
  - Extensive on-site landscaping
  - Coordinated and well-designed wayfinding signage
  - Pedestrian-scaled lighting to promote activity

Policy LUCC-21: Improve and maintain the visual and aesthetic qualities of commercial and industrial districts through the control of design, signs, parking, landscaping, architecture, and property maintenance.

Policy LUCC-22: Require high-quality design in commercial and industrial development.

Policy LUCC-23: Require development proposals to work with the Lake Elsinore public service providers (police, fire, and public utilities) to encourage efficient project site development and target land use projections as identified in Table LUCC-4.

GOAL LUCC-5: URBAN RECREATION, OPEN SPACES, AND EXPERIENCES THAT CONTRIBUTE TO COMPLETE NEIGHBORHOODS FOR ALL RESIDENTS AND DESTINATIONS FOR VISITORS

Policy LUCC-24: Encourage active living, physical activity, health, and wellness by creating and maintaining a green network that provides equitable access to recreational facilities, parks, trails, greenways, open spaces, and gardens.

Policy LUCC-25: Explore the potential for new or expanded open spaces and greenways while improving groundwater recharge areas to serve as neighborhood and community recreation or conservation resources.

Policy LUCC-26: Encourage lake-oriented recreational uses including but not limited to beaches, parks, marinas, and lake-oriented water park.

Policy LUCC-27: Consider visitor drawing recreation activities that connect to or are in the Downtown; such uses can include lake pier, geothermal based spa, etc.

Policy LUCC-28: Encourage additional extreme sport facilities as defined in Dream Extreme 2040 Plan.

Implementing Programs for Goals LUCC-1 through LUCC-5

Zoning Code/Map Update

PRO-LUCC-1: Review and revise the Zoning Code and Subdivision Ordinance.

PRO-LUCC-2: Create a Community Benefits Program.

Building and Other Code Updates

PRO-LUCC-3: Update the building code in accordance with best practices to address structure degradation due to climate change.

Review Process

PRO-LUCC-4: Examine the current plan review, permitting and design review processes to ensure development in areas designated for mixed-use and nonresidential use are consistent with the character outlined in this General Plan.

PRO-LUCC-5: Work with project applicants, developers, landowners, financial institutions, and others to provide unique opportunities for urban recreation, such as multi-story structures with rooftop theaters, fields, green roofs, gardens, etc.

PRO-LUCC-6: Continue to conduct development applications review, which includes Planning, Engineering, Public Works, Police, and Fire reviews.

PRO-LUCC-7: Require development projects subject to discretionary approval to assess potential construction noise impacts and noise associated with on-going operations on nearby sensitive uses and to minimize impacts on those uses.

PRO-LUCC-8: Prioritize parkland or similar property dedication over impact fees within the park dedication ordinance, Parks Master Plan, or other parks planning programs. Perform nexus studies regularly to update the criteria and fees. Include provisions that prevent a net loss of park space in the city.

PRO-LUCC-9: Incentivize the creation of public plazas and public urban spaces near larger residential and mixed-use developments and in underutilized parking areas within existing commercial centers. Use the community benefit structure for mixed-use and commercial areas along to create public plazas, paseos, and other urban recreation amenities, which can provide opportunities for social gathering and passive recreation in a built-out urban area. These open spaces can include hardscaped and landscaped areas, seating, and landmarks. Public plazas can be programed with "pop up" recreation programs and regularly scheduled events such as farmers' markets and festivals.

PRO-LUCC-10: Support the transformation or enhancement of creeks, streams, flood corridors into greenways that foster trails, groundwater recharge and stormwater management, and wildlife connections throughout the community.

PRO-LUCC-11: Support urban agriculture and community gardens.

New Plans and Strategies

PRO-LUCC-12: Adopt, as appropriate, a Lake Elsinore Activation Master Plan (for the lake and recreation areas supporting the lake).

PRO-LUCC-13: Prepare a facility management plan to provide adequate maintenance, rehabilitation, and modernization of parks and recreation facilities to ensure their long-term utility.

PRO-LUCC-14: Develop and implement an urban forestry strategy to ensure preservation of existing trees and encourage planning of appropriate tree species throughout Lake Elsinore. Ensure the City has ready access to trained arborists or other experts who can implement Lake Elsinore's urban forestry strategies and programs.

PRO-LUCC-15: Create new urban recreation spaces in conjunction with roadway enhancements, street reconfigurations, and streetscape improvements.

PRO-LUCC-16: Transform underutilized public right-of way and infrastructure into park space.

PRO-LUCC-17: Develop and implement streetscape improvement plans for key streets leading into Uptown, Downtown, and other major arterials. Ensure streetscape standards support walkability while creating sense of places.

PRO-LUCC-18: Create new pedestrian and bicycle routes:

- Linking Launch Pointe, the Lake's public access points, and Main Street; and
- Linking residential areas, commercial centers, and employment centers to create new recreation and commuter options.

Special Studies/Reviews

PRO-LUCC-19: Explore using developer fees, to be assessed when historic resources are impacted, for historic preservation efforts or applied to other sites or projects.

PRO-LUCC-20: Review and update the City's tree preservation ordinance to ensure all appropriate tree species are protected and included in the ordinance.

PRO-LUCC-21: Develop an incentives program encouraging private development and public agencies to provide park and recreation facilities beyond the minimum Quimby requirements.

PRO-LUCC-22: Prioritize and incentivize urban recreation as a community benefit.

PRO-LUCC-23: Identify incentives (such as expedited processing, rebates, featuring business in Lake Elsinore's publications, etc.) to encourage property and business owners to improve buildings exteriors and storefronts.

Ongoing Processing and Procedures

PRO-LUCC-24: Continue to implement the Parks Master Plan and the Dream Extreme 2040 Plan.

PRO-LUCC-25: Install temporary park features and organize pop-up events as ways to provide temporary park space and recreation. Consider adding temporary features such as seating areas with planters, ping pong tables, fitness zones, and demarcated areas for nature play and outdoor learning. Explore equipment rental programs and offer pop-up/mobile programming with temporary play props, interactive games, and local art installations. Temporary park features and pop-up events may occur on private commercial development, City-owned lots, underutilized parking lots, vacant lots, vacant commercial properties, neighborhood blocks (e.g., block party), within existing parks, and within Disadvantaged Communities. Coordinate with private landowners and local businesses to install temporary park features or organize pop-up events as a way to generate local economic activity.

PRO-LUCC-26: Conduct and fund code enforcement activities focusing on proactive, information outreach to property owners and tenants.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-LUCC-27: Work with local banks and financial institutions to develop an interest-free rehabilitation loan program that promotes the sustainable upgrade and reuse of older homes and apartment buildings, commercial buildings, and industrial buildings rather than full-scale replacement.

PRO-LUCC-28: Collaborate with local and regional business and professional groups to incorporate cultural resources such as local arts, "Lake Elsinore" oriented materials and themes into their business promotions.

PRO-LUCC-29: Collaborate with the Chamber of Commerce and other business associations to develop a menu of tools business owners can use toward maintaining the character of Downtown.

PRO-LUCC-30: Work with community members, non-profits, and government agencies to identify and acquire available land (or acquire use of the land) for urban farms, community gardens, and/or additional park space such as civic spaces, parking lots, vacant plots, rights-of-ways, school sites. Special consideration should be given to properties located in Disadvantaged Communities.

PRO-LUCC-31: Provide a coordinated program of education, outreach, and advocacy for community gardens, tree planting, maintenance, and community engagement.



Mobility and Infrastructure

In This Section

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Mobility

Infrastructure

Disadvantaged Unincorporated Communities

Mobility and Infrastructure Goals and Policies

Mobility and Infrastructure Element

Introduction

Mobility

Mobility and access are essential to the daily lives of Lake Elsinore's residents, businesses, and visitors, providing efficient connections to jobs, education, recreation, and essential services. The City's circulation system is designed to accommodate a wide range of users, including drivers, pedestrians, cyclists, transit riders, and freight movement, ensuring a balanced and adaptive transportation network. While automobiles continue to be the primary mode of transportation, Lake Elsinore is committed to enhancing mobility options through adaptive street design, transit expansion, and emerging technologies that improve access and connectivity.

Infrastructure

An efficient and reliable infrastructure system is vital to any city's health, safety, livability, and its economic well-being. The infrastructure section addresses the physical facilities needed to provide the City with important services such as water storage and distribution, wastewater collection and treatment, and electrical and natural gas services.

These infrastructure systems represent the support network upon which the community relies to maintain daily activities. To preserve high service levels in Lake Elsinore, ongoing maintenance, improvement, and replacement are required. Additionally, the City must ensure that the needs of new developments are met without burdening current users.

- Lake Elsinore and the SOI are served by the Elsinore Valley Municipal Water District (EVMWD). The EVMWD is split into two divisions: the Elsinore Division and the Temescal Division. EVMWD potable water supply is a blend of local groundwater, surface water from Railroad Canyon Reservoir (Canyon Lake), and imported water. Annual water production in the Elsinore Division is about 27,000 acre-feet. Annual water production in the Temescal Division ranges from approximately 6,000 to 7,000 acre-feet. About 75% of EVMWD's supply is imported. The Colorado River Aqueduct and State Water Project provide most of Southern California's water supply. EVMWD imports treated and disinfected water from Lake Skinner and Lake Mathews, located in Temecula and Riverside respectively. EVMWD continues to update critical water infrastructure and adopted an updated Water System Mater Plan in 2024.
- The Elsinore Valley Municipal Water District also provides water recycling for Lake Elsinore and the SOI. EVMWD recycles more than 27,000 acre-feet of water each year for use around Riverside County. Recycled water is used for irrigating crops and golf courses, filling fishing lakes, landscape irrigation, and wetlands enhancement. An updated Recycled Water System Master Plan was adopted in 2024.
- Wastewater and sewer services for the City of Lake Elsinore and SOI are provided by EVMWD. EVMWD's existing wastewater collection system consists of approximately 429 miles of sewer

pipelines, 36 lift stations, and three water reclamation facilities (WRFs). An updated Sewer System Master Plan was adopted in 2024 and includes a Capital Improvements Plan to update the system to handle anticipated increases in wastewater flows.

- Flood control services are provided by the City of Lake Elsinore and the Riverside County Flood Control and Water Conservation District (RCFC). The City is responsible for local storm drains, gutters, and pipelines connecting to the RCFC collector pipelines, channels, and washes. Lake Elsinore's updated its Master Drainage Plan in 2023.
- Southern California Edison (SCE), a subsidiary of Edison International, provides electricity to Lake Elsinore and the SOI. SCE provides power to over 15 million people throughout California. Its system includes 125,000 miles of distribution and bulk transmission lines, 1.3 million distribution structures, 1.4 million electric poles, and 142,000 transmission structures. In 2022, SCE completed the Valley Ivyglen Project, which added 25 miles of powerlines and 25 miles of fiber optic lines in Riverside County. In 2009, SCE proposed the Alberhill System Project, which would result in a new substation, transmission lines, and other facilities to expand the capacity of the power grid serving Lake Elsinore and the surrounding areas.
- Southern California Gas Company (SoCalGas) provides natural gas to the City of Lake Elsinore and the SOI. SoCalGas serves 21.1 million customers through 5.9 million meters in more than 500 communities.
- Four Disadvantaged Unincorporated Communities (DUCs) are within or adjacent to a City's SOI. DUCs may lack basic services (water, sewer, sidewalks, parks) that can be due to historical neglect, or facing environmental justice issues, like poor water quality or infrastructure deficits, despite being part of larger counties. State law requires DUCs to be identified. DUCs' existing and planned water, sewer, flood control infrastructure, and fire protection services also need to be discussed. DUCs are defined as inhabited unincorporated areas with an annual median household income that is less than 80 percent of the statewide annual median household income. The four DUCs are North of Lake Elsinore; Meadowbrook; Warm Springs/North Elsinore; and Lakeland Village.

Mobility

Mobility connects people to places. In Lake Elsinore, this includes connecting residents to their employers, connecting residents to destinations within Lake Elsinore, and connecting the rest of the Inland Empire to Lake Elsinore. Ultimately, the mobility system provides for safe, enjoyable, and healthy accessibility within Lake Elsinore.

This is accomplished through a focus on the available rights-of-way to create better connections within the city using utility corridors and flood control channels to create an active transportation system and repurposing "extra" roadway width to provide additional bicycle, pedestrian, and transit facilities. In this fashion, the City is implementing complete streets by designing for people of all ages and all abilities. Additionally, the City aims to provide a transportation system that not only supports residents' mobility

needs but also the needs of visitors and tourists, as Lake Elsinore envisions to be the "Action Sports Capital of the World."

Indicators of Roadway Efficiency

The efficient movement of goods, automotive, and non-automotive traffic throughout a region is critical to the normal day-to-day operations of a prosperous community. Delay in the transportation of people and goods can result in longer travel times. Longer travel times can lead to drivers experiencing increased stress during their daily commute and businesses experiencing economic loss, both of which adversely affect the wellbeing of a community.

The efficiency of a transportation system can be determined by assessing intersection and roadway Level-of-Service (LOS). LOS is a qualitative letter grade assigned to an intersection or roadway that measures vehicle congestion. Vehicle congestion leads to increased travel time and pollution, which has adverse effects on the transportation system and the community. Grades range from LOS A (minimal congestion) to LOS F (excessive congestion), with LOS E representing at-capacity operations.

For purposes of development project applications or infrastructure projects, the City recognizes LOS D as acceptable operating conditions for most areas. However, to increase activity and revitalize both the Main Street and the Lakeshore Drive Districts, LOS “E” will be considered acceptable.

Roadway operations analysis was conducted to compare LOS at key intersections and roadways throughout the City under baseline (2024) and cumulative (2050) conditions to assess the Mobility Element roadway network. Comparing 2024 and 2050, LOS allows existing transportation system deficiencies to be identified and ensures that the transportation system’s buildout addresses existing deficiencies and Lake Elsinore’s anticipated growth. LOS was evaluated using Transportation Research Board (TRB) *Highway Capacity Manual* (HCM) *7th Edition* methodology.

2025 Considerations

The existing physical and operational conditions of the City of Lake Elsinore’s transportation network and its Sphere of Influence (SOI) were reviewed to understand the existing conditions for roadways, public transit, active transportation networks (multimodal trails, sidewalks, and bikeways), aviation, and infrastructure that supports the movement of goods.

The City of Lake Elsinore requested SR-74 be relinquished from Caltrans responsibility to the City of Lake Elsinore in 2024 Generally, relinquishment requests take three to four years to be reviewed, determination made, and enacted. The City requested the relinquishment in order to gain local control of the roadway right-of-way, encourage development adjacent to SR-74, and improve roadway function for vehicles, bicycles, and pedestrians.

Roadway Typologies

The City of Lake Elsinore organizes its roadways into a functional classification system that defines streets based on their intended purpose, location, adjacent land uses, and roadway access characteristics such as driveway frequency. The roadway system forms the core of The City’s circulation

infrastructure and includes a hierarchy consisting of six classifications: urban arterial, major arterial, secondary roadway, collector, divided collector, and Main Street Collector. These classifications guide how streets are designed and operated across the city. Table MI-1 outlines the City's six roadway classifications, detailing their general design characteristics including right-of-way (ROW), number of travel lanes, and typical multimodal features such as sidewalks and bicycle lanes. Typical cross-sections for these roadway classifications are shown in Figures MI-1 through MI-6, which also illustrates how bicycle facilities are integrated into each roadway type. Additional guidance on bicycle facility types is provided in Section 4.3.2, based on standards from the California Manual on Uniform Traffic Control Devices (CA MUTCD).

Classifications and Design Standards

The City's roadway classification standards ensure that new street construction supports anticipated traffic volumes while aligning with broader goals for safe, efficient, and accessible transportation.

The City recognizes the value of the layered network approach recommended under Senate Bill (SB) 743 and Assembly Bill (AB) 1358, which calls for the strategic separation and prioritization of travel modes within a comprehensive street network. This approach supports the design of mode-specific corridors such as truck routes, active transportation corridors, and transit-priority corridors based on the surrounding context and mobility goals. The four guiding principles of this approach are:

- Minimizing modal conflicts;
- Enhancing connectivity and network redundancy;
- Applying context-sensitive street design standards; and
- Incorporating Safe System principles, such as protected facilities along multimodal corridors.

While the automobile is the primary form of transportation in Lake Elsinore, the City encourages use of alternative modes of transportation within the City described in more detail in the Complete Streets Section.

Table MI-1: Roadway Classification System

Classification	Description	Design Features
Urban Arterials	Six-lane roadways with a median divider, providing primary mobility for regional and citywide travel.	ROW: 120' Number of Travel Lanes: 6 Travel Lane Width: 12'-14' Median Width: Typically, 14' Bicycle Lane & Sidewalk: Included in ultimate cross-section
Major Arterials	Four-lane roadways with a median divider, facilitating major citywide travel connections.	ROW: 100' Number of Travel Lanes: 4 Travel Lane Width: 12'-13' Median Width: Typically, 14' Bicycle Lane & Sidewalk: Included in ultimate cross-section
Secondary Roadways	Four-lane highways with a median divider, connecting major arterials to local streets.	ROW: 90' Number of Travel Lanes: 4 Travel Lane Width: 12' Median Width: Typically, 14' Bicycle Lane & Sidewalk: Included in ultimate cross-section
Collectors	Two-lane or four-lane roadways that serve as connectors between arterial and local streets.	ROW: 46'-78' Number of Travel Lanes: 2 or 4 Travel Lane Width: 12'-14' Median Width: 12' Raised/Painted/Undivided Bicycle Lane: Possible on two-lane roads, not typical on four-lane roads
Divided Collector	Two-lane roads with a painted median, providing additional connectivity and multimodal access.	ROW: 58' Number of Travel Lanes: 2 Travel Lane Width: 12' Median Width: Painted Bicycle Lane & Sidewalk: Included in ultimate cross-section
Main Street Collector	Two-lane roads that include wide sidewalks, angled parking on both sides, and shared travel lanes marked with sharrows to accommodate both vehicles and bicyclists on a Class 3 bicycle facility.	ROW: Varies Number of Travel Lanes: 2 Travel Lane Width: 12' Sidewalk Width: 10'-12' Bicycle Lane & Sidewalk: Included in ultimate cross-section

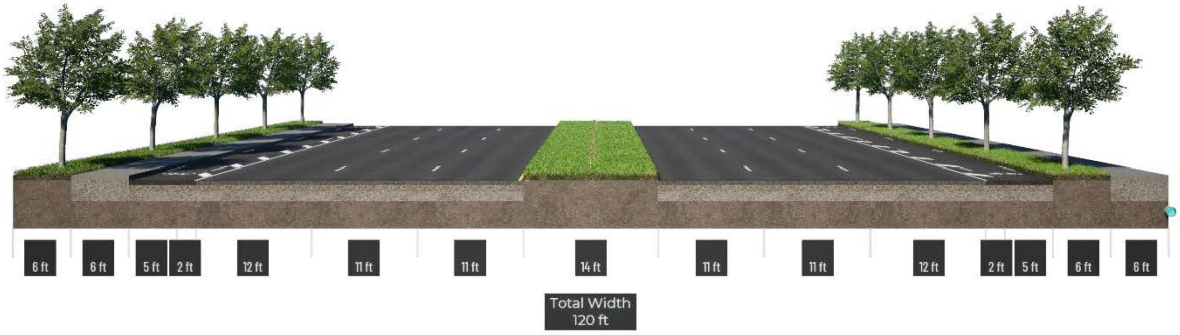


Figure MI-1: Urban Arterial Cross-Section



Figure MI-2: Major Arterial Cross-Section

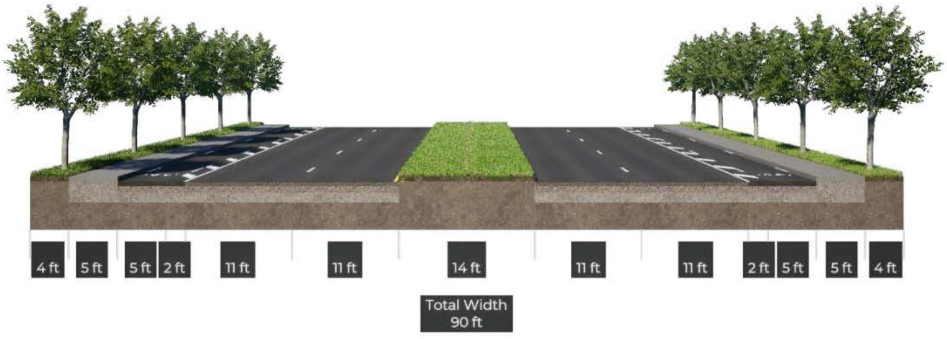


Figure MI-3: Secondary Highway Cross-Section

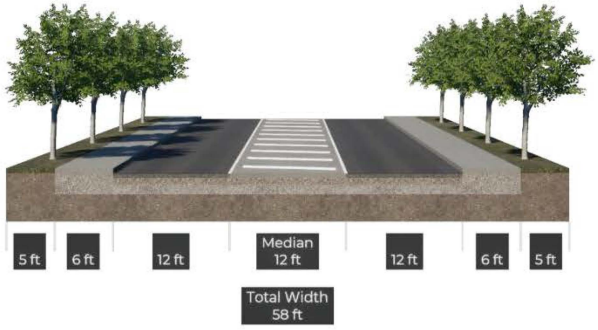


Figure MI-4: Divided Collector Cross-Section

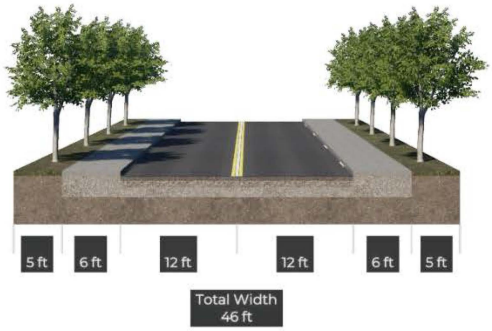


Figure MI-5: Collector (Undivided) Cross-Section

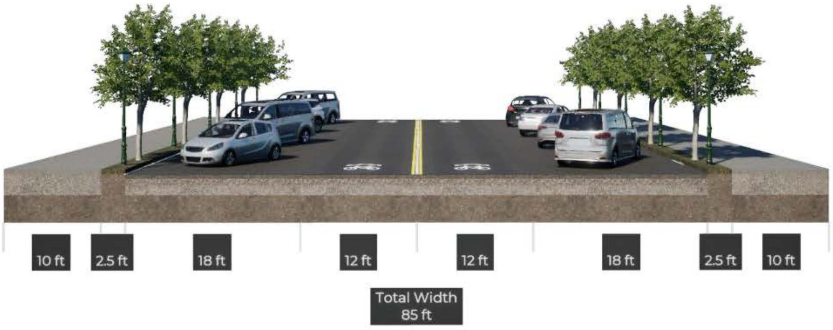


Figure MI-6: Main Street Collector Cross-Section

Complete Streets

Pedestrian Sidewalk Network

Well-designed pedestrian and bicycle facilities are needed to make active transportation safe, accessible, attractive, and comfortable enough to be a desirable alternative to driving. It is important to provide a seamless transportation system for all modes and for all people to improve circulation. The 2011 General Plan encourages the proposal of policies and programs that facilitate pedestrian improvements.

Most of the City's residential streets have a speed limit of 25 miles per hour, which create a pedestrian and bicycle-friendly environment along those streets. Pedestrian facilities in Lake Elsinore consist of sidewalks and crosswalks. Sidewalks are sometimes obstructed, incomplete mid-block, or damaged. Crosswalks at signalized intersections are generally marked and are provided on most approaches at major signalized intersections. Crosswalks at unsignalized intersections are generally not well marked, although crosswalks around K-12 public schools are typically marked at intersections.

The Active Transportation Plan, Active LE, was adopted in October 2019. The Plan assessed Lake Elsinore's current pedestrian facilities conditions and identified roadways without sidewalks. Opportunities to improve sidewalk continuity and mid-block crosswalks, complete sidewalks between crosswalks, and provide an optimal number of adequate crosswalks and sidewalks that occur throughout Lake Elsinore. Sidewalk conditions can be improved with regular maintenance and compliance measures.

Treatments such as high-visibility crosswalks, curb extensions, curb cuts, and landscaped buffers improve safety and accessibility for all pedestrians, particularly near schools and other activity centers where pedestrian activity is high. Providing shaded sidewalks, specifically through shade trees, will reduce pedestrians' heat exposure. These improvements can enhance the transportation experience for non-driving populations, such as lower income adults, adults without the ability to drive, and children, who may use routes for getting to work or short distance trips, including recreation and school trips.

Bicycle Facilities

Lake Elsinore bicycle facilities consist of bicycle lanes, routes, trails, and paths, as well as bicycle parking. The existing and planned bicycle network in Lake Elsinore is shown in Figure MI-7. Bicycle facilities are classified into four categories depending on their design and function as described in Table MI-2. Lake Elsinore provides a combination of multi-use path, bicycle lane, and bicycle route facilities citywide.

Although Lake Elsinore has multiple Class II bikeways, many of these facilities have gaps in the network. As such, citywide bicycle connectivity is a primary focus in future network development.

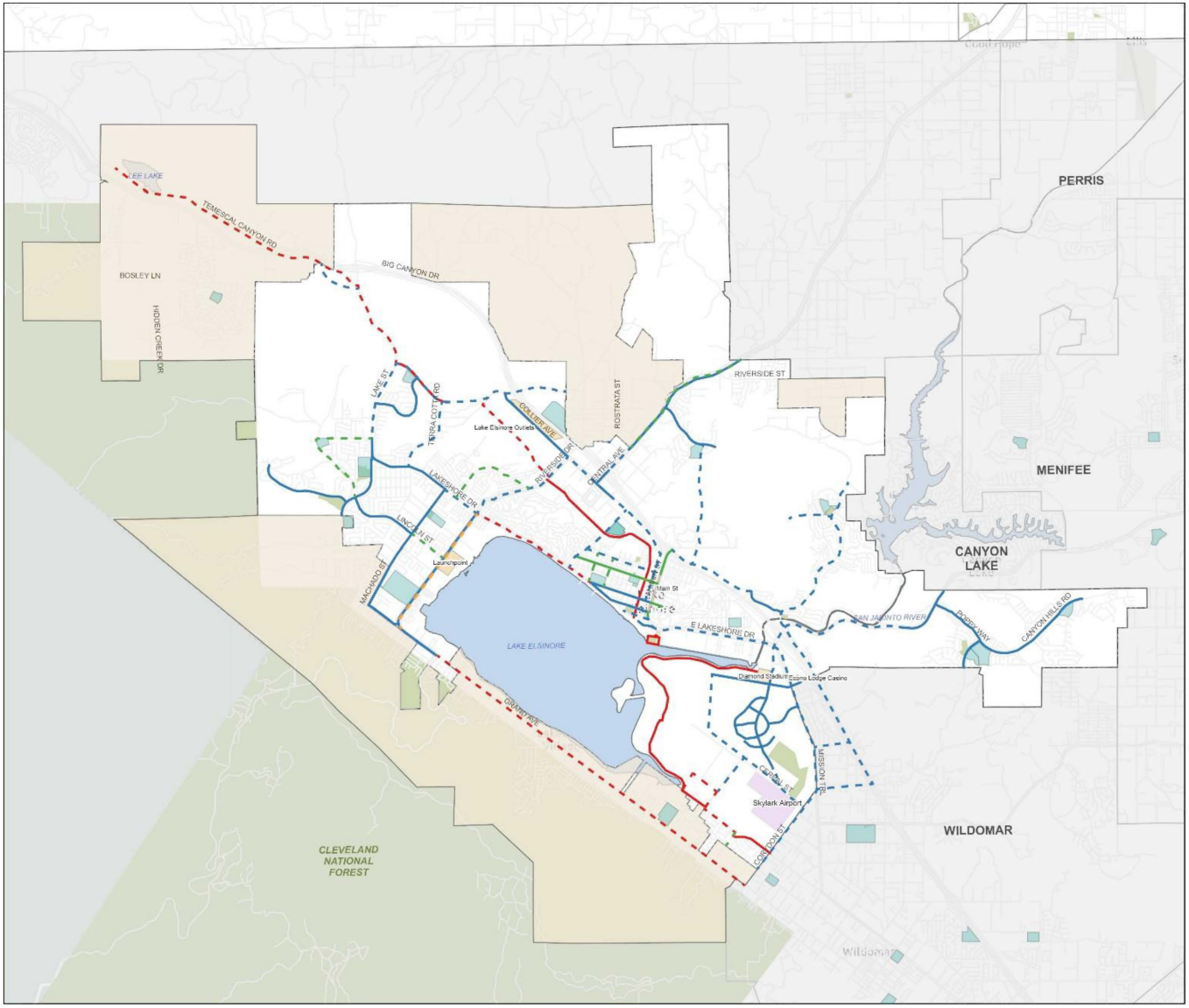


Figure MI-7
Existing and Proposed Bike Facilities

Legend

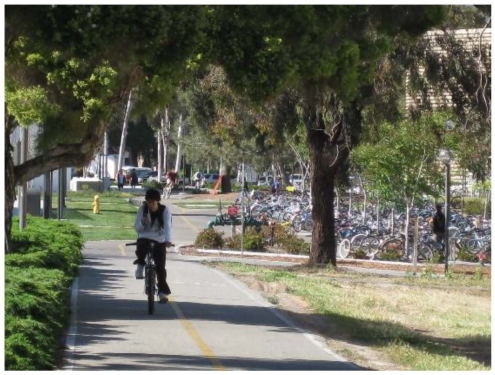
Existing Bikeways
- Existing Class I
- Existing Class II
- Existing Class III

Proposed Bikeways
- Proposed Class I
- Proposed Class II
- Proposed Class III
- Proposed Class IV

Major Destinations
- Entertainment
- Schools
- Airport

Prepared by Fehr&Peers, March 2025
Source: WRCOG, Riverside County

Table MI-2: Lake Elsinore Bicycle Facility Classifications

	**Class I/Multi-Use Path or Trail:** Provides a completely separated right-of-way for the exclusive use of cyclists and pedestrians with minimized crossflows. Typically, the most desirable for all ages and abilities. Example: Off-street bicycle facility along Temescal Wash.
	**Class II/Bicycle Lane:** Provides a striped lane for one-way travel on a street, which may include a "buffer" zone consisting of a striped portion of roadway between the bicycle lane and the nearest vehicle travel lane. Typically, Class II is suitable for some bicyclists comfortable sharing some space with cars. Example: Lakeshore Drive between Ash Street and Machado Street
	**Class III/Bicycle Route:** Provides for shared use with motor vehicle traffic to help guide bicyclists between major destinations. Typically, not suitable for most bicyclists except on local residential streets. Example: Main Street
	**Class IV/Bicycle Track/Boulevard:** Provides a right-of-way designated exclusively for bicycle travel, which is protected from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking. Typically, Class IV is suitable for most bicyclists. No examples currently in Lake Elsinore

Mobility Choices for People

Transit expands mobility options to citizens who may not be able to afford or physically operate other means of travel, it can be more convenient than driving and parking particularly for work or major events, and for those that choose not to drive. As is the case in many jurisdictions, it is important that Lake Elsinore continue to invest in and improve local transit service, since the most frequent users include some of the most vulnerable residents and workers such as lower income adults, adults without the ability to drive, and children. The City of Lake Elsinore currently does not have any regional rail service such as AMTRAK, Coaster, or Metrolink within the area.

Riverside Transit Agency

Riverside Transit Agency (RTA) operates bus service in Lake Elsinore. Fixed route service, commuter bus routes, select long-distance service, and dial-a ride service are offered by RTA within the City. RTA offers a combination of local and regional connectivity, as well as transfers to Metrolink, Coaster, and Sprinter regional rail service in neighboring metropolitan areas north and south of Lake Elsinore.



Riverside Transit Agency Bus Source: www.riversidetransit.com

RTA operates three bus routes within Lake Elsinore city limits: Route 8 (Lake Elsinore Wildomar Loop Routes), Route 9 (Perris-Lake Elsinore), Route 206. RTA routes that serve Lake Elsinore are presented in Figure MI-8.

Table MI-3 shows the key destinations and service frequencies. Please note that these details are subject to change.

Table MI-3: Lake Elsinore Bus Route Service (2025)

Route	Key Destinations	Weekday Peak Hour Frequency	Weekend Service Frequency
Route 8	Lake Elsinore Outlet Center Walmart at Central & Cambern Palomar & Wildomar	45-minute to 60-minute headways	60-minute headways
Route 9	Perris Metrolink Station Walmart at Central & Cambern Lake Elsinore Outlet Center	60-minute headways	60-minute headways
Route 206 Commuter Link	Corona Transit Center Lake Elsinore Outlet Center Mulligan Family Fun Center Promenade Mall	4 buses in the AM northbound: 45-minute to 55-minute headways 3 buses in the PM southbound: 60-minute headways	No weekend service

Source: Riverside Transit Authority, 2025

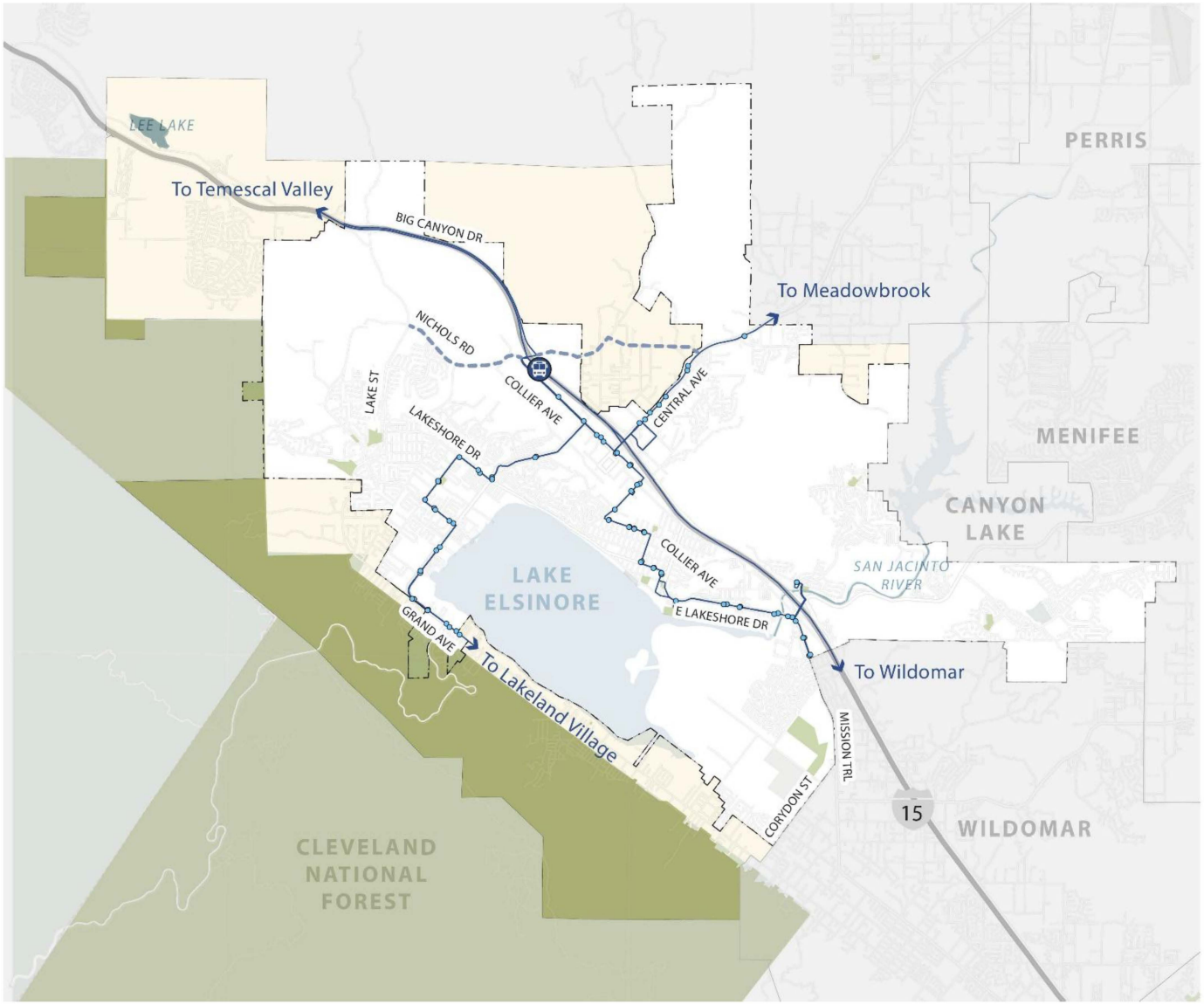


Figure MI-8

Existing Public Transportation Network

Existing Transit Route
Proposed Transit Route
Existing Transit Stops
Existing Transit Hub

Basemap Legend

City Boundary
Sphere of Influence

Prepared by Fehr & Peers, March 2025 Source: WRCOG, Riverside County

Metrolink

Metrolink is a commuter rail program operated by the Southern California Regional Rail Authority (SCRRA), providing service from outlying suburban communities to employment centers such as Burbank, Irvine, and downtown Los Angeles. Currently, no Metrolink service is provided in Lake Elsinore. The closest stations are approximately 23 miles away in the City of Corona and 11 miles away in the City of Perris.

RCTC has studied the feasibility of a future Metrolink commuter line along the I-15 from Corona to Temecula, which would provide connectivity to Lake Elsinore.

Dial-A-Ride

RTA also provides Dial-A-Ride service, which is an origin-to-destination advanced reservation transportation service for seniors and people with disabilities. This service complies with the requirements of the Americans with Disabilities Act (ADA). Reservations must be made in advance, and pick-up and drop-off must be provided within a three-quarter mile range of the existing RTA fixed bus routes and during the same service hours as those routes. All RTA fixed route buses are accessible to people with disabilities.

RTA offers 25-cent bus rides to youth, seniors, disabled and veterans on all bus routes, including Commuter Link.

Local Road Safety

Safety for all modes of travel is a priority for the City of Lake Elsinore. In 2024, the City completed its second Local Road Safety Plan, reinforcing the commitment to safety discussions as a central focus. This plan continues to support the visions and priorities established in the previous Local Road Safety Plan. It emphasizes the necessity of prioritizing traffic safety programs and investing in infrastructure in areas with high rates and severity of collisions.

The plan identified a Safety Focus Area by mapping collisions to pinpoint intersections and roadways with the highest concentration of incidents, as illustrated in Figure MI-9. It adopts a Safe System Approach that fosters a citywide culture of safety, encouraging all road users to act responsibly. The plan also emphasizes equity and accessibility, prioritizing investments in underserved communities to reduce disparities in roadway safety outcomes.

Additionally, the plan promotes partnerships with a diverse group of stakeholders, including emergency response teams, law enforcement, public health officials, educational institutions, local businesses, and community members, to achieve roadway safety goals. It highlights the importance of connectivity concerning emergency response and evacuation.

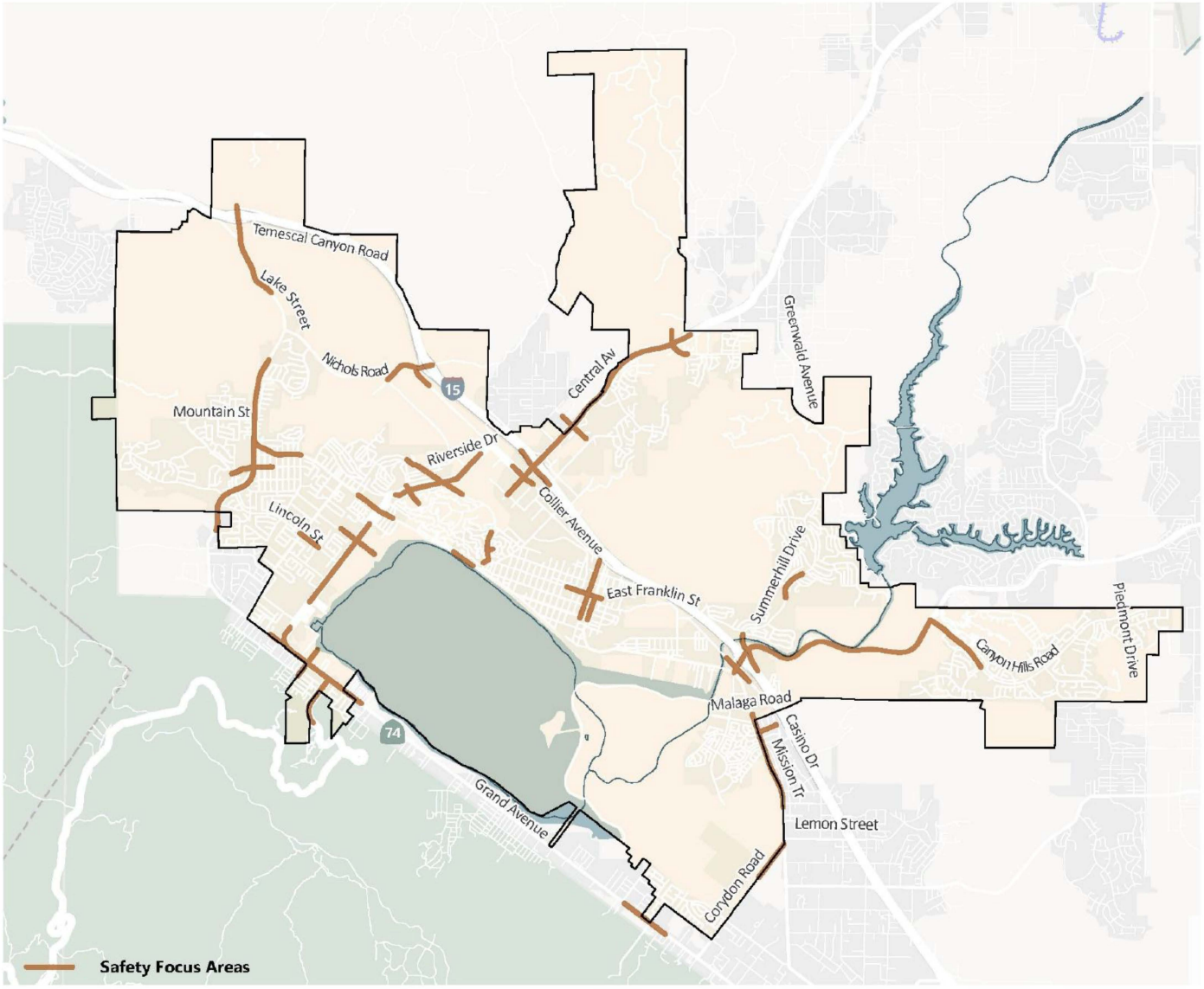


Figure MI-9
Safety Focus Areas

Safety Focus Area

Prepared by Fehr & Peers, March 2025
Source: Lake Elsinore LRSP

Goods Movement

Truck Routes

Goods movement plays an important role in both the circulation network and the economy of Lake Elsinore. Often, it can be difficult to accommodate trucks and other vehicles without impeding other modes or the well-being of residents. Effectively accommodating goods movement along its roadways is critical for local transportation planning.

Truck traffic on city streets is restricted to specific routes for trucks that are designated over three tons. These truck routes help to facilitate the movement of goods throughout the City, while providing a connection between major freeway facilities to local roadways. Trucks are allowed on designated routes even if they do not have an origin or destination within the City of Lake Elsinore. Figure MI-10 displays the truck route system in the City, which complies with the requirements of Assembly Bill 98 (AB 98), which establishes standards for local jurisdictions to designate truck routes that minimize adverse impacts on residential neighborhoods and sensitive land uses while maintaining efficient regional goods movement. The City's designated truck routes prioritize freeways, arterials, and industrial-serving roadways and, to the extent feasible, avoid local residential streets, consistent with AB98 requirements.

Technological innovation presents opportunities to improve the efficiency of goods movement in the future. The Mobility and Infrastructure Element considers the impact of this type of innovation and provides a flexible policy framework in response.

Truck Parking

Lake Elsinore's Municipal Code Section 10.12.130 states parking or standing of commercial vehicles is not permitted on public streets in residential districts for more than 24 consecutive hours. This includes any commercial vehicle as defined in Section 10.12.020, vehicles over 25 feet in total length or over 96 inches in width, detached non-motorized vehicles such as trailers, campers, or boats, and recreational vehicles over 20 feet in length. Additional truck parking standards are included in Chapter 10 Section 12 of the Lake Elsinore Municipal Code.

While AB98 does not require the provision of dedicated truck parking facilities, it requires local jurisdictions to consider truck access, routing, and operational conditions that may result in on-street parking or idling near sensitive land uses. The City's Municipal Code truck parking standards help minimize these impacts consistent with AB98.

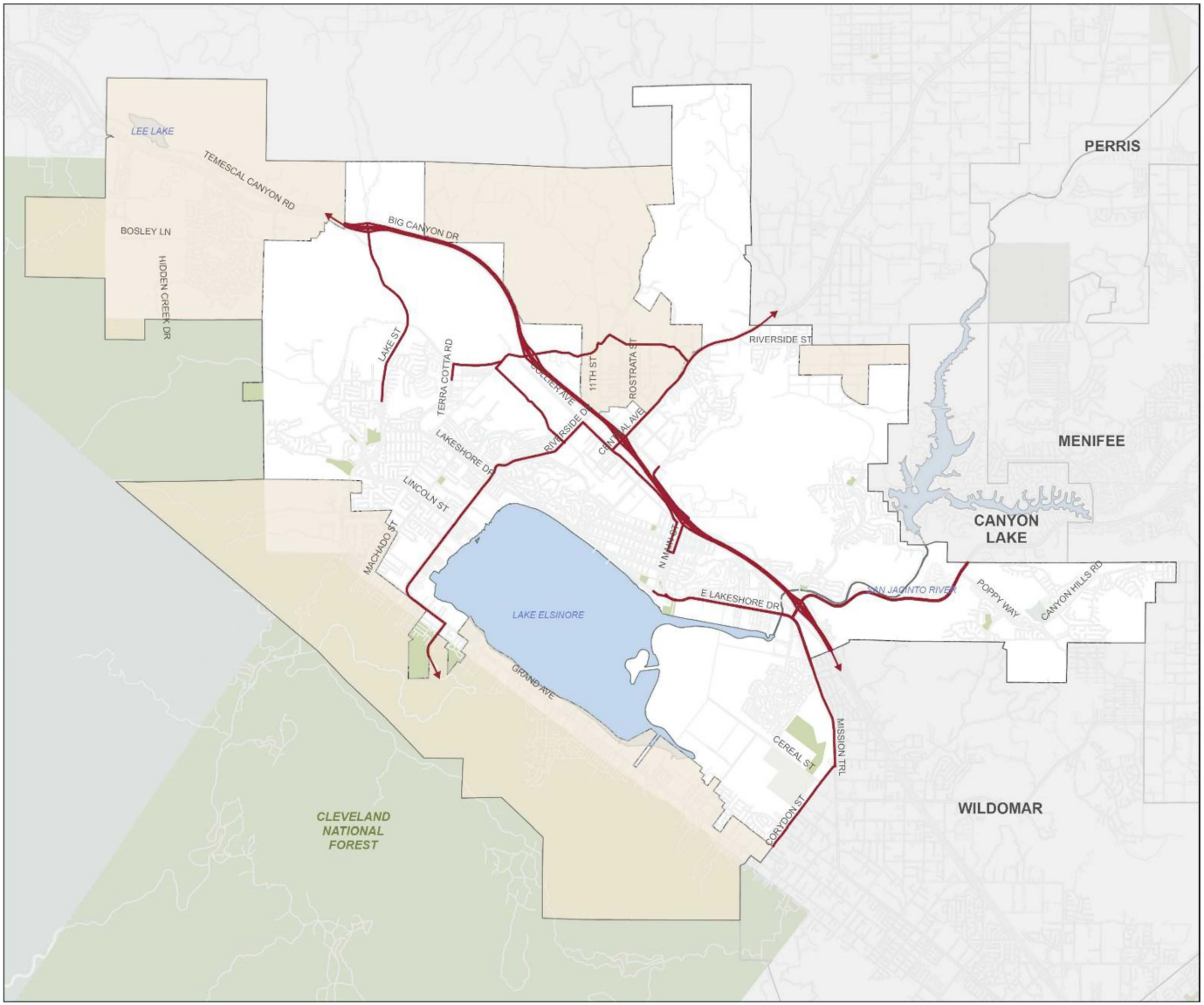


Figure MI-10
Truck Routes

Basemap Legend
City Boundary
Sphere of Influence

Prepared by Fehr & Peers, March 2025 Source: WRCOG, Riverside County

Existing Transportation Programs and Plans

The City of Lake Elsinore transportation system is developed through internal programs and plans, as well as County and regional agencies and jurisdictions. A review of these programs and plans is listed below, looking at those that are temporally relevant and prepared after 2011.

County and Regional Programs and Plans

Riverside Transit Agency Plans – Infrastructure deficiencies at select bus stations and recommendations documented in the Riverside Transit Agency's First and Last Mile Mobility Plan.

State and MPO Programs and Plans

Southern California Association of Governments' (SCAG) Regional Transportation Plan (RTP) – Connect SoCal outlines a vision for a more resilient and equitable future, with investment, policies and strategies for achieving the region's shared goals through 2050.

City Programs and Plans

Dream Extreme 2040 Plan: Lake Elsinore has established its first long-term strategic vision to guide growth and investment through 2040 by focusing on three key areas: The Lake, Downtown, and Action & Adventure. The Plan aims to continue promoting Lake Elsinore as a unique and resilient destination where both residents and visitors can live, work, and "Dream Extreme."

Future Transportation System

Future Roadway Network

Figure MI-11 shows the City of Lake Elsinore's roadway network and functional classifications under General Plan buildout conditions. This planned network reflects the City's vision for connectivity, mobility, and long-term growth. A roadway operations assessment, included under a separate cover, evaluates how the buildout network performs in response to projected land use changes and travel demand.

The analysis shows that most key corridors are expected to operate within the City's acceptable performance thresholds at General Plan buildout. Where segments are projected to experience capacity constraints or congestion, these locations are identified for further monitoring or improvements such as roadway widening, intersection enhancements, or multimodal upgrades based on feasibility and community context. This assessment demonstrates that the City's planned transportation system will provide sufficient capacity to support future land use.

Safety

Safety for all modes of transportation is a key priority for the City of Lake Elsinore. In 2024, the City adopted its Local Roadway Safety Plan (LRSP), which provides a framework for identifying high-collision locations, understanding contributing factors, and prioritizing strategies to reduce both the frequency and severity of crashes. The LRSP emphasizes the need to protect all roadway users, including pedestrians, bicyclists, and vulnerable populations such as youth and seniors.

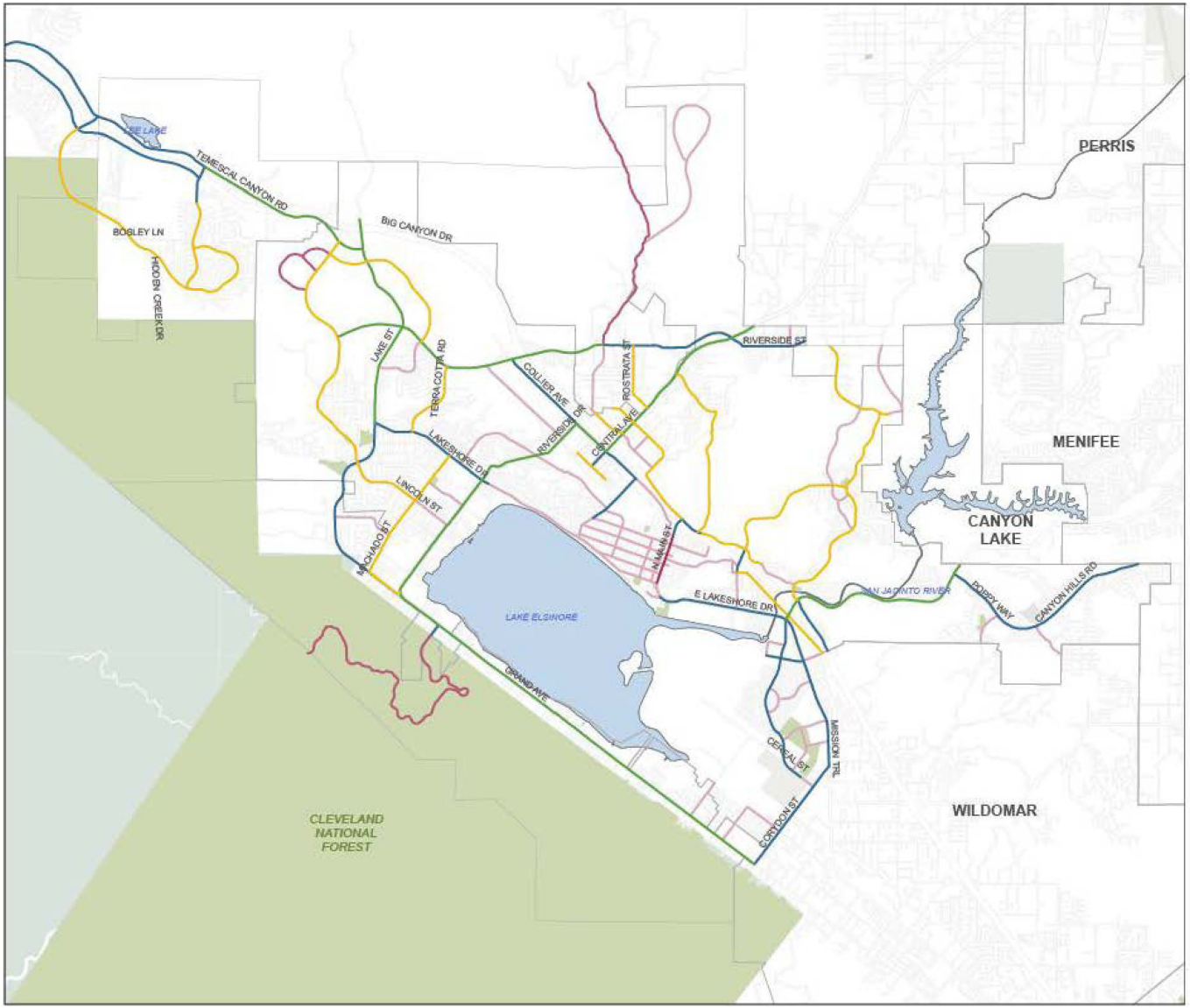


Figure MI-11

Roadway Classifications

- Urban Arterial
- Major Arterial
- Secondary Roadway
- Collector
- Divided Roadway
- Main Street Collector

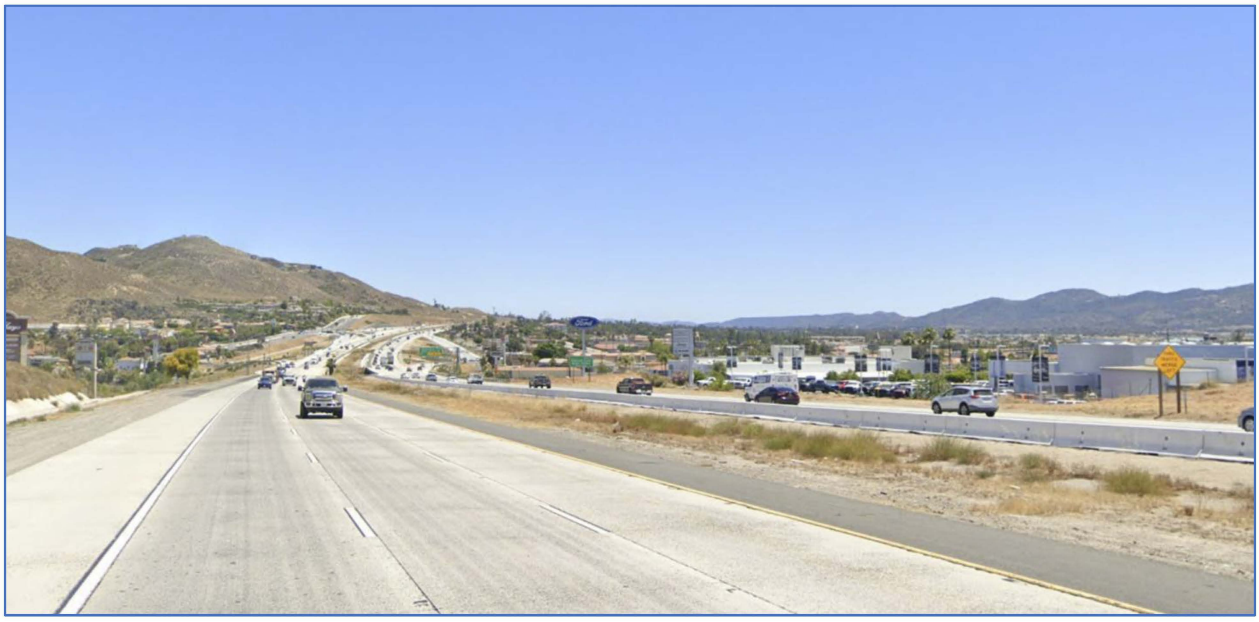
Basemap Legend

- City Boundary
- Sphere of Influence

Prepared by Fehr&Peers, August 2025
Source: WRCOG, Riverside County

Based on LRSP findings, many of the City's most severe collisions are related to unsafe speeds, failure to yield, and violations of traffic controls. Collisions involving pedestrians and bicyclists are more likely to occur on corridors that lack dedicated facilities, such as sidewalks, bike lanes, or enhanced crossings.

The City is committed to implementing the Safe System Approach, consistent with guidance from the LRSP and SB932. In the near term, the City can pursue low-cost countermeasures like high-visibility crosswalks, signal timing updates, public awareness campaigns, and proactive police enforcement such as speed cameras. Over the long term, infrastructure investments and interagency coordination will support more systemic safety improvements.



Interstate 15, 2025

Future of Transportation

From electric vehicles to autonomous vehicles and ride hailing services, new technology is changing the way we move. With the shifting landscape of 21st century mobility options, mobility planning has adapted to proactively address the opportunities and challenges associated with new and evolving transportation services. This section covers some of the new technologies to consider in planning for mobility through 2045. Figure MI-12 describes the history and future disruptive trends in vehicle accessibility and by travel mode.

Roadway Design

Roadway design continues to evolve with new and innovative technologies that improve efficiencies, enhance quality of life, boost economic development, and address environmental challenges. The City of Lake Elsinore is the first California jurisdiction to use a promising, new in-place asphalt repair technology designed to repair local roads for good. The new system is providing cost savings, reducing roadway repair time thus decreasing vehicle delay and greenhouse gas production, benefiting the environment. The City should stay ahead of evolving practices in pavement to continue to promote sustainable practices, including review of the Federal Highway Administration's (FHWA) solar roadways research, which is investigating embedding solar panel cells into the roadway to harvest solar radiation into renewable energy.

Smart Cities

The City of Lake Elsinore can continue to harness digital technology and data to make the City more efficient, sustainable and livable. In the traffic and transportation space, the Internet of Things (IoT) and artificial intelligence are making real-time traffic management easier and more effective through data collection, analysis of patterns, identification of areas for improvement, informed action and an integrated system. Lake Elsinore could improve traffic flow without widening roadways by implementing interconnected and/or adaptive traffic signals with traffic management sensors to manage real-time traffic flow.

Autonomous Vehicles

Autonomous vehicle (AV) technology is being tested in California under state-issued permits. At present, AVs are not widely deployed in Lake Elsinore. As AV technologies continue to evolve, the City's role is focusing on monitoring regulatory developments and assessing potential implications for local streets, land use, parking and safety.

In the future, Lake Elsinore is expected to accommodate a mixed fleet of conventional and automated vehicles. Vehicle autonomy occurs in several levels, ranging from cruise control (low level of autonomy) to fully autonomous vehicles (AVs), which require no driver interaction. Manufacturers are developing this technology, and the federal and state governments will likely determine regulations for a fully autonomous fleet. It is unknown how long it will take to convert all cars to autonomous vehicles or if

that will ever happen. However, the expansion of AVs will likely alter travel behavior in Lake Elsinore. The City can proactively plan for potential AV-related impacts by:

- Designing streets that prioritize safety for all users, regardless of vehicle type;
- Evaluating curbside management and loading needs that may change with increased passenger pick-up and drop-off activity; and
- Monitoring parking demand trends to inform future adjustments to parking standards, as appropriate.

The City will remain adaptable and prioritize multimodal safety during the transition period, when AV adoption, travel behavior, and regulatory frameworks remain uncertain.

Electric Vehicles

Adoption of electric vehicles (EV) is increasing statewide and demand for charging infrastructure is growing as part of California's broader climate and air quality goals such as AB32. The City of Lake Elsinore currently supports EV adoption through installation of charging facilities in select locations and through development review processes that allow or require EV infrastructure in new development.

The City can continue to support EV adoption by integrating charging infrastructure into land use planning, parking design, and microtransit projects, particularly in areas with high residential, employment, and visitor activity. As parking areas are retrofitted or new facilities developed, the City can plan for the future expansion of EV charging consistent with State climate goals and City policies.

Transportation Network Companies

Transportation network companies (TNCs), such as Uber and Lyft, are now an established component of the regional transportation system. While these services provide travel options for residents and visitors in Lake Elsinore, they also introduce challenges related to curbside management, congestion, and vehicle circulation.

In the City, the primary planning implications of TNCs relate to how curb space and parking are managed, rather than whether the services themselves are permitted. As TNC activity increases, demand may shift away from long-term parking and toward short-term passenger loading and unloading, particularly in commercial areas and near transit. The City can respond to these changes by:

- Identifying locations where curbside congestion or illegal stopping occurs;
- Designating or managing passenger loading zones in high-demand areas;
- Reassessing minimum or maximum parking requirements where appropriate; and
- Requiring or encouraging TNC staging areas to reduce unnecessary vehicle circulation.

Where TNCs are used to support first- and last-mile connections to transit, private public partnerships with TNCs can be made to ensure clear curbside management policies and safety standards are met to minimize conflicts with pedestrians, bicyclists, and transit operations.

Microtransit

Microtransit is technology-enabled, demand-responsive transit services that are open to everyone. The City of Lake Elsinore currently operates a microtransit program, GoElsinore, which provides on-demand transportation to key destinations throughout the community. The service also provides ADA-compliant vehicles and phone-based booking options to ensure accessibility for seniors and individuals without smartphone access. The service operates seven days a week and is designed to improve local mobility, support economic activity, reduce traffic congestion, and enhance access to community destinations.

Along with GoElsinore, the City will continue to use microtransit to expand transit coverage and accessibility, particularly in lower-density areas or for populations that may have difficulty accessing fixed-route transit. The City can continue to refine its microtransit approach by:

- Monitoring ridership, wait times, and service coverage to evaluate program effectiveness;
- Adjusting service areas, hours, or destinations as travel patterns evolve;
- Coordinating microtransit service with regional transit providers to improve connectivity; and
- Ensuring microtransit supports broader City goals related to equity, access, and fiscal sustainability

The City will keep enhancing fixed-route bus services, with microtransit supplementing transit by bettering first- and last-mile connections and covering trips that fixed routes can't easily serve.

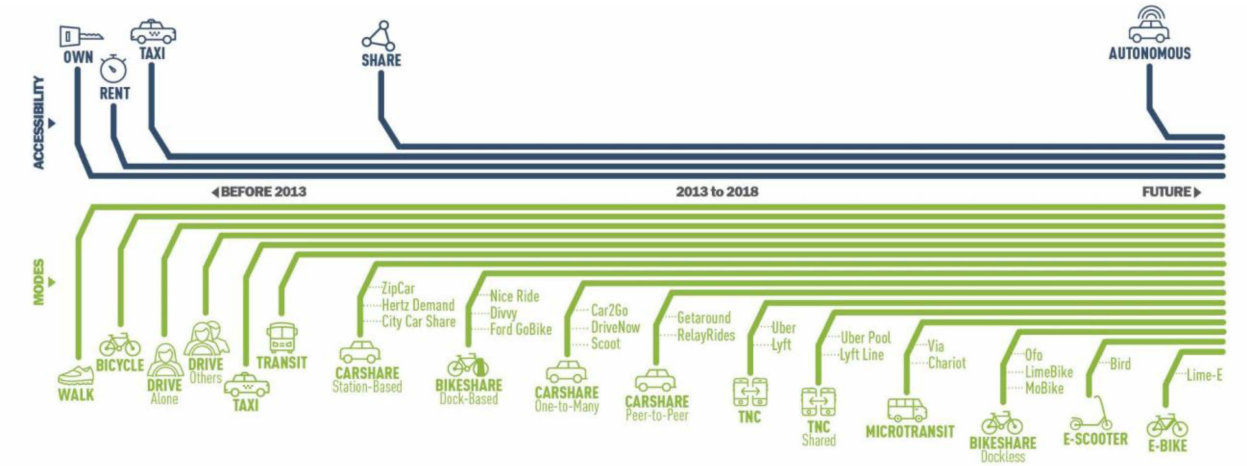
Mobility Hubs

Mobility hubs are locations where multiple transportation options are co-located to improve connectivity and reduce reliance on single-occupant vehicle travel. These hubs can range from modest facilities (bus shelter, bicycle parking, Transportation Network Company (TNC) drop-off spaces) to larger, more complex centers (commuter rail integration with a bus transfer facility, transit plaza, bicycle repair station, bicycle share, TNC pick up, microtransit, bicycle share etc.).

In Lake Elsinore, the Metrolink station offers the best opportunity to establish a robust mobility hub, given its regional connectivity and potential for expanded multimodal operations. In addition, the City has existing Park-and-Ride facilities that offer opportunities to serve as mobility hubs through enhancements that better support multimodal travel, such as improved transit amenities, secure bicycle parking, designated passenger pickup and drop-off areas, micromobility accommodations, wayfinding, and pedestrian access improvements. When evaluating a location for a mobility hub, the City will consider the following:

- Proximity to key transportation infrastructure and services;
- Safe and convenient access on foot or bicycle;
- Opportunities to serve residents with low levels of mobility accessibility; and
- Compatibility with surrounding land use and potential for future growth.

Figure MI-12
Disruptive Trends in Vehicle Accessibility and Travel Mode



Future Funding and Implementation

Senate Bill 1 Transportation Funding

The California Legislature passed Senate Bill No. 1 (SB 1) in 2017. The bill focuses on transportation funding through an increase in vehicle fees and gas taxes. The increases in fees and taxes are expected to raise an average of $5 billion per year in new revenue for road repairs, transit, and active transportation. The City can anticipate funding from these sources to assist with maintenance of existing infrastructure and construction of new infrastructure once existing roads have been brought up to a state of good repair. Measure I and SB 1 are the City's prime sources of funding for transportation improvements and maintenance. Additional funding is still needed to fund the gap in deferred maintenance of roadways.

Active Transportation Program

The Active Transportation Program (ATP) was created by Senate Bill 99 and Assembly Bill 101 to encourage increased use of active modes of transportation, such as biking and walking. The ATP consolidates various transportation programs, including the Federal Transportation Alternative Program, State Bicycle Transportation Account, and federal and state Safe Routes to School Programs, into a single program. The ATP is meant to increase the proportion of active mode trips, increase the mobility and safety of active transportation users, enhance public health, improve greenhouse gas reduction efforts, and ensure disadvantaged communities benefit from the program by dedicating 25% of program funds.

Program funding is distributed in three ways, including to the State of California, to areas with populations of 200,000 or less, and to Metropolitan Planning Organizations. In 2017, the City of Lake

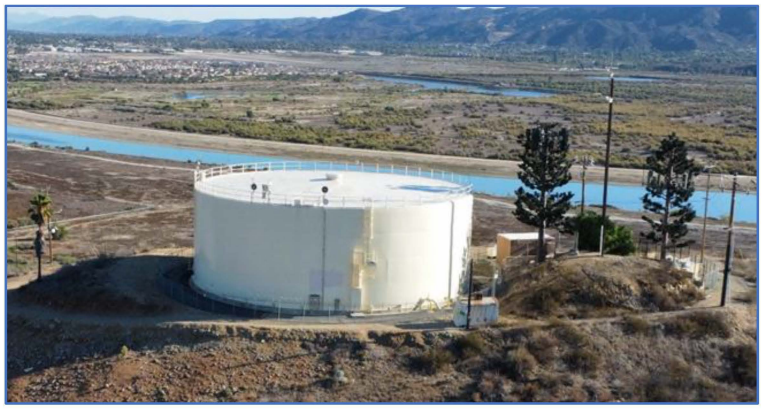
Elsinore was awarded a Caltrans Sustainable Communities Grant for the development of an ATP. To complement with the City vision of becoming "the ultimate lake destination," this ATP process leverages existing planning documents to foster, develop, and grow the City's bicycle, sidewalk, and trail related network. These efforts improved equity and helped reach AB32 goals of reducing greenhouse gas emissions.

Infrastructure

Water

EVMWD currently serves a population of approximately 165,000. Due to anticipated growth, the service area population is projected to increase to approximately 256,000 by the year 2050[1] . According to GIS analysis conducted as part of the 2024 Water System Master Plan Update, over 150 developments are planned in Lake Elsinore, indicating that a significant amount of the increased demand on EVMWD's system will be from the City.

Potable water comes from three primary sources – groundwater, local surface water, and imported water. The local ground water is pumped from 13 wells of which some require treatment prior to use. The local surface water comes from the Canyon Lake Reservoir (treated at the Canyon Lake Water Treatment Plant). Metropolitan Water District through the Western Municipal Water District provides the imported water. Imported water has been the largest source of EVMWD's supply over the last decade. Water supply produced from local groundwater has remained stable despite increased demand over the last few years, a positive result of EVMWD's water conservation efforts. Water production is 24,000 afy (2023).



EVMWD's Water System Master Plan recommends a series of improvements including transmission and distribution mains, storage reservoirs, pump stations, fire flow improvements, pipeline and well repair and replacements, as shown in Figures MI-13 and MI-14. An anticipated 13 well pump replacements will need to occur before 2050. Two new wells and upgrades to the Canyon Lake Water Treatment Plant are also anticipated. EVMWD also expects to complete over 40 projects before 2050 that include over 30 miles of transmission and distribution main upgrade, 5 miles of low-pressure improvements, and 30 miles of fire flow improvements.

[1] Water System Master Plan, Elsinore Valley Municipal Water District, 2024

Figure MI–13

Water Distribution Systems Facilities

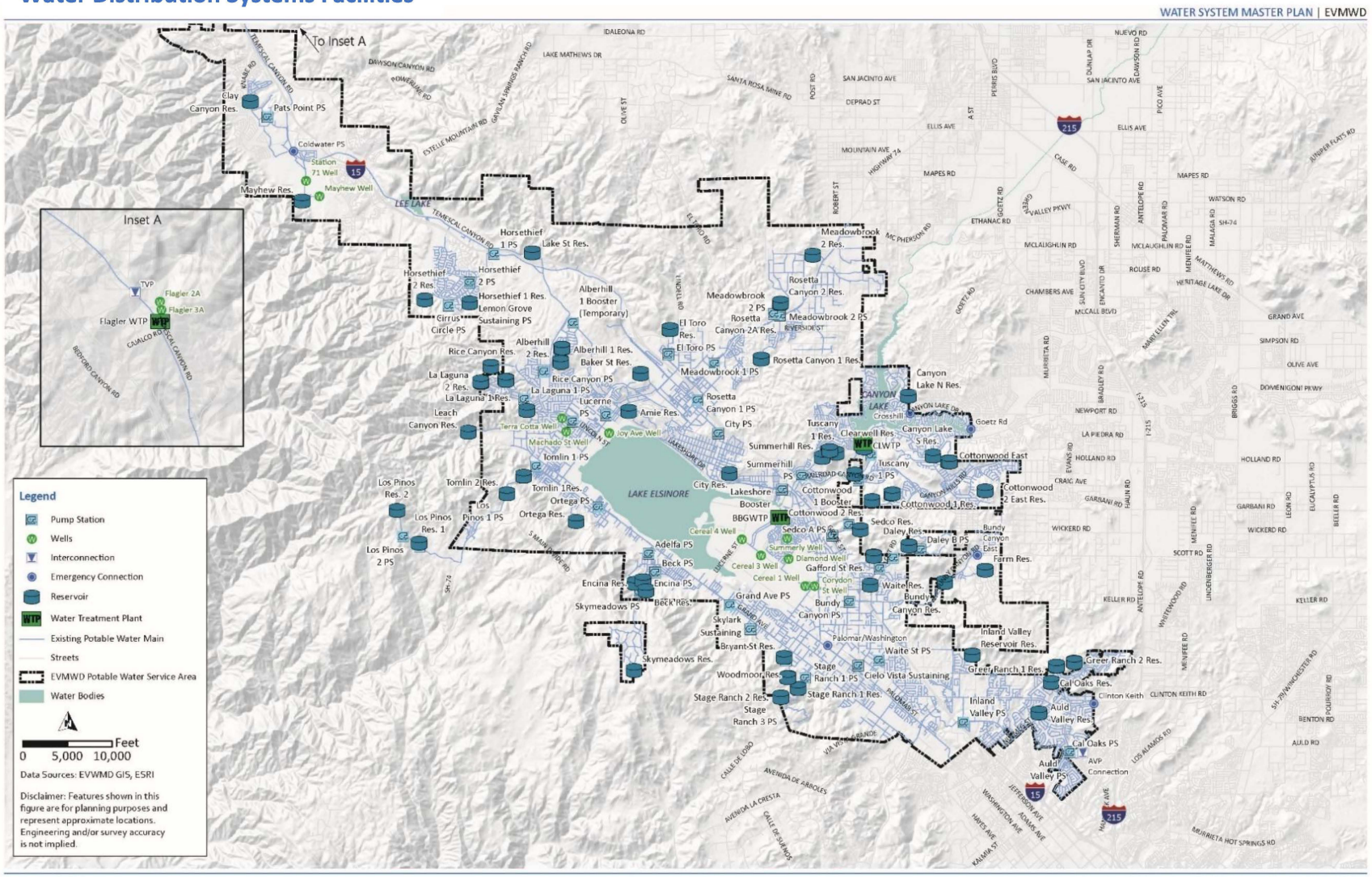
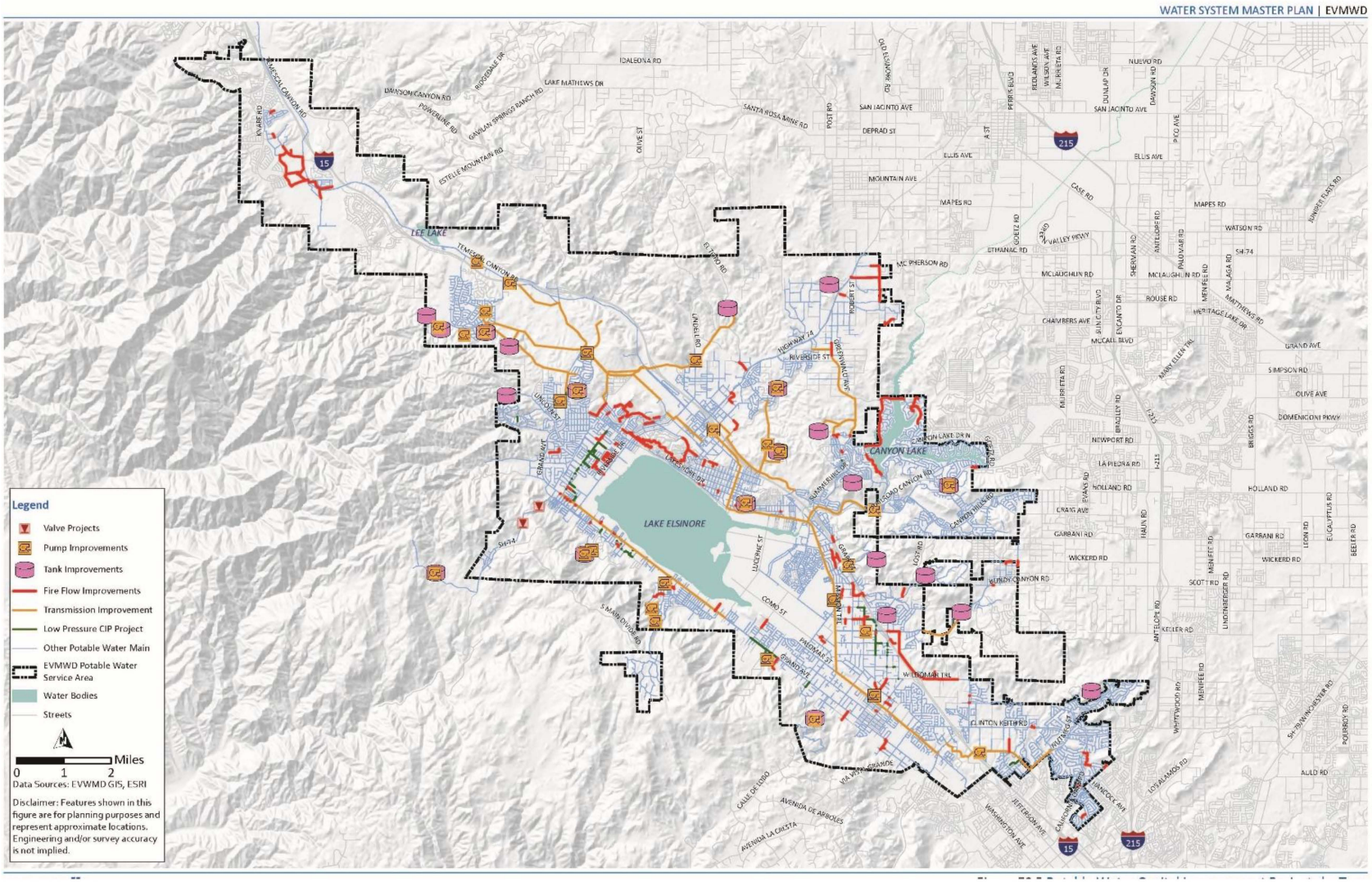


Figure MI–14

Potable Water Capital Improvement Projects by Types



Recycled Water

The City of Lake Elsinore and the SOI are served by EVMWD's Regional, Wildomar, Horsethief Canyon, and Railroad Canyon[2] water recycling systems (Figure MI-15). The Recycled Water System Master Plan looks to increase the use of recycled water to offset potable water needs and increase recycled water supply reliability. That said, the 2024 Recycled Water System Mater Plan identified limited additional demands on the system in the coming years; therefore, no expansions are anticipated or recommended. Some equipment is aging and will require replacement. Future system improvement costs are expected to be paid by future customers through development connection fees.

Sewer Services

The City of Lake Elsinore is within the Regional and Railroad Canyon sewersheds. EVMWD's 2024 Sewer System Master Plan estimated future wastewater contributions within the service area from planned developments, conversion of existing septic systems to sewer, and infill within the service area (Figure MI-16). Both capacity improvements to accommodate growth and improvements to address aging infrastructure are recommended in the Sewer Service Master Plan[3]. Specifically, the plan continues EVMWD's septic-to-sewer conversion program, where septic users infrastructure is converted to the municipal sewer system to improve services, improve groundwater quality, and reduce pollution. At present, the Avenues Septic to Sewer project upgrades sewer pipelines in East Lakeshore Drive between Country Club Boulevard, Avenue 6, and Mill Street. The Sedco Hills Septic to Sewer project is in the design phase but is anticipated to upgrade sewer facilities along Mission Trail Road between Malaga Road, Lemon Street, and I-15.

EVMWD serves about 35,000 sewer customers. In recent years, the number of potable water service connections within EVMWD's service area has grown at a rate of 1.5 percent per year and this growth is expected to continue through 2050. Although some potable water customers are on private septic systems, it is assumed that the number of wastewater customers served will grow at the same rate as EVMWD's total potable service area population. Per EVMWD, new development within the city and SOI will increase demand for the EVMWD wastewater treatment system.

[2] Recycled Water System Master Plan, Elsinore Valley Municipal Water District, 2024
[3] Sewer System Master Plan, Elsinore Valley Municipal Water District, 2024

Figure MI–15

Recycled Water System Overview

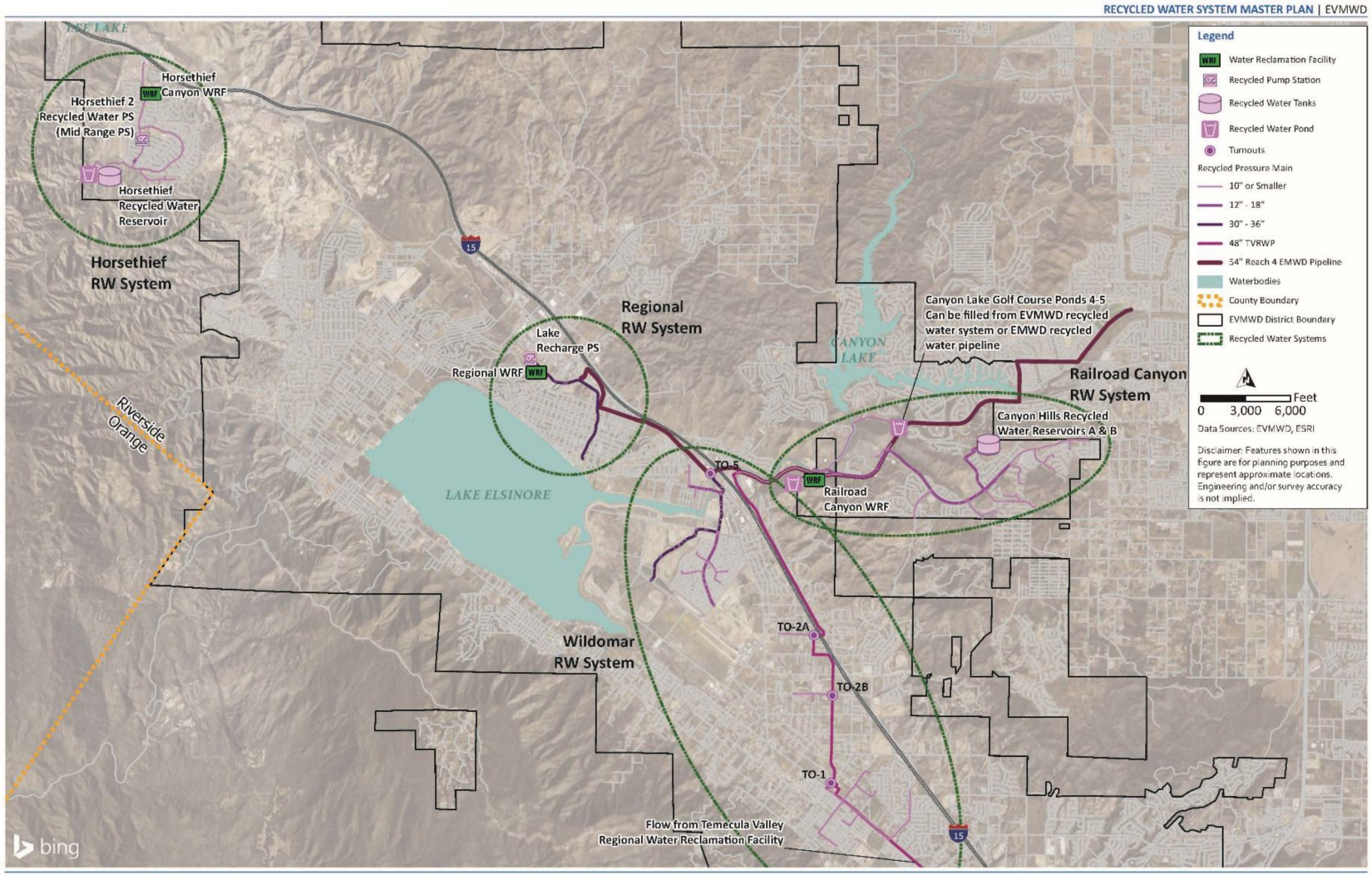
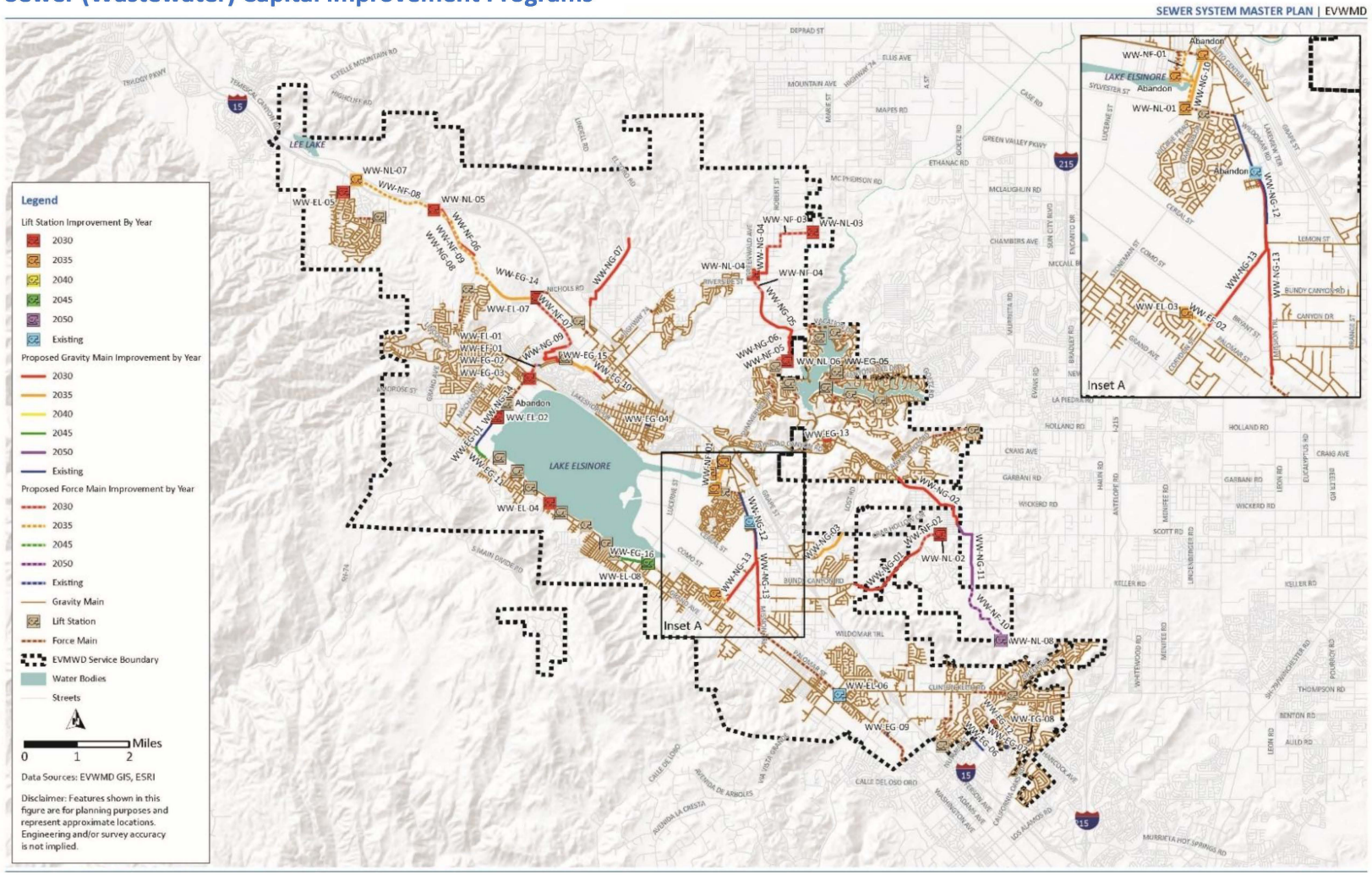


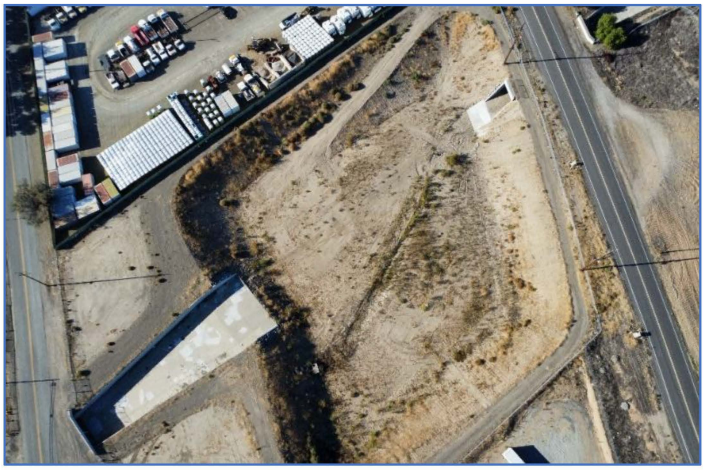
Figure MI–16

Sewer (Wastewater) Capital Improvement Programs



Flood Control

Flood control services are provided by the City of Lake Elsinore and the Riverside County Flood Control and Water Conservation District (RCFC). Lake Elsinore flood control relies on a system of engineered channels (such as Ortega, Leach Canyon, McVicker Canyon) and levees (Black Basin, Rice Canyon), and the main outlet (Temescal Creek) to divert stormwater to the lake and manage its level. These facilities, combined with strict development rules, Low Impact Development (LID) practices, and ongoing watershed projects (e.g. Lakeland Village channel improvements), aim to reduce runoff and pollution. The City implements the National Pollutant Discharge Elimination System (NPDES)[4] and enforces laws to manage construction in flood-prone areas, requiring permits and plan reviews to ensure new development doesn't worsen flood risks.



Water detention facility, 2025

The adopted Master Drainage Plan, 2023, identifies three types of flooding[5]:

- Street flooding – caused by low points in or near the street without proper drainage facilities;
- Private Property Flooding – typically occurs when property is at lower elevations than the street or when the street is lacking curbs or berms to properly channelize the water; and
- Erosion- typically occurs on streets without curbs or berms to channelize water. Runoff flows at the edge of the street creating ravines, which can get underneath the street and cause pavement damage.

[4] NPDES, a program created by the Clean Water Act, aims to regulate and decrease water pollution. NPDES requires permits for facilities that discharge pollutants from "point sources" (pipes, ditches) into US waters. Local improvements that implement NPDES and are administered by the City include low-impact development (LID). LID is a sustainable approach to managing stormwater through infiltration, filtering, storing, and treating rain, LID techniques include rain gardens, permeable pavements, green roofs, and vegetated swales to reduce runoff, improve water quality, and decrease storm drainage costs.
[5] Drainage Master Plan, City of Lake Elsinore, 2023



Per the Master Drainage Plan, the majority locations with flooding and drainage issues occur in older neighborhoods or areas with few to no existing storm drain facilities. The Master Plan identifies the following as the top flooding locations in the City.

- 1209 North Sumner Street
- 3rd Street/Pasadena Street
- Avenue 6/Lakeshore Drive
- Pepper Drive/ Dawes Street
- Mission Trail south of Olive Street
- High Street / Alley east of Lakeshore Drive[6]
- East side of Lakeshore Drive from Morton Avenue to 100 feet past Lake Park Street
- Lakeshore Drive/ Kansas Street on north side of Lakeshore Drive
- West/South Machado Street south of Joy Street by guardrail 10.
- Franklin Street by Cell Tower

The Master Drainage Plan provides for a comprehensive storm water strategy that provides flood protection for both existing and future development for each of the zones. Remedies may include additional studies, improving unimproved channels, and improving capacity (such as upgrading/enlarging pipelines, culverts, and other facilities).

Solid Waste

CR&R Environmental Services (CR&R) provides sustainable solid waste and recycling services for Lake Elsinore. CR&R provides solid waste (garbage and recycling) collection and processing services including recyclables, green waste, food waste, construction and demolition waste, and electronics. CR&R practices an advanced organics processing technology known as Anaerobic Digestion (AD). This technology has enabled CR&R to produce a clean Renewable Natural Gas that can then be used to power its large fleet of refuse and recycling collection vehicles. In addition, CR&R creates high-grade compost material for farms, gardens, and other agricultural facilities. The AD system is located at CR&R's facility in Perris, California.

Most garbage from Lake Elsinore goes to the El Sobrante Landfill, located near the I-15 and Temescal Canyon Road. El Sobrante Landfill capacity is estimated to be 196.11 million cubic yards or 109 million

[6] The High Street/Alley east of Lakeshore Drive area is addressed int the Avenues Master Plan Storm Drain Improvement Project, City of Lake Elsinore, 2025

tons. The landfill site is permitted to receive to 10,000 tons/day with a weekly intake average of 60,000-70,000 tons/week. Capacity is projected to be sufficient through 2045.

Senate Bill (SB) 1383 (2016) is a state-wide law aiming to reduce greenhouse gas emissions. SB1383 establishes state-wide targets, which the California Department of Resources, Recycling and Recovery (CalRecycle) developed regulations for local jurisdictions to implement. The City continues to implement SB1383 including replacing current bins with SB1838 color compliant bins; causing the conduct of waste audits to determine if recycling and food waste is properly sorted at the residence/business level; providing education and outreach materials; and adopted a purchasing policy requiring the purchase of recycled-content paper for City use.

Gas, Electricity, and Telecommunications

Southern California Edison (SCE) provides electricity to the City of Lake Elsinore. Southern California Gas Company (The Gas Company) provides gas to the City of Lake Elsinore. Both SCE and The Gas Company anticipate the ability to accommodate future growth within the city.

Telecommunication services are provided by a number of companies. Telecom options include fiber, cable, and satellite internet from providers such as Frontier, Spectrum, EarthLink, Viasat, HughesNet, and T-Mobile/AT&T 5g Home Internet. Cellular coverage is provided by major carriers (AT&T, T-Mobile, Cricket). The private market is anticipated to accommodate future demand in Lake Elsinore and the SOI.



Electrical facility, 2025

Disadvantaged Unincorporated Communities[7]

As required by Senate Bill (SB) 244, Disadvantaged Unincorporated Communities (DUCs) within or adjacent to a City's sphere of influence are required to be identified in the General Plan, along with information regarding existing and planned water, sewer, flood control infrastructure, and fire

[7] Note: Disadvantaged Unincorporated Communities (DUC) are different and separate from Disadvantaged Communities (DAC) identified as part of State-mandated Environmental Justice effort. DUCs are areas outside city limits lacking basic services (water, sewer, sidewalks, parks. These communities can lack representation and investment, leading to inequities. Environmental Justice Disadvantaged Communities are incorporated and unincorporated areas facing significant economic, health, and environmental burdens, characterized by low income, poor infrastructure, limited access to services (education, healthcare, clean water/air), higher pollution, and social marginalization, often including communities of color and tribal lands. DACs are identified by using the "CalEnviroScreen" tool to identify them for targeted policies and investments in equity.

protection services within those communities. DUCs are defined as inhabited unincorporated areas with an annual median household income that is less than 80 percent of the statewide annual median household income.

Three areas within Lake Elsinore's sphere of influence (SOI) have been identified as DUCs, as shown on Figure MI-17. One area is adjacent to the SOI but not within it nor the City; however, SB244 requires its inclusion in the General Plan discussion. Additional unincorporated areas within the City's SOI exist, but they are not defined as DUCs because the median household exceeds the minimum criteria.

North of Lake Elsinore; Meadowbrook (DUC-1 and DUC-2) are located northeast of the City of Lake Elsinore in the Meadowbrook unincorporated area. DUC-1 is located adjacent to SR-74 and is bounded, approximately, by Vista Avenue to the west, Mountain Avene and Eugene Street to the north, Theda Street to the east, and Mauricio Avenue to the south. Mauricio Avenue forms the northern boundary of DUC-2, which extends south to Little Valley Road and Scenic Crest Drive and is bounded by Greenwald Avenue to the west. DUC-2 included development on either side of Penny Place. DUC-1 and DUC-2 are primarily comprised of large-lot single-family residential development with some manufactured dwelling parks and scattered small scale agricultural and industrial uses.

Warm Springs/North Elsinore (DUC-3) is located north of the City of Lake Elsinore in the Warm Springs area, northeast of I-15 and northwest of SR-74. This area consists of primarily single-family homes on half acre or larger lots.

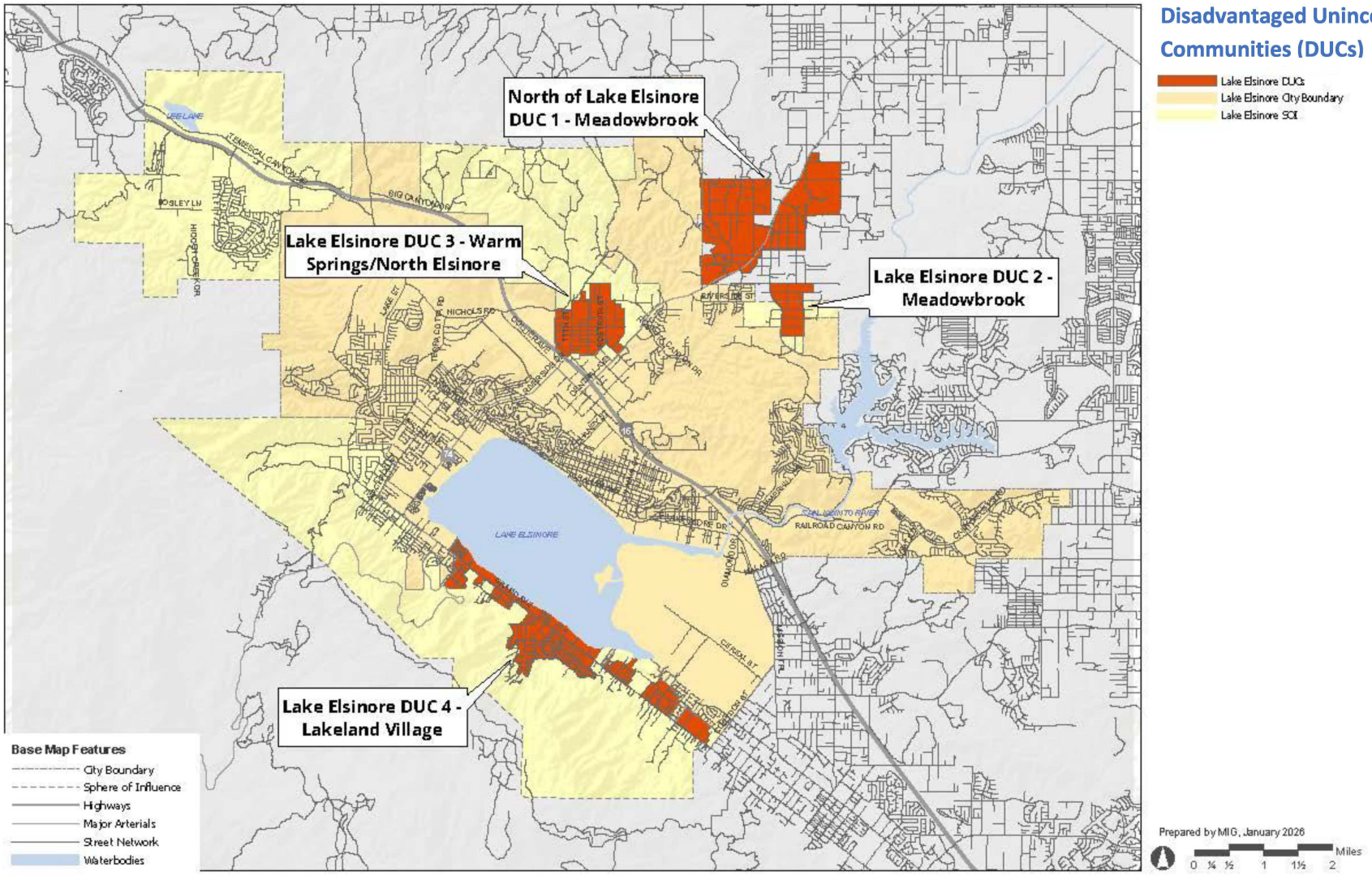
Lakeland Village (DUC-4) is located southwest of the City of Lake Elsinore and is bordered by Lake Elsinore to the northeast and forestland to the southwest. It includes development along both sides of Grand Avenue, from approximately Adelfa Street to Turner Street. Three smaller DUC-4 sub-areas on the north side of Grand Avenue. DUC-4a includes residential development along and between Kathryn Way and Shadow Trails Lane; DUC-4b includes residential development along and between Gregory Place and Ontario Way; DUC-4c includes residential development along and between Scales Way and Corydon Street. DUC-4 is comprised primarily of single-family development with some duplexes in the mix.

Water and Wastewater Overview

All four DUCs are within the EVMWD service area. EVMWD provides water supply to the majority, but not all of DUC-1 and DUC-2 and all of DUC-3 and DUC-4. EVMWD provides sewer services in DUC-4.

EVMWD is committed to providing safe, reliable water to all its customers through continual upgrades to critical infrastructure. In late 2023, EVMWD initiated a significant expansion project at the RWRF to increase its daily water treatment capacity by 4 million gallons. The expansion project, scheduled for completion in 2027, will meet the region's future wastewater treatment needs and improve overall treatment efficiency. Several other system upgrades identified in the EVMWD capital improvements plan (CIP) would improve services to one or more DUCs. These are discussed in more detail in the following sections.

Figure MI–17
Disadvantaged Unincorporated Communities (DUCs)



Flood Control Overview

Storm drains in Lake Elsinore are maintained by the Street Maintenance Division as well as by the Riverside County Flood Control and Water Conservation District. Flood control in all four DUCs is provided by the Riverside County Flood Control and Water Conservation District, covered in Operation Zone 3.

Fire Services Overview

Fire services for the Lake Elsinore SOI are provided by Riverside County Fire Department (RVC) and California Department of Forestry and Fire Protection (CAL FIRE). The 2025 Fire Hazard Severity Zones (FHSZ) & Local Responsibility Areas (LRA) map updates delineate the responsibility of each department. LRA zones are in the RVC service area, and State Responsibility Areas (SRA) are under CAL FIRE jurisdiction. The details of coverage for each DUC are discussed in detail below.

DUC-1 and DUC-2: North of Lake Elsinore, Meadowbrook

Water and Wastewater

In 2025, DUC-1 and DUC-2 are supplied with water by EVMWD; wastewater is handled by septic systems on individual properties. The Highway 74/Ethanac Sewer Extension project will increase services to the DUC-1 and DUC-2 areas. This project is part of the Riverside County American Rescue Plan Act (ARPA) funds to support necessary water and sewer infrastructure improvements. This project is for the planning, design and construction of approximately 12,500 feet of 15-inch gravity sanitary sewer main within SR-74, between Wasson Canyon Road and Elmer Street, and within Wasson Canyon Road, between SR-74 and Mauricio Avenue. This project is located within EVMWD's Regional Water Reclamation Facility sewershed and will make sanitary sewer service available to the Meadowbrook community. In addition to providing sanitary sewer service to future development in accordance with EVMWD's 2024 Sewer System Master Plan, this project will also facilitate the future conversion of existing on-site septic tanks, which will improve groundwater quality.

Flood Control

Flood control and storm drainage systems in DUC-1 and DUC-2 are managed by Riverside County Flood Control and Water Conservation District. Improvements are not planned for these DUCs as existing services meet community needs.

Fire Services

Fire services for DUC-1 and DUC-2 are provided by RCFD and CAL FIRE. The closest fire station is Rosetta Canyon Fire Station No. 97 located at 41725 Rosetta Canyon Drive. The station is a joint City/County station. According to the 2016 Riverside County Standards of Cover report, Station 97 has one 75' aerial ladder truck (staffed) and one reserve ladder truck (unstaffed). A squad unit (unstaffed) is also kept at Station 97. According to the City, this station serves a population of approximately 8,619 residents.

DUC-3: Warm Springs/North Elsinore

Water and Wastewater

Properties in DUC-3 are supplied with water by EVMWD; wastewater is handled by septic systems on individual properties. EVMWD has not identified any plans to extend wastewater removal and treatment to this area. Additionally, EVMWD has not identified any issues with continuing to provide water services to this area.

Flood Control

Flood control and storm drainage systems in DUC-3 are managed by Riverside County Flood Control and Water Conservation District. There is no indication that existing services are not meeting community needs, nor are there any planned improvements to this area.

Fire Services

Fire services for DUC-3 are provided by RCFD and CAL FIRE. The closest fire station is Rosetta Canyon Fire Station No. 97 located at 41725 Rosetta Canyon Drive. The station is a joint City/County station.

DUC-4: Lakeland Village

Water and Wastewater

DUC-4 is supplied with water by EVMWD. EVMWD also provides sewer services to DUC-4. EVMWD does not indicate any problems with continuing to provide services to this area.

Flood Control

The storm drain system in DUC-4 is maintained by the Riverside County Flood Control District. This area is included in the Lakeland Village Master Drainage Plan (MDP). The MDP identifies a conceptual network of drainage facilities needed to address the major drainage problems within Lakeland Village. Flooding is a consistent concern in DUC-4.

Drainage facilities that provide some level of flood protection within the Lakeland Village area include: Lime Street Channel, Ortega Channel, Ortega Channel Lateral A, Ortega Channel Lateral A -1 Debris Basin, Ortega Channel Lateral A-1, Ortega Channel Lateral A-2, Lakeland Village Channel, Churchill Street Drainage Ditch, Stoneman Street Channel, Corydon Channel, Palomar Channel, Ontario Way Storm Drain, Tract 23111 Drainage Ditch, Sedco-Bryant Street Storm Drain Stage 1 and Sedco Bryant Street Storm Drain and Debris Basin. Additional drainage facilities are needed to provide 100-year flood protection to the area.

Fire Services

DUC-4 is part of the RCFD/CAL FIRE Plateau planning area. This area borders the San Mateo mountains and is highly susceptible to wildland-urban interface fires. DUC-4 is in the LRA for Riverside County Fire. The nearest fire station to DUC-4 is Lakeland Village Station 11 located at 33020 Maiden Lane. According

to the 2016 Riverside County Standards of Cover report, Station 11 has one County-owned Type 1 engine (staffed) and one Type 2 engine (unstaffed).

Mobility and Infrastructure Goals and Policies

GOAL MI-1: THE MOBILITY NEEDS OF ALL USERS WHO LIVE IN, WORK IN, OR VISIT LAKE ELSINORE ARE MET, AND SUSTAINABLE TRAVEL OPTIONS WHEREVER ARE FEASIBLE

Policy MI-1: Balance the needs of all users of all ages and abilities by requiring complete streets provision for all new streets include street updates and repairs.

Policy MI-2: Build upon the Active LE principles and vision to provide a robust network for riders, walkers, and rollers to use for transportation and recreation.

Policy MI-3: Create mobility hubs (including Outlets at Lake Elsinore, Main Street [Downtown], and Uptown) and encourage Transit-Oriented Development (TOD) to make transit a viable option for city residents, workers, and visitors.

Policy MI-4: Enhance user experience and leverage the area's recreational activities to include city-to-trail facilities.

Policy MI-5: Support and plan the development of destinations aligned with Dream Extreme 2040's vision and aspirations for action sports and extreme activities.

GOAL MI-2: A TRANSPORTATION NETWORK THAT REMAINS FLEXIBLE AND ADAPTIVE TO ITS SURROUNDING CONTEXT AND CHANGES IN MOBILITY

Policy MI-6: Maintain Level of Service (LOS) D for priority modes at typical intersections and may allow for LOS E at strategic locations.

Policy MI-7: Balance the speeds and movements of vehicles with the safety and comfort of non-motorized users.

Policy MI-8: Reduce VMT with Transportation Demand Management (TDM) strategies.

Policy MI-9: Investigate and implement innovative transportation infrastructure maintenance measures that extend material lifespans and reduce capital costs while maintaining the roadways to meet federal, state, and local design standards.

GOAL MI-3: A TRANSPORTATION NETWORK THAT ENHANCES THE SAFETY AND COMFORT OF USERS

Policy MI-10: Implement a Safe Systems for All Approach into infrastructure planning.

Policy MI-11: Develop efficient emergency vehicle access and plan for evacuation egress from natural disasters.

Policy MI-12: Promote traffic calming in local neighborhoods to reduce cut-through traffic and speeds, and promote safety.

GOAL MI-4: A TRANSPORTATION NETWORK THAT EFFICIENTLY ALLOWS FOR THE MOVEMENT OF GOODS AND ON-TIME DELIVERIES, WHILE BALANCING THE NEEDS OF BUSINESSES AND RESIDENTS

Policy MI-13: Develop and maintain a truck route network that balances efficiency with safety.

Policy MI-14: Create a plan that maximizes goods delivery efficiency and provides for goods movement shared parking.

Policy MI-15: Right-size parking requirements based on industry trends.

Policy MI-16: Research, develop, and implement emerging freight technologies.

GOAL MI-5: A TRANSPORTATION NETWORK THAT MEETS AND EXCEEDS THE NEEDS OF USERS TODAY WHILE ENSURING A HEALTHY ENVIRONMENT FOR TOMORROW

Policy MI-17: Mitigate Vehicle Miles Traveled (VMT) and greenhouse gases with smart land use planning.

Policy MI-18: Support the use of electric automobiles, trucks, bicycles, and other modes.

Policy MI-19: Support and fund innovative, sustainable, and safe solutions to the transportation network.

Policy MI-20: Leverage mobility technologies and innovations to enhance the livability of residents and visitors.

Policy MI-21: Plan, develop, and implement transportation networks to promote regional access and mobility.

GOAL MI-6: SAFE AND RELIABLE POTABLE AND RECYCLED WATER STORAGE AND DISTRIBUTION SYSTEMS THAT MEET CURRENT AND FUTURE NEEDS

Policy MI-22: Implement and update the Water System Master Plan as needed in response to changing conditions; consider the unique needs of the DACs and DUCs.

Policy MI-23: Ensure local water security by minimizing the potential impacts of climate change, drought, and catastrophic events on water storage and distribution.

Policy MI-24: Ensure the City's water storage and distribution system is disaster ready.

Policy MI-25: Monitor EVMWD's implementation of improvements to its systems to provide high-quality services to Lake Elsinore and SOI customers, including the DUCs' residents.

Policy MI-26: Work with EVMWD to evaluate and ensure the water system is able to provide adequate fire flows.

Policy MI-27: Increase resident and business water efficiency, water security, and safe water knowledge.

Policy MI-28: Encourage EVMWD to provide service to all of the City of Lake Elsinore jurisdiction and the SOI.

Policy MI-29: Look to expand, as appropriate, the use of recycled water to irrigate parks, Lake Elsinore, and other public open space areas.

Policy MI-30: Support the study of microplastics/forever chemical contamination risks. Consider implementing appropriate strategies that mitigate possible contamination of public parks, wetlands, and open space habitat areas.

GOAL MI-7: RELIABLE LOCAL WASTEWATER COLLECTION FACILITIES THAT SUPPORT ESTABLISHED NEEDS, AS WELL AS THE CITY'S ECONOMIC DEVELOPMENT GOALS AND PLANS FOR NEW HOUSING

Policy MI-31: Implement and update the Sewer System Master Plan as needed in response to changing conditions.

Policy MI-32: Prioritize planned sewer system improvements in DACs, DUCs, and areas where the system has the most need and/or where growth will be focused.

Policy MI-33: Decrease groundwater infiltration and inflow to the wastewater collection system to maintain sufficient peak wet-weather capacity.

Policy MI-34: Consider innovative wastewater treatment systems.

Policy MI-35: Prevent sewer system backflow.

Policy MI-36: Secure infrastructure facilities to ensure resilience from extreme weather events.

GOAL MI-8: AN INTEGRATED LOCAL STORMWATER MANAGEMENT SYSTEM THAT GUARDS AGAINST URBAN FLOODING AND PROVIDES FOR THE "GREENING" OF THE CITY OF LAKE ELSINORE

Policy MI-37: Maintain the capacity and condition of local storm drains to accommodate all but extreme weather events.

Policy MI-38: Consider prioritizing green infrastructure solutions over grey, and "green" existing grey infrastructure, where possible.

Policy MI-39: Ensure the ability of regional stormwater collection facilities to accommodate flows from Lake Elsinore's stormwater collection system through coordination with Riverside County.

Policy MI-40: Incorporate Low Impact Development (LID) approaches into the design and upgrades of public stormwater infrastructure, including bioswales and pervious surfaces.



Bioswale Design Illustrative

GOAL MI-9: RELIABLE, UNOBTRUSIVE, AND ECO-FRIENDLY ENERGY SYSTEMS

Policy MI-41: Ensure improvements to and maintenance of electric power and natural gas transmission and distribution systems are performed in a manner that maintains safety and reliability and that implements City environmental goals.

Policy MI-42: Focus on purchasing electricity from renewable sources through continued participation in appropriate organizations and alliances.

Policy MI-43: Accommodate alternative energy infrastructure (such as wind and solar) as new technology evolves.

Policy MI-44: Ensure pipeline owners protect and maintain underground high-pressure pipelines consistent with applicable laws through coordination and working with responsible federal and State agencies.

Policy MI-45: Require new development projects underground utilities and provide utility upgrades/replacements, as appropriate.

GOAL MI-10: PROVIDE ADEQUATE AND HIGH QUALITY SOLID WASTE SERVICES

Policy MI-46: Meet Lake Elsinore's solid waste disposal needs while maximizing opportunities for waste reduction and recycling.

GOAL MI-11: COMMUNICATIONS TECHNOLOGIES THAT FACILITATE EFFICIENT AND AFFORDABLE ACCESS FOR EVERYONE IN LAKE ELSINORE, PROVIDE BROAD BENEFITS, AND INTEGRATE WELL INTO THE URBAN ENVIRONMENT

Policy MI-47: Ensure residents, businesses, and institutions in Lake Elsinore have choices regarding communications service providers.

Policy MI-48: Explore ways to provide easy access to wireless communications services in public spaces.

Policy MI-49: Identify local DACs and DUCs that may be underserved by wireless communications services due to cost or poor service coverage; work with service providers and others to improve that access.

Policy MI-50: Minimize the visual impacts of communications infrastructure.

Policy MI-51: Ensure that the City receives sufficient revenues and other benefits from the private use of public infrastructure and facilities for the installation of small cell and similar technologies.

Implementation Programs for Goals MI-1 through MI-11

Zoning Code and Map Update

PRO-MI-1: Update the Zoning Code to allow for alternative energy infrastructure and urban greening structures.

Review Process

PRO-MI-2: Through the development review process, require:

- Water supply, wastewater, and storm drainage capacity and infrastructure to be in place prior to new development occupancy;
- Development projects to provide water efficient landscaping;
- New development to underground utilities;
- LID and other storm drainage best practices;
- Telecommunications, electrical, and other infrastructure facilities to be designed in a manner that reflects the neighborhood's character;
- Trail connections and development as part of development project approvals;
- New developments to reduce VMT, including incentives for carpooling, transit use, active transportation, parking credits, etc, and target major land use developments, especially those with 100 or more employees;
- Future industrial developments to provide adequate truck parking to limit spillover on City streets;
- Future developments to evaluate emergency vehicle access through CEQA evacuation impact assessments for projects within high-fire severity zones or for projects that could affect existing emergency access to developments in high-fire severity zones. ; and
- Land use and infrastructure projects to perform transportation impact studies consistent with CEQA and requirements of SB743; consider implementation of TDM measures in place of infrastructure improvements to offset LOS deficiencies, managed by the Planning and Public Works Departments.

PRO-MI-3: Promote modes other than single occupants by requiring TDM plans for projects with greater than 50 employees.

PRO-MI-4: Implement measures to mimic or improve the pre-development water balance through infiltration, evapotranspiration, and capture and reuse of stormwater.

New Plans, Programs, and Strategies

PRO-MI-5: Develop active transportation projects through Active LE and Safe Systems for All projects to pursue for grant funding.

PRO-MI-6: Establish mobility hubs near the Outlets at Lake Elsinore, Main Street [Downtown], and Uptown and other key destinations. Work collaboratively with local transportation organizations and Riverside Transit Authority.

PRO-MI-7: Evaluate the feasibility of microtransit in the City to supplement areas of Lake Elsinore that don't warrant fixed route service.

PRO-MI-8: Improve multimodal connections by providing secure bicycle parking at transit stops and mobility hubs, upgrading transit stop amenities, and providing clear wayfinding to support transfers between modes.

PRO-MI-9: Strategically locate scooter- or electric bicycle charging and share stations in more densely populated areas including but not limited to Downtown, near high schools, and in tourist and commercial areas in coordination with safety education programs consistent with City electric bicycle regulations.

PRO-MI-10: Continue to require development application projects of a certain size to conduct transportation impact studies that evaluate LOS and contribute toward future infrastructure improvements to meet LOS D or better conditions. Typically projects that warrant studies are those that add 50 or more peak hour trips to the circulation network, however, the City Traffic Engineer has the right to request focused studies as needed.

PRO-MI-11: Maximize efficiency and safety through innovative intersection and street designs. Evaluate infrastructure improvement options that maximize efficiency over cost, such as requiring projects to update traffic signal coordination, implement traffic signal infrastructure with adaptive signal timing, or integrate autonomous vehicles through Smart technology rather than widening roads, where feasible. In areas of high pedestrian activity, implement traffic calming treatments such as bulb-outs, raised crosswalks, lane narrowing, and roundabouts.

PRO-MI-12: Establish a VMT program to minimize VMT.

PRO-MI-13: Provide separate routing and parking for trucks that minimizes noise/air impacts on sensitive areas and maintains a truck route map as outlined in Assembly Bill 98.

PRO-MI-14: Reduce conflicts with trucks through the separation between truck routes and bicycle or pedestrian facilities when planning new land use and infrastructure projects and through Active LE updates.

PRO-MI-15: Manage public parking supply with time limits, incentives, and permits.

PRO-MI-16: Develop a citywide ITE Safe Systems for All Approach program aimed at eliminating fatal and serious mobility-related injuries, as outlined in Senate Bill 932 or subsequent legislation. Include an evaluation and recalibration process ensuring the ITE Safe Systems for All Approach is effective. Additionally, implement the Active Transportation Plan (ATP).

PRO-MI-17: Create and maintain a High Injury Network program and mapping to improve safety, livability, and the overall quality of neighborhood streetscapes, aligning with broader design goals.

PRO-MI-18: Develop a citywide traffic calming program to incorporate strategies into the design, planning, and retrofit of new and existing neighborhoods.

PRO-MI-19: In partnership with logistics and goods delivery partners during commercial and industrial project development, consider requiring alternative fueling or charging stations.

PRO-MI-20: Develop a citywide charging plan and network for automobiles, bicycles, scooters, and other modes of transportation.

PRO-MI-21: Create a program to ensure public and private charging facilities in the City are known (listed on key charging apps and in web search engines), that facilities are regularly maintained for damage and operation, and latest smart technology is utilized for charging efficiency (real time publishing of when the station is in use, what type of charging capacity is available (CHAdeMO, CCS, GB/T, etc) / Level 1, 2, or 3 service, allow charging reservations, and maximize charge times to prevent a single user monopolizing the charging station).

PRO-MI-22: Work with new mobility companies, such as Transportation Network Companies (TNC) or microtransit to fill gaps in first/last mile travel.

PRO-MI-23: Develop a city policy or program that includes AV-oriented street design and parking facilities.

PRO-MI-24: Encourage EVMWD to:

- Develop a water supply alternatives plan that mitigates potential impacts of climate change, drought, and natural or human-caused catastrophic events by enhancing water supply resiliency and reliability;

- Study the water system for rapid recovery and reliable/sufficient emergency water supply in the event of a disaster, such as decentralizing the water system, reducing water delivery during certain events, and developing a network of water distribution sites; and
- Study existing water system and sewer system for backflow risks and work to prevent backflow in during a flooding event.

PRO-MI-25: Consider a multi-benefit "one water" approach for new capital projects to include stormwater quality (low-impact development features), flood mitigation, and increased groundwater recharge.

PRO-MI-26: Work with the RCFCD to develop and implement a greenway strategy looking to "green" urban waterways including flood control facilities.

PRO-MI-27: Identify and work with partners to address impacts from groundwater threats and solid waste.

PRO-MI-28: Identify solid waste and hazardous waste facilities that do not comply with standards for preventing contamination of air, water, and soil with hazardous waste, and work with owners to upgrade those facilities to meet those standards, prioritizing facilities in DACs.

Ongoing Processes and Procedures

PRO-MI-29: Every five years, assess the Complete Streets program progress, effectiveness, and gaps yet to be addressed, managed by Public Works.

PRO-MI-30: Maintain a list of strategic locations that may be permitted to operate at LOS E, such as areas that are widened to capacity within the right-of-way or where active modes are prioritized, such as walking or biking in the Downtown.

PRO-MI-31: Monitor curb space/high demand areas and adjust curb treatments to maximize benefits to the community, such as prioritizing parking, delivery vehicles, managing ride-hailing services, or inductive charging technology to support future electric vehicle parking.

PRO-MI-32: Update Active LE every 10 years, managed by Public Works.

PRO-MI-33: Enforce parking requirements as required in the City's Municipal Code, managed by the Planning Department; consider shared and/or reduced parking supply as supported by appropriate parking studies.

PRO-MI-34: Track the usage of TNCs and autonomous vehicles as these industries develop. Review parking minimums/maximums and pick-up/drop-off areas to right-size parking in commercial areas. Evaluate the need for autonomous vehicle parking only areas and TNC staging areas. Regularly review parking requirements and adjust to reflect changing needs.

PRO-MI-35: Update and maintain (every five years) an emergency operations plan in response to new developments and changing definitions of high-fire severity zones, as managed Planning and Public Works Departments.

PRO-MI-36: Continue to implement and update the City's SB1838 compliance programs.

PRO-MI-37: Provide and maintain public drinking fountains and bottle fillers in high traffic and outdoor recreation areas to reduce demand for bottled water.

PRO-MI-38: Evaluate the effectiveness of existing and future/innovative materials and design practices every ten years.

PRO-MI-39: During standard maintenance and improvements, align the goals of Complete Streets as outlined in the City's Active LE Plan to create roadways that enhance safety and improve accessibility for all users.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-MI-40: Designate scenic highways on SR-74 in coordination with Caltrans. Upon the successful relinquishment of SR-74, conduct studies to update/improve roadway design, efficiency, and aesthetics.

PRO-MI-41: Regularly coordinate with local and regional agencies to enhance and improve regional travel within the City, particularly regional transit options.

PRO-MI-42: Consider participating in a regional partnership to conduct community capacity building around water supply risks and water supply contamination (including microplastics and forever chemicals).

PRO-MI-43: Promote water use efficiency through public education, incentives, rebates, technical assistance, customer programs, and information about indoor and outdoor water use efficiency measures.

PRO-MI-44: Provide information and explore incentive opportunities to encourage property owners to install catchment, graywater systems, and other water recycling systems; remove paving; and install low-impact development features, such as permeable pavers, bioswales, and other green infrastructure components.

PRO-MI-45: Regularly meet with RCFCD to increase infiltration, provide treatment, promote groundwater recharge, reduce flood risk, capture trash, and enhance the environment.

PRO-MI-46: Meet with RCFC to:

- Identify flood control facilities and other water ways appropriate for urban greening; and
- Ensure flood control facilities are maintained and upgraded in accordance with the Drainage Master Plan.

PRO-MI-47: Meet with EVMWD to:

- Increase service provision to the city and SOI;
- Expand recycled water availability;
- Consider innovative and sustainable wastewater treatment methods, such as local brewery's ethanol waste for denitrification, or nitrogen removal from wastewater; and
- Identify water supply facilities and equipment for risk of flooding and identify methods to minimize flooding impacts on those facilities.

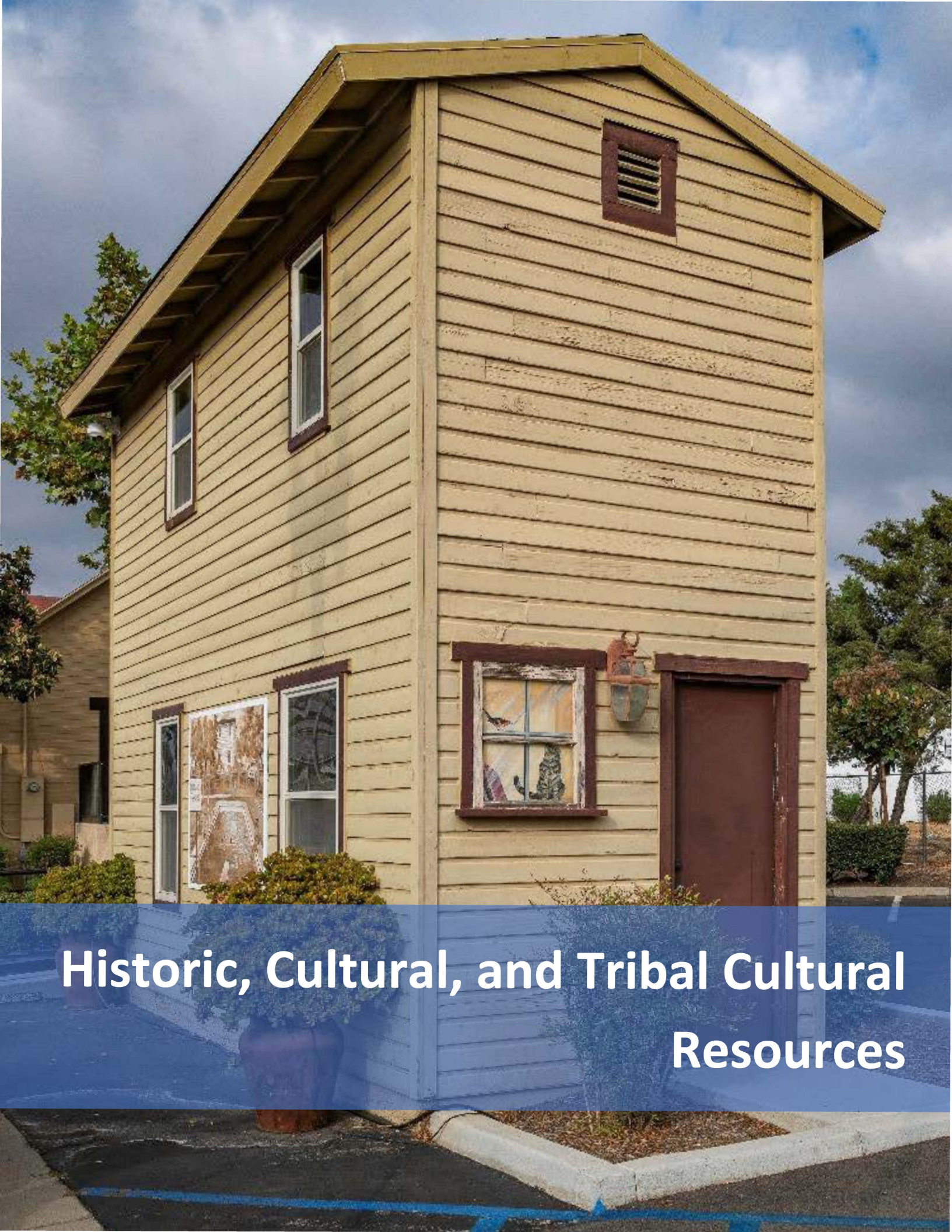
PRO-MI-48: Meet with SCE, The Gas Company, and telecommunication companies to ensure facilities are maintained and operated in a manner that improves public safety while maintaining or increasing availability.

PRO-MI-49: Work with telecommunication service providers to:

- Increase availability and affordability; and
- Provide free wireless services in public spaces.

PRO-MI-50: Continue public education programs about waste reduction, including recycling, composting, yard waste, wood waste, and household hazardous waste.

PRO-MI-51: Consult with appropriate regional, state, and federal agencies to monitor water quality and address local sources of groundwater and soil contamination, including underground storage tanks, septic tanks, and industrial uses, as necessary, to achieve State and federal water quality standards.



Historic, Cultural, and Tribal Cultural Resources

In This Section

Introduction

Historic Context of Lake Elsinore

Historic Development Patterns

Paleontological Resources

Historic Resources

- Tribal Cultural Resources
- Archaeological Resources

Tribes and Preservation Organizations

Key Considerations

Historic, Cultural, and Tribal Cultural Resources Goals and Policies

HISTORIC, CULTURAL, AND TRIBAL CULTURAL RESOURCES ELEMENT

Introduction

The City of Lake Elsinore (City) strives to strengthen its ties to its history and heritage and promote public understanding, appreciation, and civic pride for those people, places, events, and cultures within the City, including recognizing the ongoing cultural presence and stewardship responsibilities. The optional[1] Historic, Cultural, and Tribal Cultural Resources[2] Element looks to:

- improve historic and cultural preservation as part of local planning and project level efforts;
- Improve tribal consultation processes and identification and treatment of tribal cultural resources;
- identify goals and policies promoting archaeological, historic, and tribal cultural resources preservation;
- consider local historic properties, including historic structures and districts, archeological resources, and Native American traditional cultural places, tribal cultural resources and Native American human remains[3] and burial areas[4]; and
- maintain the City's unique community character and history

as a path to making City a more desirable place to live and work.

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[1] Gov. Code § 65303 authorizes local agencies to adopt additional general plan elements addressing local priorities beyond those mandatory elements required under Gov. Code § 65302.

[2] **Tribal Cultural Resource (TCR)**
A site, feature, place, cultural landscape, sacred place, including a Native American sanctified cemetery, Indian cemetery, or Indian burial area, or an object with cultural value to a California Native American Tribe that is any of the following:
(i) Included or eligible for inclusion in the California Register of Historical Resources or the National Register of Historic Places (***pursuant to the Historic Property Definition herein***).
(ii) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1 of the Public Resources Code.
(iii) Identified by the Native American Heritage Commission as a sacred place pursuant to Section 5097.94 or 5097.96 of the Public Resources Code.
(iv) Included in a local tribal register.
A Tribal Cultural Resource may also be a Historic Property and/or a Unique Archaeological Resource.

[3] **Native American Human Remains (sometimes referred to as Ancestral Remains)**
Any combination of human remains, cremations, and soils of a deceased Native American individual, including skeletal remains, cremations, associated soils, funerary objects, and burial items. Native American Human Remains may or may not contain inhumations.

[4] **Burial Areas**
Geographic areas containing one or more of the following: Native American internments, cremations, inhumations, funerary objects or other locations of intentional Native American Human Remains deposition, whether formally identified or not. Burial Areas may include marked or unmarked locations and also may contain cultural objects and artifacts, sometimes referred to as funerary objects.

Historic properties are also considered under the National Historic Preservation Act (NHPA). A historic property is any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places. Examples include historic ranches, mission-era sites, traditional cultural landscapes, archaeological sites, and historic transportation corridors. The NHPA also recognizes properties of traditional religious and cultural importance to Tribes. Examples include sacred mountains, ceremonial gathering places, traditional village sites, cultural landscapes associated with creation stories, and locations used for traditional practices, ceremonies, or the collection of culturally important plants and materials.

This element discusses Paleontological Resources, Tribal Cultural Resources, Archaeological Resources, and Historic Resources (Structures and Landscapes).

Historic Context of the City Lake Elsinore

Pre-Contact

Prior to Western settlement, areas within present day City of Lake Elsinore were occupied by the *Payómkawichum* (or Luiseño) indigenous people who lived along the Pacific Coast as well as in the inland hills and valleys. Luiseño traditional territory comprised approximately 1,500 square miles of Southern California. Living Areas were located in diverse ecological areas, typically along streams, valleys, or coastal strands near mountain ranges. The area around and including the Elsinore hot springs is known to the Luiseño as *iténgvu Wumówmu*. *Payómkawichum* lived in villages and maintained ceremonial landscapes and cultural practices on the shore area surrounding Lake Elsinore – this place is known traditionally as *Páayaxchi* to the Luiseño. Several additional Luiseño place names are within the Lake Elsinore Sphere of Influence (SOI)[5], reflecting a diverse and well used region by *Payómkawichum*. The City of Lake Elsinore has, through ethnographic, historical and cultural records, been identified as a part of Luiseño linguistic territory; however, use may have occurred by the Juaneño/Acjachemen as place names and creation accounts are culturally similar to those of Luiseño. There may also have been some historic overlapping use or influence by adjacent groups, including the Gabrielino, Serrano, and Cahuilla; however, the area has a longstanding traditional cultural affiliation to the Luiseño people, and Páayaxchi maintains significant cultural associations tied to traditional land use, resource procurement, travel routes, settlement patterns, and ceremonial and cultural practices of the *Payómkawichum*. The Lake Elsinore area has historically supported habitation, resource use, travel, ceremonial activities, and other cultural practices associated with culturally-affiliated Luiseño Tribal communities.

[5] The place name information is submitted under separate confidential cover pursuant to Gov. Code §§ 65352.3 and 65562.5.

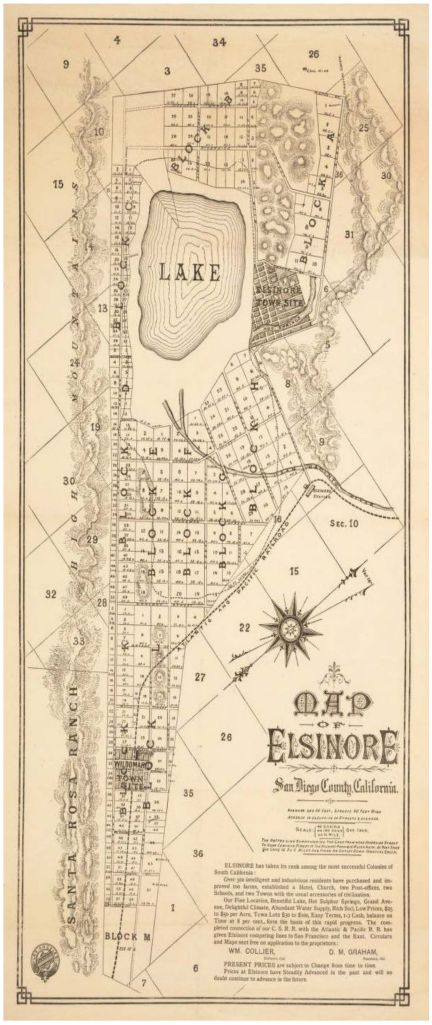
Spanish Influence and Missions

Beginning in 1769, Spanish missionaries accompanied by Spanish military forces established a network of missions throughout Alta California. These missions had profound and devastating impacts on California Indian Tribes. Native people were displaced and often forced into the mission system, where they provided enslaved labor to support agriculture, construction, and daily operations. Like many California Indians, the Luiseños experienced harsh living conditions, cultural suppression, family separation, and disease. The mission system disrupted traditional lifeways and led to significant population loss among Native communities.

In 1822, Mexico gained independence from Spain, bringing changes to California's governance. The Secularization Act of 1833 transferred mission lands from the Catholic Church to the Mexican government. Although some Native people were promised land and greater freedom, these promises were largely unfulfilled. As large ranchos were established through land grants, local tribes were displaced from their ancestral homelands and often forced to work as laborers on ranches under exploitative conditions. This further eroded Native communities' land ownership, autonomy, and traditional ways of life.

The comisionados, who were placed in charge of the land transfer, took advantage of the situation, and became the powerful land holding class known as the rancheros.

In 1844, a Mexican land grant was awarded to Julian Manriquez for 13,340 acres, which included Lake Elsinore. He named this area Rancho La Laguna. The property exchanged ownership several times before being sold to Franklin Heald, William Collier, and Donald Graham in 1883 for $24,000. With Margaret Collier Graham, they established the town site and sold lots. Margaret Graham gave the town its name “Elsinore” as it reminded her of the Danish town in Shakespeare’s play “Hamlet”.[6]



Early Map of Elsinore, California. Date Unknown but likely between 1883 (Elsinore’s founding) and May 1893 (County of Riverside founded).

[6] “Historic Downtown Walking Tour.” Lake Elsinore Historical Society, lakeelsinorehistoricalsociety.org/. Accessed Nov. 2023.

Railroad and Incorporation

Elsinore became a transcontinental railroad stop in 1885. The original route was abandoned; a new station was built by the Santa Fe Railway Company in 1896. The Santa Fe Railway station is now home to the Lake Elsinore Chamber of Commerce. In 1887, the Crescent Bath House, also known as The Chimes, was one of the first buildings in Downtown and is a registered national historic site.

In April 1888, Elsinore incorporated as a city and gained prominence for the local hot springs and the area's natural beauty. By the late 1800s, the economy was supported by coal and clay mining, ranching, and agricultural industries. Farmers in the area grew olives, grapes, apricots, and other produce. Elsinore's population was approximately 1,000 residents; the town boasted a variety of stores, a lumberyard, daily mail service, and brick buildings downtown. In addition, the mineral and hot springs attained regional recognition.



Main Street, 1887

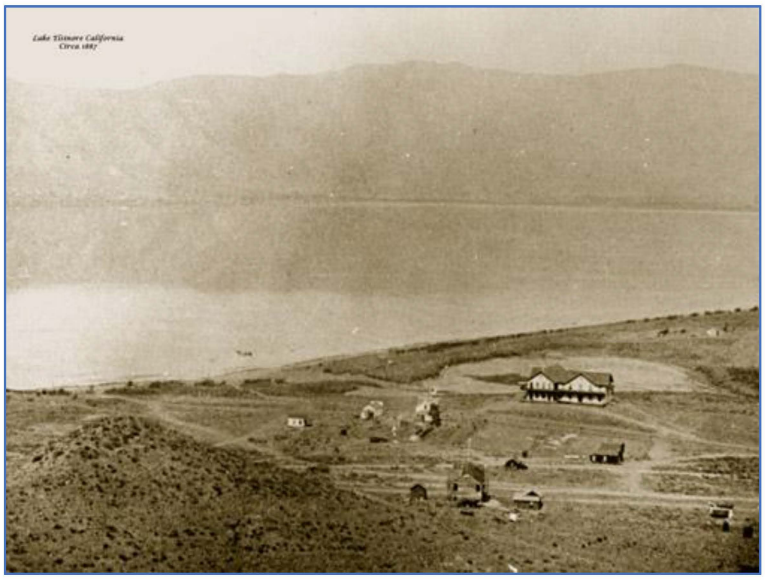
20th Century

By the 1920s, Elsinore was a popular recreational destination for boat races and Olympic swim team training. In the 1930s, Elsinore was a resort-style retreat/party destination featuring the Laguna Vista Club and Mount Elsinore Country Club. During World War II, Douglas Aircraft had a factory assembling aircraft wings for bombers. The Lake was used to test seaplanes.

In 1948, Lake Elsinore elected the first black city councilman in California, Thomas Yarborough.[7] In 1972, Elsinore's name was changed to the City of Lake Elsinore. The name change helped highlight Lake Elsinore as a lake-oriented destination. The State of California Department of Parks and Recreation owned the lake and a campground recreation area until 1993, when the assets were conveyed to the City. [8]

[7] Forrey, Kathy, August 1, 1990. "More than 200 pay homage to Yarborough". Lake Elsinore Valley Sun-Tribune. Accessed Nov. 2023 – via Newspapers.com.
[8] "Lake Elsinore General Plan, Chapter 9." Lake Elsinore General Plan | Lake Elsinore, CA, City of Lake Elsinore, Dec. 2011, www.lake-elsinore.org/465/Lake-Elsinore-General-Plan

Historic Development Patterns



As shown in Figure HCTCR-1, many of the City's historic structures are concentrated in the Historic Community Plan area (Downtown). Several of these structures are recognized on either national or State level historic registers. The Downtown area has served as Lake Elsinore's cultural and economic hub since the late 1800s.

In the SOI, many developments and subdivisions constructed in the last 30-40 years show housing demand continues to grow (Figure HCTCR-2). Many of the newest developments are concentrated on the east side of the city near Railroad Canyon Road and the Canyon Lake area. The demand for growth is further depicted by Figure HCTCR-3, which shows the City's annexation history post 1888. Since incorporating, the City has moderately expanded its boundaries to include outlying areas within the SOI predominantly to the north, east, and west.

Lake Elsinore's Historic Downtown

Lake Elsinore recognizes Downtown as its historic core with civic institutions, historic landmarks, and local businesses located within the Downtown district.

In the 1980s, the Riverside County Historical Commission designated the City of Lake Elsinore downtown as a local historic district. The historic downtown primarily encompasses Main Street, Heald Avenue, and Graham Avenue. Two historic downtown buildings are listed in the National Register of Historic Places: The Crescent Bath House (aka Chimes Building) and the Grand Army of the Republic Armory Hall. The Crescent Bath House, built in 1887, was one of the first buildings to be constructed within the City of Lake Elsinore. The Armory Hall was built in 1887 to serve the Grand Army of the Republic, a fraternal organization for Civil War Union Army, Navy, and Marine veterans. Several other structures are listed in the California Points of Historical Interest, Riverside County Historical Landmarks, and locally recognized historic structures. In 2011, the City adopted the Downtown Elsinore Specific Plan to maintain the important Downtown historical resources while facilitating future growth and development.[9]

[9] "Downtown Elsinore Specific Plan." Downtown Elsinore Specific Plan | Lake Elsinore, CA, City of Lake Elsinore, 25 Sept. 2018, www.lake-elsinore.org/472/Downtown-Elsinore-Specific-Plan.

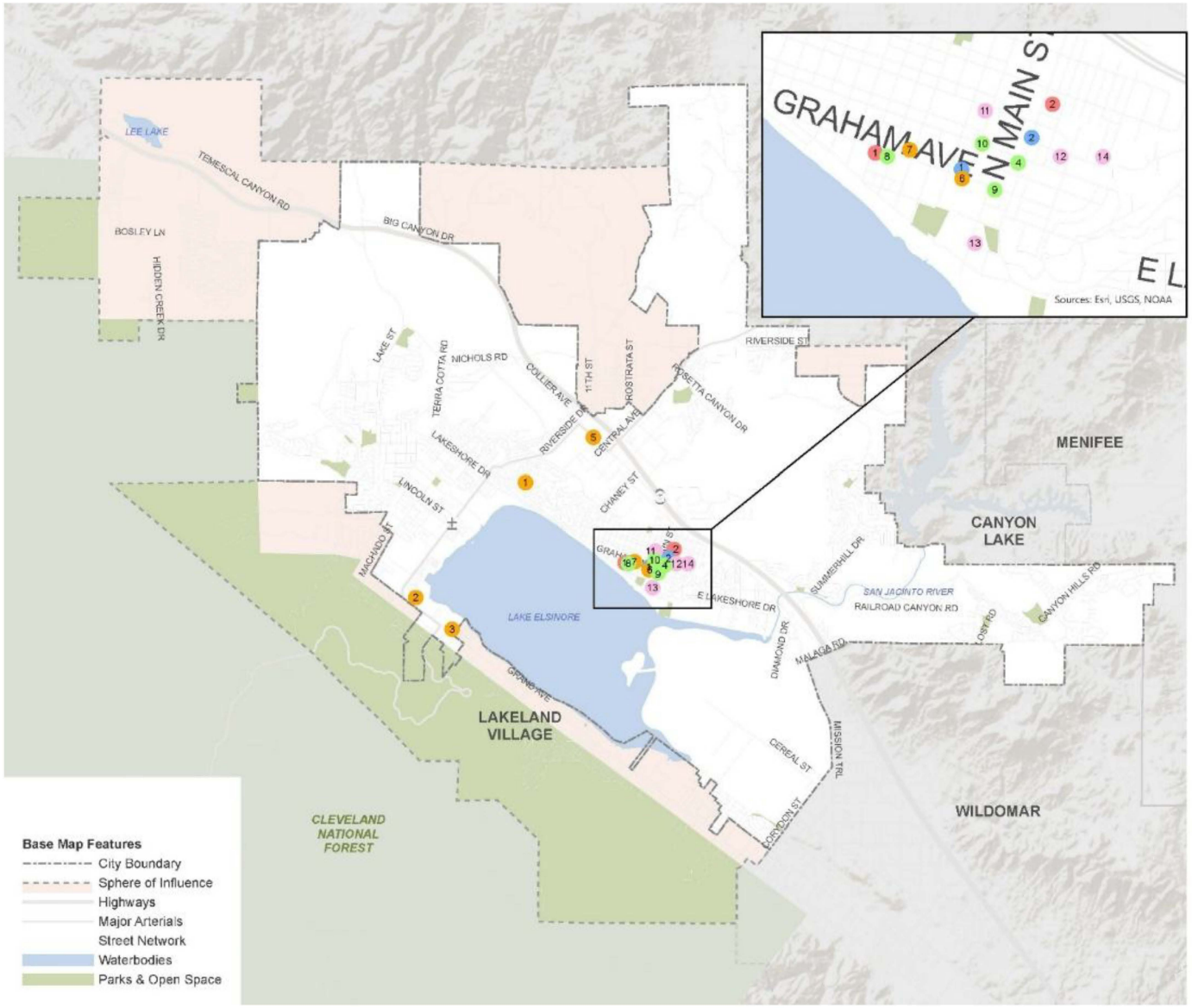


Figure HCTCR-1
HISTORIC LANDMARKS

Historic Landmarks
California Points of Historical Interest
California Points of Historical Interest
National Register of Historic Places
National Register of Historic Places
Locally Recognized Historic Sites
Local Historic Homes of Interest
Locally Recognized Significant Historical Resource
Riverside County Historical Landmark

National Register of Historic Places List
1. Crescent Bath House/Chimes Building 201 W Graham Av
2. Grand Army of the Republic Armory Hall 252 N. Main St

California Points of Historical Interest List:
1. Grand Army of the Republic Armory Hall
2. Elsinore Women's Club 701 W Graham Av

Riverside County Significant Historical Resource List:
1. Lake Elsinore Cultural Center/Methodist Episcopal Church 183 N. Main Str
2. Santa Fe Train Station 132 W Graham Av
3. Mary J. McDonald Fountain and Building 301 W Heald Av

Locally/Unofficially Recognized Significant Historical Resources:
1. Aimee's Castle 17375 Sunnyslope Av
2. The Adobe Machado House and Butterfield Stage Stop 15410 Grand Av
3. Elsinore Naval Military Academy 15900 Grand /av
4. Lake Theater 310 W Graham
5. Heritage Home (Strickland Home)
6. First Presbyterian Church
7. Elsinore Valley Cemetery 18170 Collier Av

Lake Elsinore Historic Homes of Interest:

8. 219 Riley Street, 1920
9. Scotty's Castle, 226 East Franklin Street, 1924
10. Gardner Home, 228 Spring Street, 1912
11. 257 Hill Street

Prepared by MIG, October 2023.
Source: National Park Service, 2023, California Office of Historic Preservation, 2023, Lake Elsinore Historical Society, 2023, Downtown Elsinore Specific Plan, 2018

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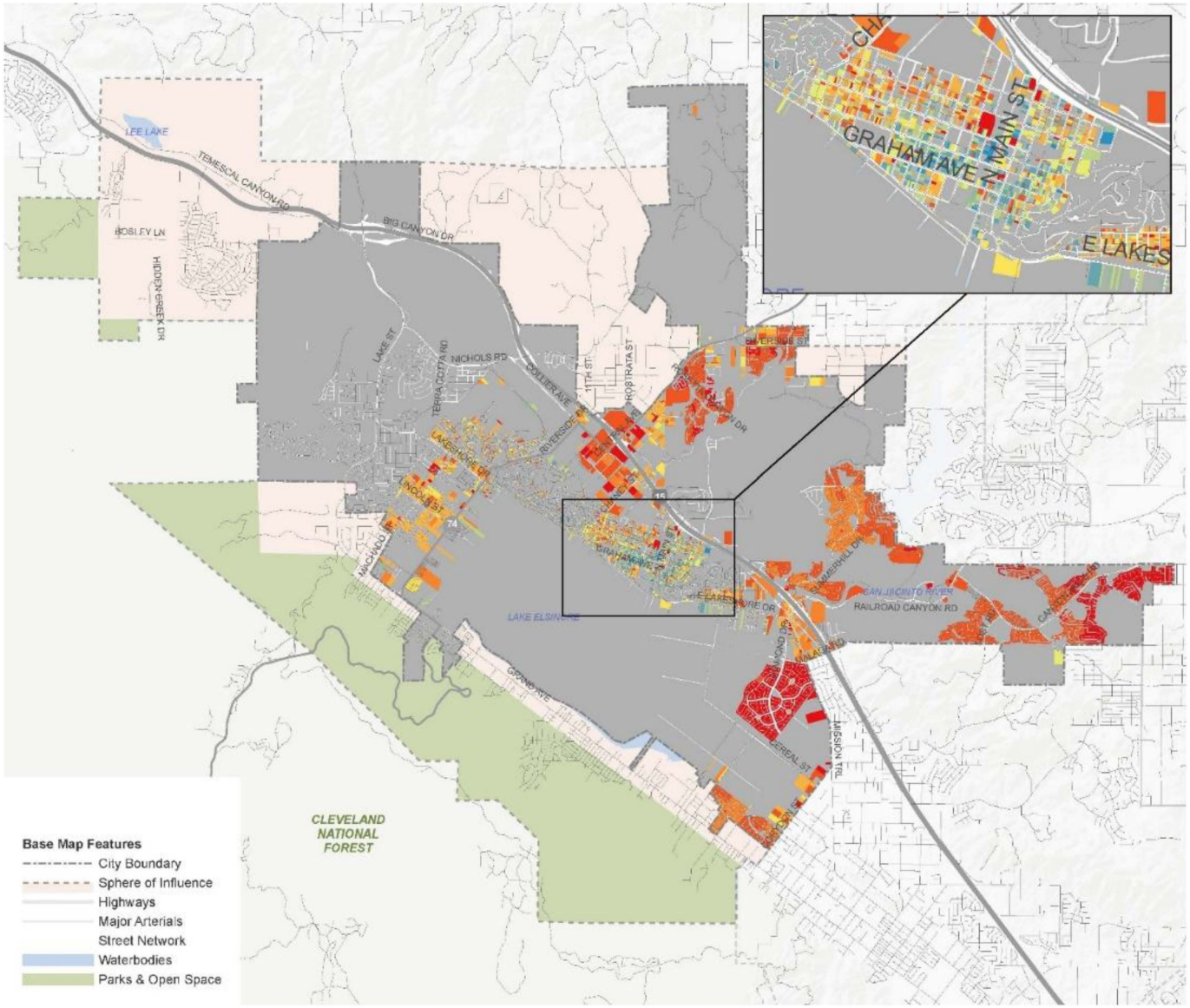
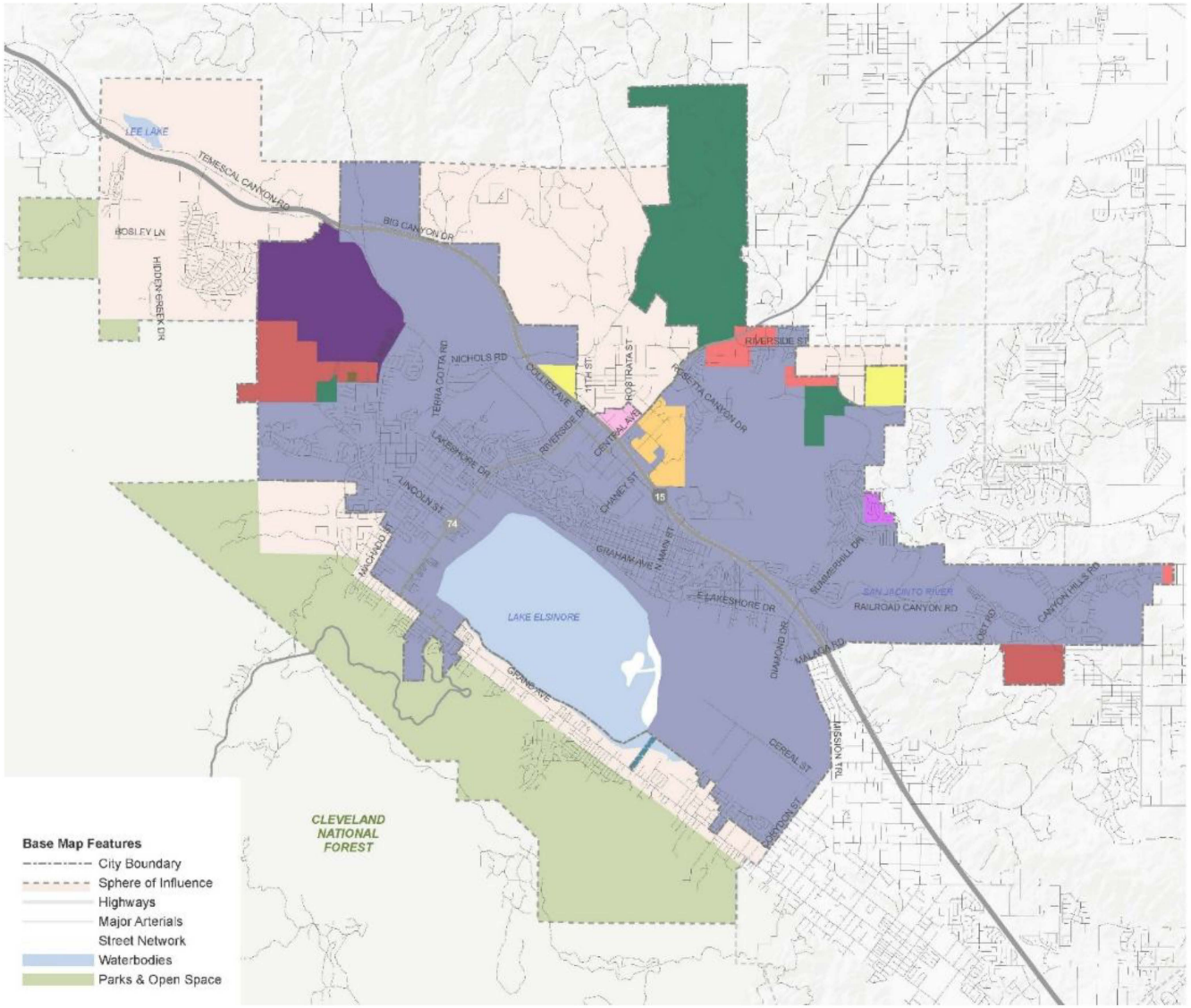


Figure HCTCR-2
BUILDING AGE

Figure HCTCR-3

ANNEXATION HISTORY



The Crescent Bath House, built in 1887, was one of the first buildings to be constructed within the City. The Armory Hall was built in 1887 to serve the Grand Army of the Republic, a fraternal organization for Civil War Union Army, Navy, and Marine veterans. Several other structures are listed in the California Points of Historical Interest, Riverside County Historical Landmarks, and locally recognized historic structures. In 2011, the City adopted the Downtown Elsinore Specific Plan to maintain the important Downtown historical resources while facilitating future growth and development.[10]



Crescent Bath House/Chimes Building, 2025

Paleontological Resources

The County of Riverside conducted a countywide paleontological sensitivity inventory. The County's paleontological resources sensitivity mapping shows areas of high paleontological sensitivity in Quaternary deposits north of Lake Elsinore west of the I-15 corridor (Figure HCTCR-4). Quaternary units of the valley floor surrounding Lake Elsinore, the Santa Ana Mountains range fan deposits south of the Lake, the Mesozoic metasedimentary rocks northwest of the Lake; and Tertiary and Quaternary sedimentary rocks, and Mesozoic metasediments east of the Lake are undetermined paleontological sensitivity. While much of the valley floor south of Lake Elsinore, and the plutonic highlands to the west and east of the valley, are considered to have low paleontological sensitivity.[11]

Throughout Lake Elsinore and the SOI, historical archaeological sites include a range of activities including mining, transportation, recreation, and ranching/homesteading. Based on documented history and the previously identified sites, additional resources are likely to be found in the future.

[10] "Downtown Elsinore Specific Plan." Downtown Elsinore Specific Plan | Lake Elsinore, CA, City of Lake Elsinore, 25 Sept. 2018, www.lake-elsinore.org/472/Downtown-Elsinore-Specific-Plan.
[11] City of Lake Elsinore General Plan, 2011

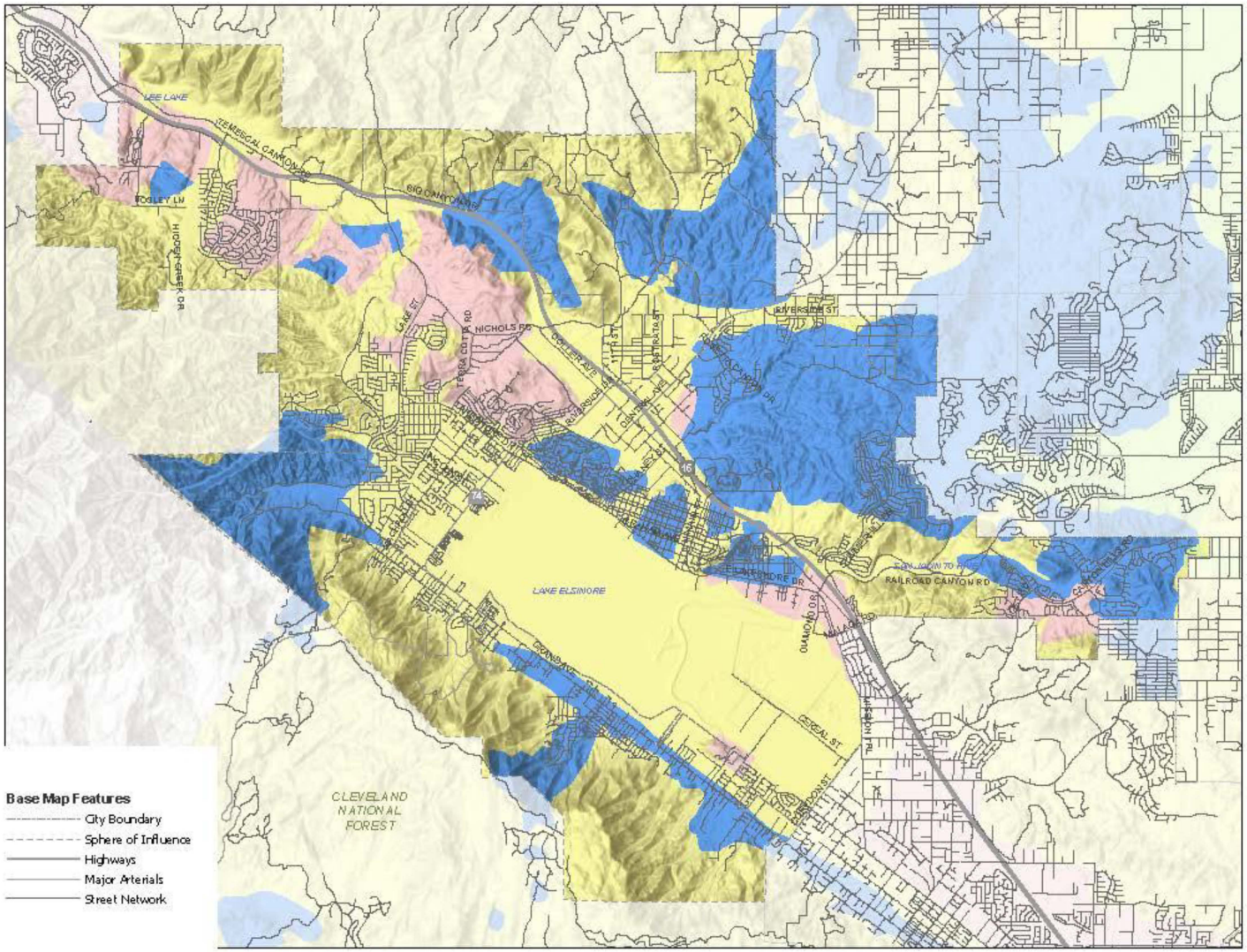


Figure HCTCR-4

PALEONTOLOGICAL SENSITIVITY

Historic Resources

Historic Resources is a category of protected resources that includes Historic Structures, Archaeological Resources, and Tribal Cultural Resources. The California Environmental Quality Act (CEQA) requires lead agencies to consider the effects of their actions on Historic Resources.

Tribal Cultural Resources

As defined in California Public Resources Code Section 21074, tribal cultural resources are objects with cultural value to a California Native American[12] tribe that are listed or eligible for listing in the California Register of Historical Resources, in a local register of historical resources, or resources determined by the Lead Agency to be significant pursuant to the State Register criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

As further defined in California Public Resources Code Section 21080.66(b)(5)(C), tribal cultural resources include, but are not limited to, a site, feature, place, cultural landscape, sacred place, including a Native American sanctified cemetery, Indian cemetery, or Indian burial area, or an object with cultural value to a California Native American tribe that is listed or eligible for listing in the California Register of Historical Resources, in a local register of historical resources, identified by the Native American Heritage Commission as a sacred place pursuant to Section 5097.94 or 5097.96, or included in a local tribal register.

Tribal cultural resources are not necessarily limited to archaeological sites or isolated artifacts, and may include places, landscapes, viewsheds, natural features, and locations possessing traditional importance to traditionally culturally affiliated tribes.[13] Many tribal cultural resources reflect continuing cultural relationships between tribal communities and the land, water, plants, animals, and natural features within the region..

A cultural landscape that meets the statutory criteria is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size, scope, contributing elements, cultural associations, and traditional use and significance of the landscape.

Historical resources, unique archaeological resources[14], or non-unique archaeological resources may also be tribal cultural resources where such resources possess cultural value or cultural affiliation to a

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[12] **California Native American Tribe (sometimes referred to as Tribe)**
A Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission.

[13] **Culturally Affiliated Native American Tribe (sometimes referred to as Culturally Affiliated Tribe)**
A California Native American Tribe that is traditionally culturally affiliated to the geographic area know today as the City of Lake Elsinore.

[14] **Unique Archaeological Resource**
An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

California Native American tribe. However, tribal cultural resources are distinct from conventional archaeological or historic property[15] resources because their significance may derive from tribal traditional knowledge, oral history, ceremonial use, cultural practice, spiritual association, cultural continuity, or other tribal cultural values.

The City recognizes that traditionally culturally affiliated tribal governments possess unique tribal traditional knowledge, oral history, ethnographic information, cultural expertise, and historical information that are essential to the identification, evaluation, treatment, management, and protection of tribal cultural resources.

(i) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
(ii) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
(iii) Is directly associated with a scientifically recognized important prehistoric or historic event or person.
A Unique Archeological Resource may also be a Tribal Cultural Resource.

[15] **Historic Property**
(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources **(Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.)**.
Pub. Res. Code § 5024.1(c) states: A resource may be listed as an historical resource in the California Register if it meets any of the following National Register of Historic Places criteria:
(i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(ii) Is associated with the lives of persons important in our past.
(iii) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(iv) Has yielded, or may be likely to yield, information important in prehistory or history.
(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:
(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
(B) Is associated with the lives of persons important in our past;
(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
(D) Has yielded, or may be likely to yield, information important in prehistory or history.
A Historic Property may also be a Tribal Cultural Resource and/or a Unique Archaeological Resource.

The Native American Heritage Commission (NAHC) maintains the Sacred Lands File (SLF), a confidential inventory of known tribal cultural resources and sacred sites[16], including some already recorded and documented within the General Plan area. The SLF is continuously being updated as new sites and finds are discovered and, therefore, does not represent a complete inventory of all tribal cultural resources and sacred sites. Given the longstanding Luiseño Tribes' traditional cultural affiliation with Lake Elsinore, it is highly likely that additional tribal cultural resources and sacred sites exist throughout the General Plan area that have not yet been discovered, documented, or evaluated due to confidentiality concerns, historical land disturbance, limited prior studies, or the sensitive nature of such information.

Tribal cultural resources can be found on the ground , buried, within natural landforms, or in previously-disturbed or urbanized areas. The absence of surface evidence or prior documentation does not preclude the existence or significance of tribal cultural resources. Ground-disturbing activities associated with development, infill, redevelopment, infrastructure expansion, utility installation, grading, excavation, vegetation removal, and other activities have the potential to unearth, damage, destroy, disturb, or adversely affect tribal cultural resources, including Native American human remains, burial areas, and funerary objects.

Archaeological Resources

Precontact archaeological sites include villages, rock shelters, habitation sites, lithic scatters, and milling slicks. While these sites may be known, it does not preclude the possibility of additional prehistoric sites being located in Lake Elsinore and its SOI. Such resources are of continued cultural value to Luiseño People since archaeological resources may also be tribal cultural resources. However, some of these resources may not contain archaeological materials and may instead derive significance from tribal traditional knowledge, ethnographic, oral history, cultural and historical information. Therefore, certain archaeological methods and standards, alone, may not be suitable for the identification, assessment, and treatment of archaeological resources that are also tribal cultural resources.

Historic archaeological sites are often associated with Historic Structures and historic uses, including ranchos and adobes.

Based upon recorded and previously identified Historic Resources, additional archaeological resources of both types are likely to be found in the future.

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[16] **Sacred Site**
A place, feature or object described in Sections 5097.9 and 5097.993 of the Public Resources Code as follows:
(i) Section 5097.9: Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine.
(ii) Section 5097.993: historic or prehistoric ruins, any burial ground, any archaeological or historic site, any inscriptions made by Native Americans at such a site, any archaeological or historic Native American rock art, or any archaeological or historic feature of a Native American historic, cultural, or sacred site.

Table HCTCR-1 Previously Identified Precontact Archaeological Sites within the SOI

Site Types	Site Definitions and Locations
Village sites	Sites with a level of sustained residency with resources suitable for sustaining long-term or seasonal habitation. Typically located along watercourses (such as the San Jacinto River and its tributaries or near Lake Elsinore). Associated artifact assemblages may include (but are not limited to) bedrock outcrops, lithic artifacts, groundstone, shell, animal bone, fire-affected rock, ceramics, pictographs and petroglyphs, house rings, and evidence of funerary practices, including Native American remains.
Rock shelters	Typically located in higher elevations in areas that sustain habitable rock overhangs that can support brief habitation episodes or be utilized for ceremonial purposes. Associated artifacts can include (but are not limited to) pictographs and petroglyphs, fire-affected rock, lithic artifacts, midden soil, animal bone, bedrock milling features, ceramics.
Habitation Sites	Temporary camps or transition areas that exploit an immediate or seasonal resource. Usually located near watercourses such as the San Jacinto River and its tributaries. Associated artifact assemblages may include (but are not limited to) ground stone, lithic debitage, and bedrock milling features.
Lithic scatters	Flaking stations that may indicate possible opportunistic quarrying activities or tool reduction stations. Clusters can be identified in isolation or in association with other site types and are not restricted in geographic location.
Bedrock Milling Features	Grinding stations typically located along watercourses (such as the San Jacinto River and its tributaries) near exposed bedrock outcrops (typically granite or granodiorite) with suitable resources in the area for processing.
Isolates	Not included in the study group.

Source: City of Lake Elsinore General Plan, 2011

Historic Structures

The following is a list of recognized historic structures that are either on the National Register or deemed Register Eligible. Other resources may be added to registries on an ongoing basis.

National Register of Historic Places List[17]:

- Crescent Bath House/Chimes Building (P33-6998) Once a popular resort destination for its mineral springs, this two-story Moorish-style building was built in 1887 by Frank Ferris. The building became an antique shop from the 1950s to the mid-2010s, when it was known as the Chimes Building. Location: 201 West Graham Avenue
- Grand Army of the Republic Armory Hall (RIV-070) – The two-story structure, constructed in 1887, was built as a meeting hall for Union Army, Marines, and Navy veterans who served in the American Civil War. Overtime, the structure became the Odd Fellow Hall and, later, the American Legion Hall. It is currently used for commercial purposes. Location: 252 North Main Street



Grand Army of the Republic Armory Hall
Source: loopnet.com



Elsinore Women's Club
Source: Facebook.com

California Points of Historical Interest List[18]:

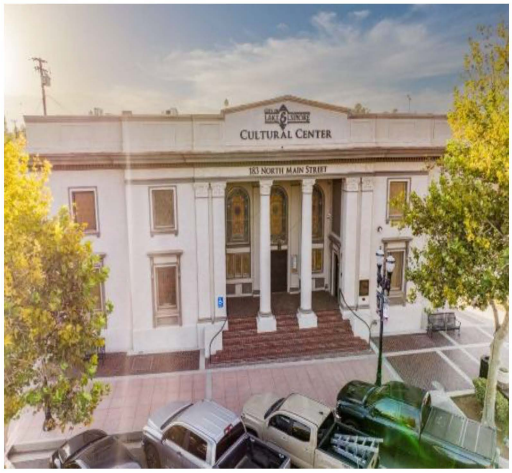
- Grand Army of the Republic Armory Hall (RIV-070)
- Elsinore Women's Club (RIV-071) – The Elsinore Women's Club, founded in 1906, is headquartered in the 1925 structure located at 701 West Graham Avenue.

[17] National Park Service, 2023
[18] California Office of Historic Preservation, 2023

Riverside County Significant Historical Resource List[19]:

Lake Elsinore Downtown Historic District (P33-7142) includes:

- Lake Elsinore Cultural Center/Methodist Episcopal Church (RIV-023) – Originally constructed as the Methodist Episcopal Church in 1923, the building is now a public meeting hall known as the City of Lake Elsinore Cultural Center. The Lake Elsinore Historical Society Museum and Research Library are housed in the building's basement. Location: 183 North Main Street
- Santa Fe Train Station (P33-6997) – The Santa Fe Train station, built in 1896 by the California Southern Railway Company, was moved to its current location, 132 West Graham Avenue. The train station now houses the Lake Elsinore Valley Chamber of Commerce.
- Mary J. McDonald Fountain and Building – Constructed in 1931 for Mary J. McDonald (a key figure in Elsinore Valley's settlement/early development) by Steve Coogan. Ms. McDonald commissioned a fresh water well drilled at the corner of Heald and Riley Streets, a park built around the well, and a 25-foot diameter gazebo constructed over the well/fountain. The well/fountain and gazebo seats were subsequently removed. Location: 301 W. Heald Avenue.



Lake Elsinore Cultural Center/Methodist Episcopal Church
Source: Lake-Elsinore.com



Santa Fe Train Station
Source: lakeelsinorehistoricalsociety.org



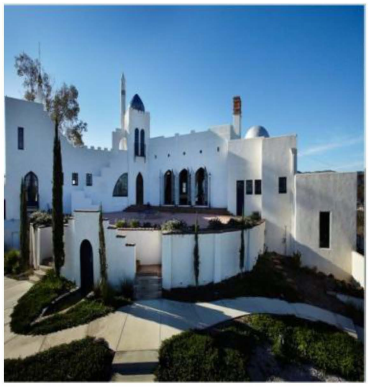
Mary J. McDonald Fountain and Building
Source: https://www.pressenterprise.com

[19] Downtown Elsinore Specific Plan, 2018

Locally Recognized Significant Historical Resources[20]:

The sites listed below are not on official historical registers but have been locally recognized for their historical significance.

- Aimee's Castle - A 1929 Moorish Revival style with Art Deco influence mansion constructed for Aimee Semple McPherson, a 1920s evangelist. Aimee's Castle's unique features include a hidden tunnel, hand-painted murals, a domed dining room ceiling resembling the night sky, and rooftop where Aimee would preach. It is now owned by Rock Church. Location: 17375 Sunnyslope Avenue
- The Adobe Machado House and Butterfield Stage Stop – built in 1858, served as a Butterfield Overland Mail route relay station. It was the oldest building in Lake Elsinore; however, the Adobe House, was destroyed by fire in 2017. Location: 15410 Grand Avenue
- Elsinore Naval Military Academy – Built in the 1920s, it was originally intended to be used as a country club; however, the country club never opened due to financial problems. The structure served as a boys boarding school (grades 1 -12), which operated from 1933-1977. Location: 15900 Grand Avenue
- Lake Theater - Originally built as a movie theater in the 1950s and later renovated in 1990, the Lake Theater is now the City's first Senior and Community Center. Location: 310 W. Graham Avenue
- Heritage Home (Strickland Home), 1905 Location: 700 West Graham Street
- First Presbyterian Church, 1889 Location:105 North Lindsey Street
- Elsinore Valley Cemetery – Greenwood Cemetery, originally 12 acres in 1891, is now known as Elsinore Valley Cemetery. According to records, eight Elsinore pioneers were disinterred from the "old cemetery" (Minthorn Street, east of Interstate 15) and re-buried in Elsinore Valley Cemetery. Location: 18170 Collier Avenue



Aimee's Castle
Source: https://paradiseleased.wordpress.com/2010/11/22



Elsinore Naval Military Academy
Source: https://www.atlasobscura.com/places/elsinore-naval-military-school



Lake Theater
Source: https://cinematreasures.org/theaters/35965/photos/108442

[20] Lake Elsinore Historical Society, 2023

Lake Elsinore Historic Homes of Interest[21]:

The Downtown Elsinore Specific Plan identifies the following homes as historic.

- 219 North Riley Street, 1920
- Scotty's Castle, 226 East Franklin Street, 1924
- Gardner Home, 228 South Spring Street, 1912
- 257 Hill Street

Tribes, Historic Preservation Organizations, and Services

Affiliated Tribes

Tribal governments act to preserve and protect tribal cultural resources, historic property, traditional cultural places, sacred sites, Native American human remains and burial areas, and other places and resources of ongoing cultural, spiritual, historical, and ceremonial importance to the tribal communities. The Luiseño Tribes are traditionally culturally affiliated with the City of Lake Elsinore and the SOI, including *Páayaxchi* and its surrounding cultural landscapes.

Many of the Luiseño Tribes have cultural departments and designated representatives who possess and maintain tribal traditional knowledge, oral and cultural history, ethnographic information, cultural expertise, and historical knowledge, as well as Tribal Historic Preservation Officers (THPOs), who hold knowledge of traditions, cultural expertise, and historical information for the Tribes, including, but not limited to, sacred knowledge concerning tribal cultural resources, historic property traditional cultural places, sacred sites, traditional plant use, waterways, and culturally-significant landforms within the region. Such information is often uniquely held by tribal governments and may not be available from any other source. Tribal knowledge and expertise are necessary for the accurate identification, evolution, treatment, management, and protection of tribal cultural resources and traditional cultural places. This fact underscores the importance, value and necessity of open, meaningful, good-faith, timely, and ongoing government-to-government consultation and coordination with the traditional culturally affiliated Tribes.

California State law has multiple statutory frameworks requiring government-to-government consultation with Tribal governments concerning land use planning, environmental review, and the protection of tribal cultural resources. Two key pieces of legislation include Senate Bill (SB) 18 (2004) and Assembly Bill (AB) 52 (2014).

Senate Bill 18 requires local governments to consult with California Native American Tribes during the planning stages of local land use decision-making processes. It is designed to allow for the consideration and protection of traditional Tribal cultural places, sacred sites and tribal cultural resources in the context of local land use policy planning decisions. SB18 applies to a General Plan's adoption or

[21] Ibid.

amendment, a Specific Plan's adoption or amendment, and open space land use designations, as well as other applicable planning actions.

Assembly Bill 52 amended the California Environmental Quality Act (CEQA) to require public agencies at the State and local levels to consult with California Native American Tribes during the CEQA environmental review processes concerning projects that may cause significant adverse impacts to tribal cultural resources. AB52 formally recognized tribal cultural resources as a distinct category of environmental resource and dire and directed lead agencies to identify significant environmental impacts to such resources, and avoid or mitigate those impacts, when feasible, through early, meaningful and good-faith consultation with culturally affiliated tribes.

The City will consult with tribes in accordance with the requirements of SB18, AB52, CEQA, the National Historic Preservation Act (NHPA), applicable provisions of the California Public Resources Code and Government Code, and other applicable Federal, State regional and local laws, regulations and policies. Through these consultations, tribes may share resource/site and cultural information related to project areas. During the consultation process, tribes will also have the opportunity to review development applications that may have an impact on historic resources and may provide comments to the Planning Department or other City departments and officials, including, but not limited to, recommendations for culturally-appropriate treatment and protection measures relevant to the scope and nature of the proposed plans, policies and development activities.

Information obtained through tribal consultation with Luiseño Tribes may help in the early identification, preservation and protection of tribal cultural resources and historic properties, including traditional cultural places, from the outset of a project design or land use planning phase. It is anticipated that development, redevelopment, infrastructure improvements, grading, and other ground-disturbing activities and land use changes may impact tribal cultural resources and traditional cultural places throughout Lake Elsinore and its Sphere of Influence. Adherence to existing laws, rules, and regulations and engaging in meaningful and ongoing consultation with the Luiseño Tribes is vital to avoid or reduce impacts to tribal cultural resources and historic property traditional cultural places, by facilitating early identification of tribal cultural resources and traditional cultural places, allowing for project design modifications or avoidance and preservation measures, and ensuring that Luiseño Tribes have input into culturally-appropriate treatment measures and mitigation strategies during construction of development projects.

Lake Elsinore Historical Society

The Lake Elsinore Historical Society was founded in 1996 to collect, protect, preserve, display, and further the preservation of items and documents of historical value and significance from the Lake Elsinore Valley. The Lake Elsinore Historical Society Museum, located at 183 North Main Street, displays over 300 years of artifacts, and includes exhibits of the Elsinore Naval and Military Academy, Aimee's Castle, sports memorabilia, and antique household and farm tool items. The Historical Society reviews

development applications that impact historic resources and may provide comments to the Planning Department.

Key Considerations

- Much of Lake Elsinore and its SOI are designated as having high paleontological sensitivity (High A or High B). As a result, soil disruption from both natural and human-made causes may unearth additional resources.
- As time progresses, buildings and other potential resources age and cultural resources evolve and reveal themselves. With these changes additional resources will become eligible for historic and cultural resource designation. The City must consider an ongoing policy to address identifying and managing additional historic, cultural resources and tribal cultural resources.

Historic, Cultural, and Tribal Cultural Resources Goals and Policies

GOAL HCTCR-1: PROTECT LAKE ELSINORE'S PALEONTOLOGICAL RESOURCES AND ENHANCE UNDERSTANDING OF THE CITY'S PREHISTORY

Policy HCTCR-1: Protect paleontological resources from destruction, or inappropriate actions or consequences, as feasible.

GOAL HCTCR-2: PROTECT AND PRESERVE TRIBAL CULTURAL RESOURCES, HISTORIC PROPERTIES AND UNIQUE ARCHAEOLOGICAL RESOURCES IN LAKE ELSINORE

Policy HCTCR-2: Honor the early stewards of the Lake Elsinore area.

Policy HCTCR-3: Acknowledge the Native American tribes and Luiseño (*Payómkawichum*) people who traditionally and historically populated Lake Elsinore and its Sphere of Influence.

Policy HCTCR-4: Confer with Riverside County to acknowledge and reflect the history and ongoing cultural presence of the Luiseño (*Payómkawichum*) people in the Sphere of Influence.

Policy HCTCR-5: Safeguard Native American heritage in the City of Lake Elsinore by minimizing, to the fullest extent feasible, significant adverse impacts to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources. Encourage project applicants to design projects in a way that protects Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources in passive open space areas on the project site, when feasible.

Policy HCTCR 6: Integrate tribal traditional knowledge, tribal information, methods and standards into City planning and land use decision-making processes to preserve and protect Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources..

Policy HCTCR 7: Conduct early, ongoing and meaningful government-to-government consultation with Tribes for all planning and development activities, subdivisions, and decisions affecting the identification, evaluation, treatment, management, mitigation, and protection of Tribal Cultural Resources, Historic Properties, and Unique Archaeological Resources.

Policy HCTCR-8: Protect the confidentiality of sensitive information provided by Tribes to the City, including information provided to the City during tribal consultation, to the fullest extent permitted by law, to prevent looting, vandalism or damage to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, and unauthorized use or disclosure of such information.

Policy HCTCR-9: Develop and implement compliance measures to ensure adherence to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources protection requirements established by the City and applicable State and Federal laws.

Policy HCTCR-10: Implement avoidance and minimization measures to prevent significant adverse effects to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources and, to the fullest extent feasible, maximize their preservation and protection.

Policy HCTCR-11: Recognize and acknowledge that Historic Properties, including properties containing historic structures, may also contain Tribal Cultural Resources and/or Unique Archaeological Resources that must be considered during planning, project review and site-management activities.

Policy HCTCR-12: In consultation with Culturally Affiliated Tribal governments, adopt a Tribal Cultural Resources Land Use Overlay ("TCR Overlay") that is intended to pre-identify lands that may contain known Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, including the Luiseño sacred site known as *Páayaxchi*. The TCR Overlay is intended to provide a transparent and efficient process to address known Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources.

Acknowledging the City's history and pre-contact history and the Culturally Affiliated Tribal government's tribal traditional knowledge, ethnographic, oral history, cultural, and historical information, the TCR Overlay will provide respectful protections for one of the most notable and documented Luiseño sacred sites,

known as *Páayaxchi*. Land use and development projects located within the TCR Overlay boundary shall be subject to, and will benefit from, early consultation and coordination with the City and Culturally Affiliated Tribal governments concerning the cultural significance of the subject lands, and any additional evaluation or mitigation criteria that may be applicable. See Program HCTCR-3 for more information.

Policy HCTCR-13: Establish and implement a transparent and systematic process to address inadvertent/accidental finds of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources. The process shall include, but not be limited to, temporary halt work requirements in the immediate vicinity of the discovery; coordination and consultation procedures among developers, the City, and consulting Culturally Affiliated Tribal governments; resource/site evaluation steps; timeframes; contingency funding, and a good-faith resolution process concerning the culturally-appropriate treatment of resources/sites, including dispute resolution mechanisms.

GOAL HCTCR-3: PROTECT AND ENHANCE LAKE ELSINORE'S ARCHAEOLOGICAL, HISTORIC, AND TRIBAL CULTURAL RESOURCES, ENRICHING THE SENSE OF PLACE AND UNDERSTANDING OF THE CITY'S HISTORY

Policy HCTCR-14: Recognize and acknowledge Luiseño (*Payómkawichum*) people as the original ancestral inhabitants and caretakers of the area known today as the City of Lake Elsinore.

Policy HCTCR-15: The City recognizes Tribes as the primary sources of expertise regarding Tribal Cultural Resources, tribal cultural values, tribal traditional knowledge and culturally – appropriate treatment. Tribal information, including, without limitation, oral history, ethnographic information, Tribal Historic Preservation Officer (THPO) statements, elder testimony and other traditional tribal knowledge may constitute substantial evidence. The City shall consider and may rely on such information, while retaining final responsibility for determining feasibility, mitigation and project conditions.

Policy HCTCR-16: Acknowledge *Páayaxchi* as a Historic Property Traditional Cultural Place (TCP)[22], which, based on tribal substantial evidence, is eligible for listing in the federal and

[22] **Historic Property Traditional Cultural Place (TCP)**
A particular type of Historic Property that is eligible or listed due to its association with the cultural belief, customs, traditions, practices, or history of a living community or Tribe. A TCP may include natural features, landscapes, gathering areas, trails, or places of ongoing cultural importance.
A TCP may also be a Tribal Cultural Resource and/or a Unique Archaeological Resource.

State Register of Historical Resources, and is traditionally culturally affiliated with Luiseño people and their present-day Luiseño Tribal governments. The City shall consider and may rely on such information, while retaining final responsibility for determining feasibility, mitigation and project conditions.

Policy: HCTCR-17: Support and foster government-to-government relationships between the City and Luiseño Tribal governments for purposes of shared government goals, land stewardship, and heritage preservation .

Policy: HCTCR-18: Preserve Lake Elsinore's historic sites, buildings, and neighborhoods.

Policy: HCTCR-19: In compliance with applicable laws and to the extent feasible, protect Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources from unpermitted demolition, destruction, and inappropriate actions or consequences.

Policy: HCTCR-20: Recognize and acknowledge that certain archaeological resources may also be Tribal Cultural Resources, and that certain archaeological methods and standards, may not be suitable for the identification, assessment, and treatment of Tribal Cultural Resources. For Tribal Cultural Resources, when feasible, tribal identification standards, along with culturally appropriate and sensitive treatment methods shall be given deference.

Policy: HCTCR-21: Develop and maintain, in coordination with Culturally Affiliated Tribal governments, formal Tribal Cultural Resources and Tribal Consultation Guidelines ("Guidelines"). The Guidelines shall establish a transparent and efficient framework outlining steps and processes, including best practices concerning tribal consultation, the identification of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, and best practices for conducting good-faith discussions between the City and consulting Tribes, including project applicants, concerning mitigation measures, treatment solutions and enforceable measures and conditions. The Guidelines shall be designed to provide clarity, certainty and fairness for the City, project applicants, and consulting Tribes in implementing compliance with Tribal Cultural Resources, Traditional Cultural Places (TCPs), and Sacred Sites laws, including, but not limited to, AB52, CEQA, the National Historic Preservation Act (NHPA), Section 106 processes, SB18 planning requirements, Senate Bill 35 and AB168 housing streamlining provisions, AB130 CEQA exemptions, and other applicable federal and State laws governing land use and development permitting processes administered by the City. See Program HCTCR-14 for more information.

Implementing Programs for Goals HCTCR-1 though HCTCR-3

Zoning Code/Map Update

PRO-HCTCR-1: Consider the potential impacts of lot subdivisions, urban lot splits, and development applications on historical and cultural sites. Develop objective design standards and development standards, as appropriate.

PRO-HCTCR-2: Update the zoning code to encourage compatible new development of and near buildings, structures, sites, districts, and landscapes with historic designations to maintain the historic building pattern and neighborhood character, and to ensure limited physical and visual impact to existing historic resources and within older neighborhoods.

PRO-HCTCR-3: In consultation with culturally affiliated Tribal governments, develop procedures governing the Tribal Cultural Resources Land Use Overlay ("TCR Overlay"), which shall:

- Address land known to contain Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, including sacred lands listed or identified on the Native American Heritage Commission (NAHC) Sacred Lands File (SLF), and *Páayaxchi;*
- Address lands that have a reasonable potential to contain Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources based on tribal traditional knowledge, ethnographic information, oral history, historical information, including historical maps and waterways, archaeological data, including site records and studies/reports, biological information, including cultural plants, topographic and land features, or other substantial evidence;
- Specify applicability to all land use development processes for projects located within the TCR Overlay, including establishing referral triggers;
- Provide review procedures for projects/properties located within the TCR Overlay boundary;
- Provide for early tribal engagement and consultation to support the early identification of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources;
- Establish additional consultation, evaluation and mitigation criteria for projects within the TCR Overlay boundary, including but not limited to, long-term management and voluntary co-management with consulting Culturally Affiliated Tribal governments;
- Implement an avoidance evaluation and consideration process that examines avoidance measures, to the extent feasible, when requested by a consulting Tribe, in order to preserve-in-place or minimize significant adverse impacts to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources;

- Include confidentiality requirements for the protection of sensitive resources and information identified within the TCR Overlay; and
- Establish enforcement mechanisms to ensure compliance with all City requirements.

The TCR Overlay shall be adopted within two to three (2-3) years following adoption of the 2026 General Plan Update. The TCR Overlay may be periodically reviewed and updated in consultation with the Culturally Affiliated Tribal governments, as needed. This program implements Policy HCTCR 2-12.

Building, Municipal, and Other Code Updates

PRO-HCTCR-4: Establish development standards and/or guidelines to encourage the preservation of materials, such as historic windows, doors, siding, and trim, for potential reuse, as feasible when historic buildings are improved, expanded, or renovated.

Review Process

PRO-HCTCR-5: Require projects proposed in areas identified as "High" or "Undetermined" for paleontological resources to hire certified paleontologist to perform a literature search and/or survey and apply the relevant treatment for the site as recommended by the Society of Vertebrate Paleontology.

PRO-HCTCR-6: Require project applicants to conduct and submit, as part of the application process, detailed results from records searches of the California Historical Resources Information System (CHRIS), the Native American Heritage Commission (NAHC) Sacred Lands File (SLF), the State Historic Preservation Officer (SHPO), and other applicable registers to determine whether the project area contains recorded Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources.

PRO-HCTCR-7: Work with project applicants and consulting Tribes to incorporate feasible preservation strategies into project planning and design to protect Tribal Cultural Resources, Historic Properties, and Unique Archaeological Resources. Such strategies may include, without limitation, project redesign, site planning adjustments, clustering, reduced or controlled grading, modified setbacks, designation of passive open space areas, restrictive covenants or conservation easements, flexible development standards, density transfers, incentives, variances, and other land use planning tools or mechanisms intended to avoid or reduce impacts to Tribal Cultural Resources, Historic Properties, and Unique Archaeological Resources, consistent with CEQA applicable land-use laws.

PRO-HCTCR-8: Consider the impacts of climate change, erosion, flooding, wildfire, and other environmental conditions on Tribal Cultural Resources, Historic Properties, and Unique Archaeological Resources, and implement appropriate preservation and preventative measures, such as dust barriers and erosion control measures.

PRO-HCTCR-9: Provide Tribes with all relevant and available City-held documentation for the proposed project area prior to tribal consultation, including, without limitation, reports, maps, prior development and site plans, environmental documents, grading information, subsurface testing results, and any relevant prior project approvals including mitigation measures and conditions of approval.

PRO-HCTCR-10: Continue to require project areas found to contain significant archaeological resources (as defined in California Public Resources Code Section 21083.2) be examined by a registered professional archaeologist, and as required, State and/or federal agencies, and consulting Tribes, consistent with all applicable tribal consultation requirements.

PRO-HCTCR-11: Engage in meaningful consultation with interested individuals, historic resources groups, and culturally affiliated Tribes to determine if identified significant cultural resources, Tribal Cultural Resources (TCRs) or Historic Property Traditional Cultural Places (TCPs) are eligible for inclusion in the National Register of Historic Places, the California Register of Historic Places or local historic registries.

PRO-HCTCR-12: The City shall notify and provide consulting Tribes the opportunity to participate in archaeological work including, but not limited to, surveys, testing programs including Phase I, Phase II, Phase III and Cultural Resources Management Plan (CRMP) activities, subject to confidentiality protections, professional standards, safety requirements and project-specific conditions.

Consulting Tribes shall also be invited to participate in the preparation and review of all documents concerning archaeological work and investigations. All reports, program documents, testing plans, filed methodologies, treatment plans and on-site protocols shall be prepared by registered professional archaeologists in coordination with consulting Tribes. The City shall develop procedures for inclusion in the Guidelines (Policy HCTCR-21; Program HCTCR-14) establishing how tribal input will be incorporated into archaeological work plans, field methodologies, reporting and treatment measures. Phase I and Phase II investigations shall be conducted and documented as separate processes. The City will retain final authority to determine report adequacy and required project mitigation and conditions.

New Plans, Programs, and Strategies

PRO-HCTCR-13: Identify and minimize obstacles for property owners of Historic Property Structures[23] to support historic preservation, such as permit streamlining; proactive guidance for navigating historic preservation review; guidelines for appropriate modifications,

[23] **Historic Property Structure**
A particular type of Historic Property that is eligible or listed, and is a building or structure.
Historic Property Structures may have been constructed on or with other types of Historic Property sites and/or Unique Archaeological Resources.

expansions, and renovations of historic buildings, structures, and sites with potential historic significance and/or with historic designation.

PRO-HCTCR-14: As permitted by the California Environmental Quality Act (CEQA) Guidelines Section 15169, and to implement City's Policy HCTCR-21, develop and maintain, in coordination with Culturally Affiliated Tribal governments, formal Tribal Cultural Resources and Tribal Consultation Guidelines ("Guidelines"), establishing clear, consistent, criteria, procedures and best practices that, at a minimum, address the following:

- Tribal consultation for the efficient evaluation and processing of land use development and subdivision applications;
- Identifies relevant and applicable Federal, State, regional, and local laws, policies, and guidelines that address impacts on Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources;
- Provide Tribes with all relevant and available City-held documentation for the proposed project area prior to tribal consultation, including, without limitation, reports, maps, prior development and site plans, environmental documents, grading information, subsurface testing results, and any relevant prior project approvals including mitigation measures and conditions of approval;
- Detailed tribal consultation steps and requirements, including timelines, communication procedures, confidentiality standards, and documentation practices, including, but not limited to:
  - Early tribal engagement during the planning, land use and development application review processes, as appropriate;
  - Regulatory framework governing Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources;
  - Situations where avoiding or minimizing significant adverse impacts to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources may be requested and considered as a part of the project design;
  - Carry out Tribal Cultural Resources compliance with other requirements of the California Environmental Quality Act (CEQA) and all other applicable and relevant laws;
  - Consideration and evaluation process for resources under the eligibility criteria for inclusion in the National Register of Historic Places, the California Register of Historic Resources, or any other appropriate and relevant registries;
  - Use and application of tribal information as substantial evidence; and
  - Culturally-appropriate management practices and protective measures for open space areas permanently preserved for Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources;
- Culturally-appropriate identification, evaluation, treatment, mitigation, protection, and management of Tribal Cultural Resources, Historic Properties and Unique

Archaeological Resources, including feasible avoidance measures and best practices for minimizing significant adverse impacts to such resources/sites;

  - Contributing elements to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources may include, but shall not be limited to, flora, fauna, waterways, viewsheds, landscapes, geological resources. The Guidelines shall also include an inventory of traditional cultural plants, flora and fauna for consideration in project biological studies;

- Develop and adopt standard protection and treatment measures for Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources. These measures shall be developed and implemented within two to three (2-3) months following adoption of the 2026 General Plan Update, and shall also be incorporated into the final Guidelines;
- Procedures and protocols for the inadvertent/accidental discovery of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, including Native American human remains and burial items;
- Confidentiality protections and related processes; and
- Other measures, as appropriate.

The Guidelines shall be developed separately from the General Plan and this program shall be implemented within two to three (2-3) years following adoption of the 2026 General Plan Update. The Guidelines may be periodically reviewed and updated in consultation with Culturally Affiliated Tribal governments, as needed.

For the purposes of drafting the Guidelines, conduct regularly scheduled (occurring no less than quarterly) coordination meetings, beyond those required by State and Federal laws, between Culturally Affiliated Tribal governments and key planning staff from the City of Lake Elsinore. This program implements Policy HCTCR-21.

Special Studies and Projects

PRO-HCTCR-15: Pursue designation as a Certified Local Government Program by the National Parks Service (NPS) and the California Office of Historic Preservation (OHP) to assist in funding local historic preservation.

PRO-HCTCR-16: Complete the update of the 1991 Survey of Historic Structures and Sites. Include historic structures and districts that may have become eligible for historic listing since 1991. Post the updated survey on the City's website to ensure easy access and use by the public.

PRO-HCTCR-17: Consider preparing Historic Community Plan development standards and guidelines to encourage the preservation of the area's urban, site, architectural, and landscape architectural design character and development pattern.

PRO-HCTCR-18: Consider expanding the City's Arts and Culture program to include historical themes in its public art program.

PRO-HCTCR-19: Expand the Arts and Culture program to key destinations and centers including but not limited to Lake Elsinore Levee Walk, Launch Point Recreation Center, and Uptown.

PRO-HCTCR-20: Strongly encourage and incentivize adaptive re-use of structures with potential historic significance over demolition.

PRO-HCTCR-21: Identify and pursue funding and resources to pursue designating new landmarks and historic preservation districts.

Ongoing Processing and Procedures

PRO-HCTCR-22: Follow the Secretary of the Interior Standards for Preservation, Rehabilitation, Restoration, and Reconstruction for the treatment of historic property structures.

PRO-HCTCR-23: Provide owners of buildings, structures, and sites with potential historic significance and those with historic designations clear and cost-effective options to measurably enhance energy efficiency while maintaining the historic integrity to the greatest extent possible.

PRO-HCTCR-24: Recognize that tribal traditional knowledge and tribal expertise may independently constitute substantial evidence to support the identification and significance of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources.

PRO-HCTCR-25: Ensure tribal consultation complies with applicable laws, including, without limitation, SB18, AB52, the California Environmental Quality Act (CEQA), the National Historic Preservation Act (NHPA), and other State and federal requirements, for all relevant applications, plans, policies, and projects with the potential to impact Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources.

PRO-HCTCR-26: Document the City's good-faith consideration of tribal input and information, including tribal traditional knowledge.

PRO-HCTCR-27: In compliance with State and federal laws, and in consultation with Culturally Affiliated Tribal governments, the City will establish and implement in the Guidelines (Policy HCTCR-21, Program HCTCR-14), protocols and practices preventing public disclosure of sensitive and confidential Tribal Cultural Resources, Historic Properties, and Unique Archaeological Resources information, such as geographic location, site identification information, sensitive tribal information, and tribal traditional knowledge, for purposes of project review, environmental review under applicable laws, and public hearings, including protocols for confidential appendices and generalized descriptions required in environmental documents.

PRO-HCTCR-28: Establish and implement, in consultation with Culturally Affiliated Tribal governments, secure data management practices, including Public Records Act notification and

disclosure practices and protocols ensuring the confidentiality of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources and sensitive tribal information.

PRO-HCTCR-29: If requested by a consulting Tribe, prior to grading permit issuance, require the establishment of a temporary storage container to house Tribal Cultural Resources until final disposition.

Temporary holding containers shall:

- Be located in an area that does not impact any onsite sensitive resources;
- Be accessible to consulting and monitoring Tribes via public road for vehicle and pedestrian access; and
- Provide for the culturally-appropriate storage of resources in paper or fiber bags.

PRO-HCTCR-30: If Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, significant archaeological resources (as defined in California Public Resources Code Section 21083.2), or Native American Human Remains are discovered during ground-disturbing, grading or other development activities, require the implementation of inadvertent discovery procedures that, at a minimum, include the following:

- Immediately halt all work and further ground disturbance, equipment staging, soil stockpiling, and construction-related activities within the area of discovery and within a minimum 100-foot radius surrounding the discovery as determined appropriate by the consulting Tribes and registered professional archaeologist, and secure the area using appropriate protective measures, such as silt fencing, temporary barriers or other appropriate methods until consultation and evaluation of the discovery is completed and appropriate treatment measures are identified. Work may continue outside of the halt work area;
- Immediately notify the City of Lake Elsinore, which shall subsequently and promptly notify the consulting Tribes;
- Coordinate with the consulting Tribes (or Most Likely Descendant) and registered professional archaeologist and any other relevant qualified professionals to evaluate the discovery and, in good-faith, determine whether it constitutes a significant archaeological resource (as defined in California Public Resources Code Section 21083.2), Tribal Cultural Resource, Historic Property, Unique Archaeological Resource, or Native American Human Remains, as appropriate;
- Engage in meaningful and good-faith discussions to identify and determine culturally-appropriate treatment, handling and long-term protections for the discovery with the goal of reaching agreement;
- If the parties are unable to agree on any one or more identification, treatment, documentation and protection measure(s), the parties shall consult with the City on any disagreements. The City will consider all information from the good-faith

discussions and recommendations from the consulting Tribes, registered professional archaeologist, project applicant and other relevant qualified professionals, and shall make a final determination on the disputed identification, treatment, documentation and protection measures;

- Document final decisions in a written treatment agreement; and
- Work shall not resume within the protected discovery area until authorized by the City.

PRO-HCTCR-31: Follow the Secretary of the Interior Standards for Preservation, Rehabilitation, Restoration, and Reconstruction for the treatment of Historic Property Structures.

PRO-HCTCR-32: Recognize that Native American Human Remains, including Burial Areas, located within the City of Lake Elsinore are the Ancestral Remains and sacred cultural heritage of the present-day Luiseño (*Payómkawichum*) Tribes. In recognition of the cultural and historical significance of Native American Burial Areas, ensure the respectful treatment and culturally-appropriate mitigation and management of Native American Human Remains and associated Tribal Cultural Resources, including requiring avoidance and minimization of impacts to the greatest extent feasible.

In the event of an inadvertent discovery of Native American Human Remains during project development or ground-disturbing activities, and in addition to compliance with the applicable requirements of the California Health & Safety Code and the California Public Resources Code, the City will require, the following: immediate halt of all work within a minimum 100-foot radius surrounding the discovery as determined appropriate by the consulting Tribes and registered professional archaeologist, use of protective measures for the discovery area such as silt fencing, temporary barriers or other appropriate protection methods, prompt notification and consultation with consulting Tribes and applicable agencies, and meaningful good-faith discussions concerning the identification of the discovery, and culturally-appropriate treatment, handling and any long-term protections with the goal of reaching agreement.

If the parties are unable to agree on any one or more identification, treatment, documentation and protection measure(s), the parties shall consult with the City on any disagreements. The City will consider all information from the good-faith discussions and recommendations from the consulting Tribes, registered professional archaeologist, project applicant, and other relevant qualified professionals, and shall make a final determination on the disputed identification, treatment, documentation and protection measures. All final decisions will be documented in a written agreement.

Work shall not resume within the halt work area until authorized by the City

PRO-HCTCR-33: Incorporate tribal input into long-range land use planning, policies, zoning, and development standards for public and private lands.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-HCTCR-34: Establish and conduct regular (at least quarterly) government-to-government meetings between the City of Lake Elsinore and Culturally Affiliated Tribal governments. Discussion items may include, but are not limited to, early consultation; relationship building; shared government goals; and coordination on planning initiatives.

PRO-HCTCR-35: Provide opportunities to culturally affiliated Luiseño Tribal governments to participate in planning, educational and community engagement efforts that recognize and reflect the cultural heritage and continued cultural affiliation of the Luiseño people to the City of Lake Elsinore.

PRO-HCTCR-36: Develop an archaeological, historic, and cultural resources awareness program that informs the public about the archaeological, historic, and cultural resources including but not limited to installing plaques and/or educational signage at locations of cultural significance and significant events.

PRO-HCTCR-37: Continue to support the Lake Elsinore Historical Society including its heritage walking tour, and other programs.

PRO-HCTCR-38: Partner with the local tourism industry, school districts, property owners, businesses, nonprofit organizations, and other public agencies to develop and promote heritage tourism opportunities, integrating efforts with ongoing initiatives for economic development and the creative economy.

PRO-HCTCR-39: Work with local schools and historic organizations to engage and interest residents of all ages in Lake Elsinore's archaeology, history, and historic and cultural sites, structures, and neighborhoods.

PRO-HCTCR-40: Establish methods, such as website postings, social media and periodic flyers to educate property owners and residents about the City's historic preservation program.



Environmental Justice

In This Section

Introduction

Disadvantaged Communities

Healthy Places Index

Environmental Justice Goals and Policies

Environmental Justice Element

Introduction

Environmental justice provides a specific lens through which to redress disparities in socio-economic outcomes that fall along a community's racial, ethnic, gender, and economic identities. The geographic dimension of these disparities became etched in maps through tribal lands loss, redlining, racially restrictive covenants, Jim Crow laws, and exclusionary zoning. Barriers to voting, equal representation, and discrimination in appointments against Black, Hispanics, Asian, Pacific Islanders, and American Indians created the decision-making environments that let harmful land uses flourish and public infrastructure fail to meet the needs of the underserved. The deficits of that system—including a lack of transparency—prevented these communities from equal participation in society such as political processes or to be informed about disparities in facilities and services to the detriment of public health and economic development. This Environmental Justice Element represents the City's commitment to ensuring that all people receive equal treatment, equal access, and equal protection, and that everyone has the opportunity to engage in decisions that affect their health and economic well-being. Environmental justice planning and policies seek to address existing inequalities regarding pollution and health burdens that certain communities disproportionately face.

The State of California defines Environmental Justice as:

> the fair treatment and meaningful involvement of people of all races, cultures, and incomes regarding the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.[1]

Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations and policies. Senate Bill 1000 (2016) (SB1000) requires local jurisdictions with disadvantaged communities to incorporate environmental justice policies into their general plans. If a local jurisdiction has a disadvantaged community, as defined by State law, the environmental justice element, or related environmental justice goals, policies, and objectives integrated in other elements, are required to do the following:

- Identify objectives and policies to reduce the unique compounded health risks in disadvantaged communities by means that include, but are not limited to, the reduction of pollution exposure, including the improvement of air quality, and the promotion of public facilities, food access, safe and sanitary homes, and physical activity.
- Identify objectives and policies to promote civic engagement in the public decision-making process.

[1] https://oag.ca.gov/environment/sb1000

- Identify objectives and policies that prioritize improvements and programs that address the needs of disadvantaged communities.[2]

This Environmental Justice Element provides a set of goals, policies, and programs to address environmental justice in these areas: pollution exposure, public facility access, food access, safe and sanitary housing, physical activity, civic engagement and the prioritization of improvements in the City's disadvantaged communities. As permitted by SB1000, the City of Lake Elsinore has chosen to adopt an Environmental Justice Element rather than integrating policies and programs into other elements.

Disadvantaged Communities

Climate burdens are the disproportionate harm of climate change, such as health issues and economic losses, that fall most heavily on vulnerable communities (low-income, Indigenous, and People of Color [BIPOC] populations). In California, the State of California has defined some communities as "disadvantaged communities". Lake Elsinore has three census tracts identified as disadvantaged communities (DAC). One census tract, 430.06, lies wholly in the City of Lake Elsinore, while the other two, 429.01 and 430.01 are within both the City of Lake Elsinore and its Sphere of Influence (SOI) as illustrated in Figure EJ-1.

California law defines "disadvantaged communities" as areas that are most afflicted with a combination of economic, health, and environmental burdens.[3] The California Communities Environmental Health Screening Tool "CalEnviroScreen" was developed by the California Environmental Protection Agency (CalEPA) to identify environmental justice communities using the following indicators:

- Pollution Burden: Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation; and
- Population Characteristics: Areas with concentrations of people with low incomes, high unemployment, low levels of homeownership, high rent burden, low levels of educational attainment, and/or are sensitive populations (e.g., disabled individuals, seniors, and emancipated foster youth).

The CalEnviroScreen 4.0 indicators are listed in Table EJ-1.

[2] oag.ca.gov/environment/sb1000
[3] oag.ca.gov/environment/sb1000

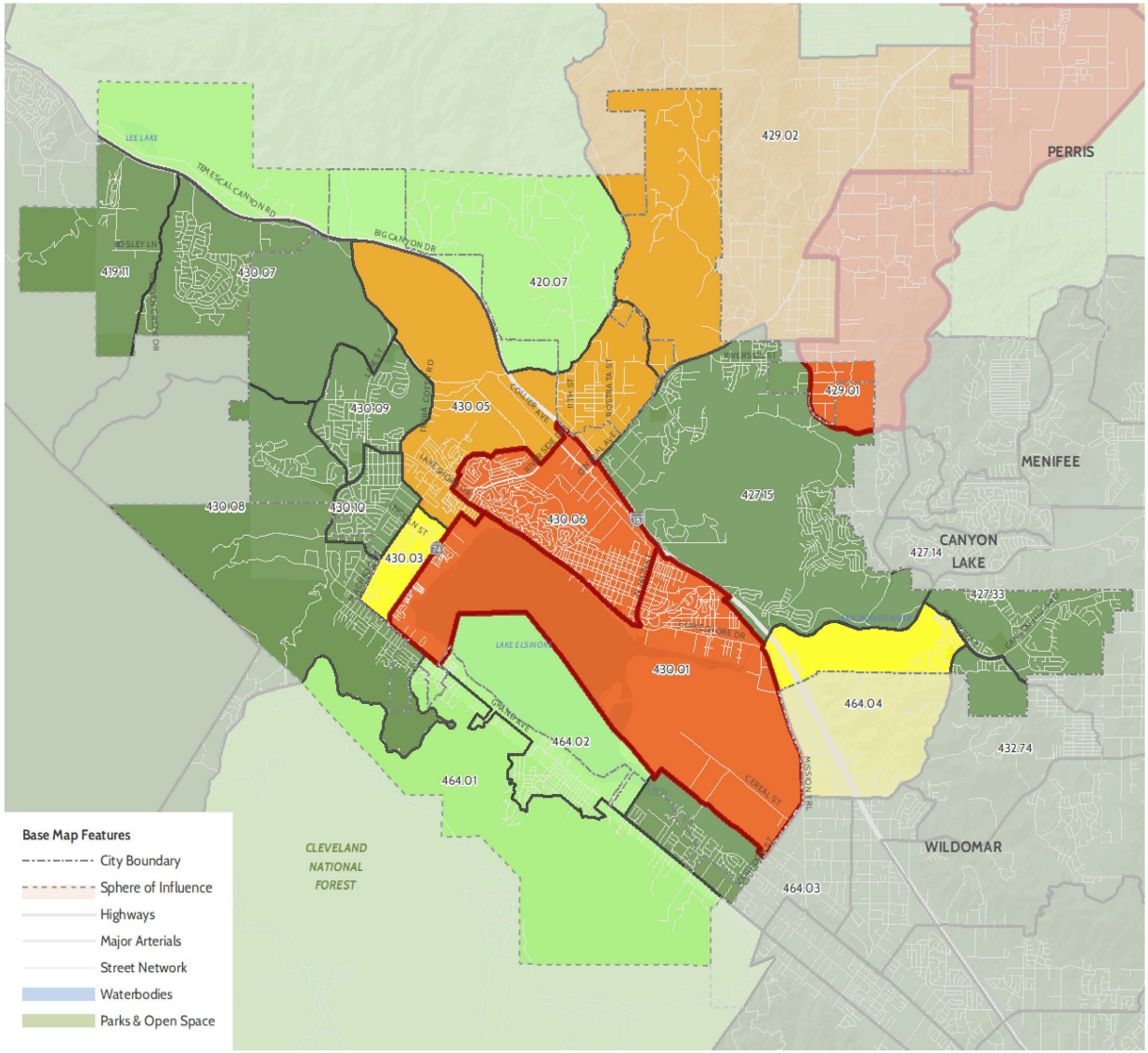


Figure EJ-1

CALENVIROSCREEN 4.0

CES 4.0 Percentile Scores

- 54% or Lower
- 55 - 59%
- 60 - 64%
- 65 - 69%
- 70 - 74%
- 75% or Higher (DAC)

Prepared by MIG, October 2023.
Source: California Health Hazard Assessment, Public Health Alliance of Southern California, 2021

0 ¼ ½ 1 1½ 2 Miles

Table EJ-1: CalEnviroScreen 4.0 Indicators

Pollution Burdens	
Exposure Indicators: • Ozone concentrations in air • PM 2.5 concentrations in air • Diesel particulate matter emissions • Drinking water contaminants • Children's Lead Risk from Housing • Use of certain high-hazard, high volatility pesticides • Toxic releases from facilities • Traffic density	**Environmental Effect Indicators:** • Toxic cleanup sites • Groundwater threats from leaking underground storage sites and cleanups • Hazardous waste facilities and generators • Impaired water bodies • Solid waste sites and facilities
Population Characteristics	
Sensitive Population Indicators: • Asthma emergency department visits • Cardiovascular disease (emergency department visits for heart attacks) • Low birth weight infants	**Socioeconomic Factor Indicators:** • Educational attainment • Housing burdened low-income households • Linguistic isolation • Poverty • Unemployment

Source: California Communities Environmental Health Screening Tool (CalEnviroScreen 4.0), Office of Environmental Health Hazard Assessment (OEHHA), 2021.

CalEnviroScreen produces a percentile ranking of census tracts to demonstrate the degree of burdens present in that tract relative to the rest of the State. For example, a 75th percentile ranking for a census tract would mean that it falls within the top 25 percent of all CalEnviroScreen scores statewide—and is among the highest burdened census tracts in California. A CalEnviroScreen score of 75 or higher also means the census tract is considered a Disadvantaged Community (DAC) for the purpose of the Environmental Justice Element. Table EJ-2 shows three census tracts (highlighted in blue) in the Planning Area with an overall percentile score in the top 25 percent, qualifying those tracts as DAC. While these three census tracts do not have significant pollution impacts, they possess significant socioeconomic and health burdens. The following discussion provides more detail regarding the CalEnviroScreen scores.

Table EJ-2: Lake Elsinore Planning Area's CalEnviroScreen 4.0 Percentile Scores

Census Tracts	Percentiles and Indicators		
	CES 4.0 Percentile	Pollution Indicators Percentile	Population Characteristics Percentile
Census Tracts in City of Lake Elsinore			
427.14	12	5	26
427.33	32	16	46
430.06	83	60	90
430.09	26	7	51
432.74	26	7	50
464.04	60	48	62
Census Tracts that Overlap City and Sphere of Influence			
420.07	59	80	42
427.15	49	58	40
429.01	82	70	81
429.02	73	46	85
430.01	75	55	81
430.03	64	21	95
430.05	73	51	81
430.07	11	14	14
430.08	42	18	62
430.10	27	4	63
464.01	55	37	63
464.02	59	31	75
464.03	43	13	72
Census Tracts in Sphere of Influence			
419.11	37	56	27

Source: CalEnviroScreen 4.0 the Office of Environmental Health Hazard Assessment, June 2018.
Note: Census tracts with a percentile of 75 or greater are highlighted in light blue, indicating these areas are within the top 25 percentiles in the State.

Pollution Burden[4]

CalEnviroScreen uses Pollution Burden as one of the two measures to designate a disadvantaged community. Pollution Burden is calculated by measuring the average exposure and environmental effects within the census tracts. Only one census tract scores above the 75th percentile for the aggregate pollution indicator, tract 420.07 (colored in darker brown in Figure EJ-2).

Pollution burdens receiving the most focus due to their higher composite scores and wide distribution of burden in Lake Elsinore are discussed below. Ozone, Traffic, and Solid Waste Facilities have the highest prevalence. Table EJ-3 shows the Pollution Burden percentiles for each census tract regarding the fourteen Pollution Burden indicators.

- **Cleanup Sites.** Brownfield sites containing hazardous substances are areas that suffer from environmental degradation. While some sites may be undergoing cleanup actions by governmental authorities or property owners, other sites clean up may experience delays due to high costs, lawsuits, and concerns regarding cleanup. Three census tracts are impacted by Cleanup Sites; they are 420.07, 429.01, and 429.02.
- **Hazardous Waste.** Hazardous Waste is potentially dangerous or harmful to human health or the environment. Potential health effects associated with living in proximity to hazardous waste processing and disposal sites include diabetes and cardiovascular disease. Three census tracts, 427.15, 429.01, and 429.02, have percentile rankings above 75 with tract 429.01 scoring in the 93rd percentile.
- **Solid Waste Facilities.** Solid waste disposal sites can release waste gases such as methane and carbon dioxide. Exposure to landfill leachate can have adverse impacts on reproductive and respiratory systems. Solid Waste Facilities impact four census tracts, 420.07, 427.15, 429.01, and 464.02 with both 420.07 and 429.01 both ranked in the 93rd percentile.
- **Traffic.** Exhaust from automobiles is the main air pollution source in much of California. Major roads/highways can bring the air pollutants into nearby residential neighborhoods. Children attending schools or live near busy roads tend to have higher rates of asthma and other lung diseases. Exhaust fumes containing toxic chemicals can damage DNA, cause cancer, and cause low birth weights and premature births. With the I-15 and SR-74 traversing Lake Elsinore and the SOI, six census tracts rank above the 75th percentile for Traffic. Census tract 419.11 ranks in the 99th percentile.

[4] See the Public Safety, Noise, and Air Quality Element for additional climate related goals and policies.

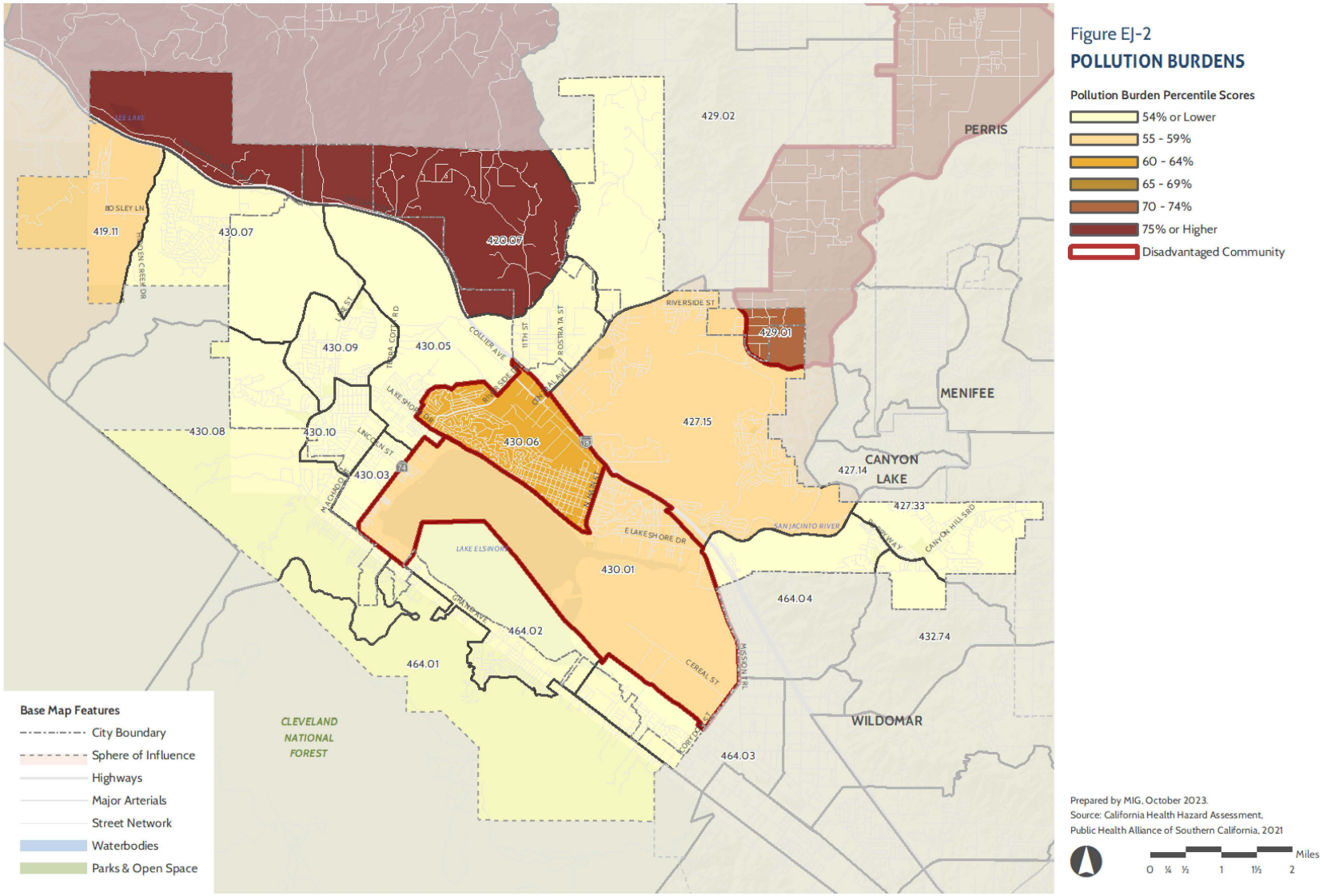

Figure EJ-2
POLLUTION BURDENS
Pollution Burden Percentile Scores
54% or Lower
55 - 59%
60 - 64%
65 - 69%
70 - 74%
75% or Higher
Disadvantaged Community
Base Map Features
City Boundary
Sphere of Influence
Highways
Major Arterials
Street Network
Waterbodies
Parks & Open Space
429.02
PERRIS
419.11
430.07
420.07
430.09
430.05
429.01
MENIFEE
427.15
430.08
430.10
430.06
427.14
CANYON LAKE
430.03
427.33
430.01
464.04
464.02
432.74
464.01
WILDOMAR
464.03
CLEVELAND NATIONAL FOREST
Prepared by MIG, October 2023.
Source: California Health Hazard Assessment, Public Health Alliance of Southern California, 2021
Miles
0 ¼ ½ 1 1½ 2

Table EJ-3: Pollution Burden Indicators Percentile Scores

Census Tracts	Percentiles and Indicators													
	Pollution Indicators	Cleanup Sites	Hazardous Waste	Groundwater Threats	Solid Waste Facilities	Toxic Release Inventory	PM2.5	Traffic	Diesel PM	Drinking Water	Ozone	Impaired Water Bodies	Pesticides	Lead Exposure
City of Lake Elsinore														
427.14	5	0	10	0	0	21	50	46	6	32	85	12	0	4
427.33	16	0	61	0	0	18	47	19	21	71	85	12	10	23
430.06	60	17	77	7	10	29	53	83	65	32	82	51	0	79
430.09	7	0	2	0	0	42	53	0	30	32	80	0	0	12
432.74	7	0	0	0	53	15	47	19	2	73	80	0	0	7
464.04	48	0	71	31	10	19	50	68	47	69	80	51	0	41
Census Tracts that Overlap City and Sphere of Influence														
420.07	79	75	71	32	93	49	58	83	4	79	85	0	66	3
427.15	58	8	80	38	76	23	52	83	20	69	85	51	0	14
429.01	70	81	93	25	93	27	52	17	21	72	94	12	36	38
429.02	46	77	17	0	53	31	53	5	12	69	89	0	62	56
430.01	55	17	79	38	22	24	51	66	48	32	80	51	0	68
430.03	21	0	5	0	0	38	53	51	43	32	78	51	0	41
430.05	51	0	55	0	70	38	53	94	46	32	83	51	0	30
430.07	14	0	7	14	0	45	55	97	8	32	78	0	0	6
430.08	17	0	0	0	0	41	51	20	11	55	74	92	0	35
430.10	4	0	9	0	0	40	53	0	7	32	80	0	0	4

Table EJ-3: Pollution Burden Indicators Percentile Scores

Census Tracts	Percentiles and Indicators													
	Pollution Indicators	Cleanup Sites	Hazardous Waste	Groundwater Threats	Solid Waste Facilities	Toxic Release Inventory	PM2.5	Traffic	Diesel PM	Drinking Water	Ozone	Impaired Water Bodies	Pesticides	Lead Exposure
464.01	37	17	0	31	59	21	39	24	1	99	71	92	17	25
464.02	30	2	0	47	76	23	50	27	4	32	77	51	0	73
464.03	13	17	4	7	0	14	49	52	10	32	78	51	0	29
Census Tracts in Sphere of Influence														
9.11	56	0	56	28	70	53	56	99	9	98	78	24	0	1

- **Drinking Water.** Per the California Office of Environmental Health Hazard Assessment, most California drinking water meets health and safety requirements. This is true for Lake Elsinore's drinking water; per Elsinore Valley Municipal Water District, all water is considered safe in the city because the water undergoes mitigation prior to reaching customers.[5] That said, water prior to treatment, can be contaminated by both natural and human sources. Natural sources, as defined by the Elsinore Valley Municipal Water District, include wildlife contamination, naturally occurring salts and metals, radioactive compounds, coliform bacteria, erosion of natural deposits, substances that form ions when in water, and seawater influence. Human sources include factories, sewage, and agriculture runoff. Health impacts from contaminated water include "blue baby syndrome" in infants, birth defects, miscarriages, and cancer. Two census tracts have elevated rates for Drinking Water; they are 420.07 (79th percentile) and 464.01 (99th percentile).
- **Ozone.** Ozone is the main ingredient of smog. At ground level, ozone is formed when pollutants chemically react in the presence of sunlight. The key sources of ozone are trucks, cars, planes, trains, factories, farms, construction, and dry cleaners. Ozone can cause lung irritation, inflammation, and worsening of existing chronic health conditions. Ozone can increase asthma in children and increase mortality in elderly, and women. Ozone is the most significant Pollution Burden in Lake Elsinore and the SOI. Eighteen of the 20 census tracts are ranked above the 75th percentile, ranging from 77th to 94th. Twelve of the 18 census tracts are ranked in the 80th - 89th percentiles.
- **Impaired Water Bodies.** The CalEnviroScreen notes that streams, rivers, and lakes are used for recreation and fishing and may provide water for drinking or agriculture. When water is contaminated by pollutants, the water bodies are considered impaired. These impairments are related to the amount of pollution that has occurred in or near the water body. Low income communities as well as tribal communities may rely on fish, aquatic plants, and wildlife in or near the water bodies. Two census tracts, 430.08 and 464.01 are ranked in the 92nd percentile.

Population Characteristics

Table EJ-4 provides a comparison of Lake Elsinore, Riverside County, and the State of California for both Race/Ethnicity and Educational Attainment. Race/Ethnicity is not a CalEnviroScreen indicator; however, Educational Attainment is.

[5] Conversation between Mike Ali (EVMWD) and Carolyn Fahey (Michael Baker International), October 24, 2025

Table EJ-4: Race/Ethnicity and Educational Attainment

Census Tracts	Percent of Population		
	Lake Elsinore	Riverside County	California
Race/Ethnicity - 2020[1]			
White Only	39.5	36.5	34.7
Black Only	6.8	6.4	5.4
American Indian Only	1.5	2.0	0.4
Asian Only	7.4	7.4	15.1
Pacific Islander Only	0.5	0.4	0.4
2 or More Races	18.9	17.2	4.1
Hispanic[2]	51.0	54.7	39.4
Educational Attainment[1]			
Less than High School Diploma	14.9	15.6	15.5
High School Diploma or GED	29.6	29.0	20.6
College, No Degree	21.2	20.0	19.6
Associate's Degree	10.1	8.5	7.9
Bachelor's Degree	17.2	15.9	22.4
Graduate or Professional Degree	7.0	11.0	14.2

1 Community Profile, ESRI 2025

2 Residents responding as Hispanic may identify as any race.

Race/Ethnicity

The Lake Elsinore 2020 population is predominantly of Hispanic or Latino origin (51 percent), a proportion lower than that of Riverside County (54.7 percent) but a higher proportion than California (39.4 percent)[6]. In addition, Lake Elsinore has a higher percentage of White only, Black only, and Two or More Races residents, than Riverside County and California.

Educational Attainment

Educational attainment is one of the CalEnviroScreen indicators. According to the Bureau of Labor Statistics, a population that has a high percentage of residents without a high school diploma, or equivalent, can be expected to earn less and experience higher unemployment rates. As shown in Table EJ-4, 85.1 percent of Lake Elsinore residents have at least a high school diploma (or equivalent), which is higher than both Riverside County and California, 84.4 percent and 84.5 percent, respectively. Table EJ-5 notes that four Lake Elsinore/Sphere of Influence census tracts, 430.06, 429.01, 429.02, and 430.05,

[6] Community Profile, ESRI 2025

have higher percentage of its population with lower educational attainment rates than 75 percent of all California census tracts.

Language Skills and English-Speaking Ability

English is the dominate language of Lake Elsinore residents; however, a significant proportion of residents speak another language at home. Just over 35 percent of Lake Elsinore residents speak Spanish, 1.9 percent speak Tagalog (including Filipino), with 0.9 percent speaking Chinese (Mandarin and Cantonese.

Linguistic Isolation is one of the indicators the CalEnviroScreen uses to determine "Population Characteristics". Table EJ-5 identifies three census tracts as having a higher linguistic isolation percentile; they are tracts 430.06, 429.01, and 429.02.

Other CalEnvironScreen Indicators

In addition to Educational Attainment and Linguistic Isolation, CalEnviroScreen uses six other indicators to determine the "Population Characteristics". It is important to note that the CalEnviroScreen identifies 16 of the 20 Lake Elsinore and Lake Elsinore SOI census tracts as having higher rates of Cardiovascular Disease and half of the tracts have higher unemployment rates.

The Population Characteristics are mapped in Figure EJ-3. The figure shows that the number of census tracts scoring higher than 75 percentile is significant, yet when Population Characteristics is combined with Pollution Burden, three census tracts (highlighted in red) are determined to be DACs.

Table EJ-5: Population Characteristics Indicators Percentile Scores

Census Tracts	Percentiles and Indicators								
	Population Indicators	Asthma	Low Birth Weight	Cardiovascular Disease	Educational Attainment	Linguistic Isolation	Poverty	Unemployment	Housing Burden
City of Lake Elsinore									
427.14	26	41	18	70	33	0	27	0	41
427.33	46	46	25	94	31	12	42	61	50
430.06	90	66	49	99	83	82	93	93	71
430.09	51	67	24	99	44	32	27	73	11
432.74	50	39	27	93	59	35	36	93	9
464.04	62	37	28	88	66	56	74	97	31
Census Tracts that Overlap City and Sphere of Influence									
420.07	42	44	54	70	42	26	39	38	16
427.15	40	33	41	84	50	11	48	29	31
429.01	81	65	38	89	86	77	83	75	67
429.02	85	63	73	89	86	75	81	92	26
430.01	81	64	51	98	68	62	82	62	79
430.03	95	67	88	99	74	64	89	93	78
430.05	81	63	59	99	75	50	74	80	58
430.07	14	16	4	60	32	12	38	24	12
430.08	62	58	14	97	55	2	57	95	83
430.10	63	67	32	99	70	47	44	77	18
464.01	63	56	58	96	59	66	52	11	49
464.02	75	67	28	99	59	43	86	67	89
464.03	72	43	55	91	65	41	75	77	73
Census Tracts in Sphere of Influence									
419.11	27	17	31	64	33	19	24	71	12

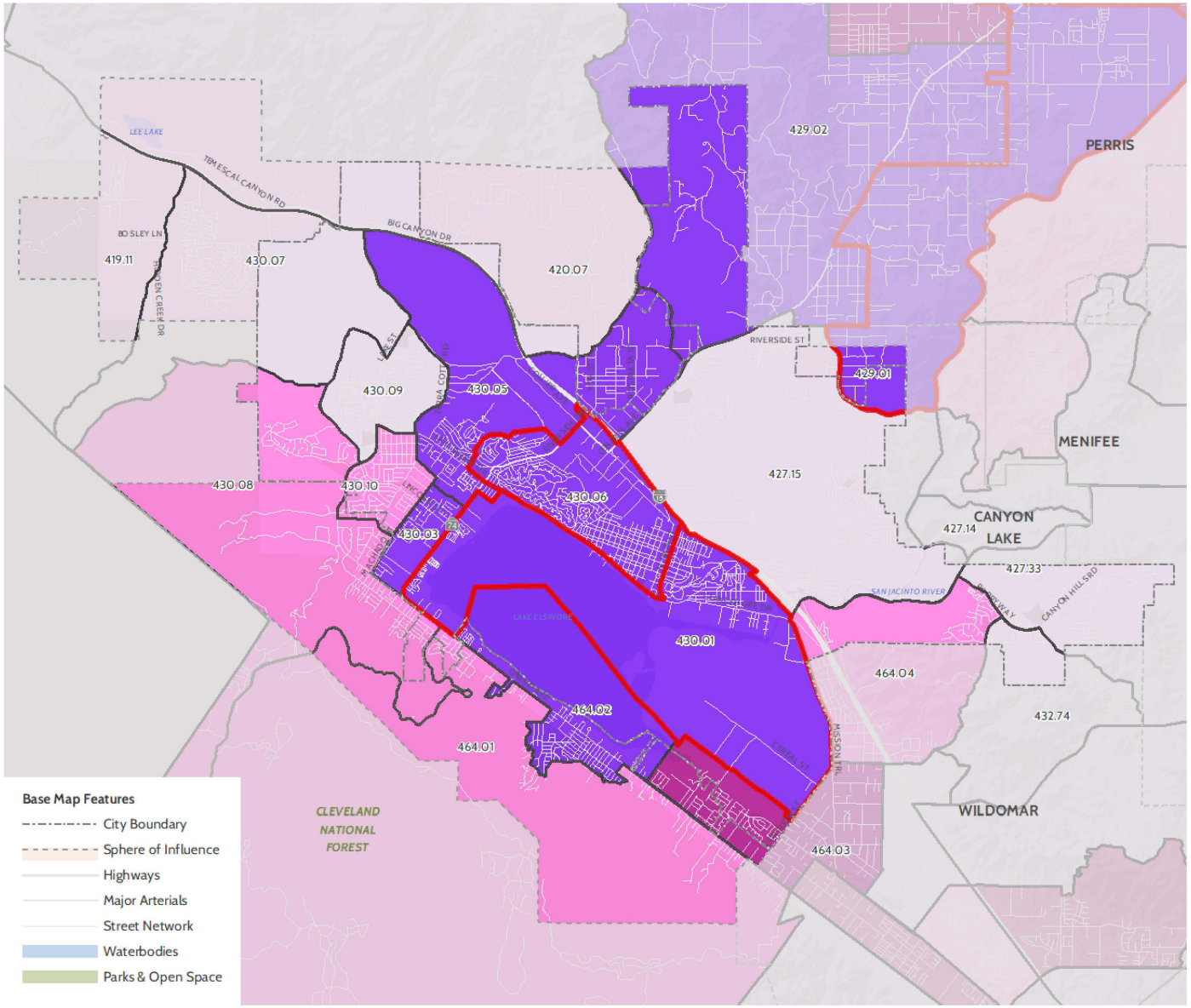


Figure EJ-3

POPULATION CHARACTERISTICS

Population Characteristics Percentile Scores

- 54% or Lower
- 55 - 59%
- 60 - 64%
- 65 - 69%
- 70 - 74%
- 75% or Higher
- Disadvantaged Community

Prepared by MIG, October 2023.
Source: California Health Hazard Assessment, Public Health Alliance of Southern California, 2021

0 ¼ ½ 1 1½ 2 Miles

A summary of the Population Characteristics indicators impacting Lake Elsinore or its SOI are briefly described below.

- **Cardiovascular Disease.** Cardiovascular disease can lead to acute myocardial infarction (heart attack) and other heart problems and is the leading cause of death both in California and the United States. Survivors of a cardiovascular event are highly vulnerable to future cardiovascular events, especially following short- or long-term exposure to particulate matter. Risk factors for developing cardiovascular disease include diet, lack of exercise, smoking, and exposure to air pollution. This indicator has the highest average score of all indicators in the Planning Area's CalEnviroScreen 4.0 dataset, with 16 of 20 census tracts scoring above the 75th percentile.
- **Educational Attainment.** Studies have found that adults with less education and lower incomes have increased exposure to pollutants, suffer from more pollution-related health problems and are more likely to die from the effects of air pollution. Educational Attainment equals or exceeds the 75-percentile score in four of the 20 census tracts.
- **Linguistic Isolation.** A high degree of linguistic isolation (difficulty speaking English) among members of a community can limit access to health information and public services. People with limited English abilities are less likely to receive regular medical care or mental health services. Linguistic Isolation is very high in three of the 20 tracts with percentile scores, respectively, of 82 for census tract 430.06, 77 for census tract 429.01, and 75 for census tract 429.02.
- **Poverty.** Income can affect health, as people with limited means often cannot afford healthy living and working conditions, nutritious food, and necessary medical care. Poverty can cause stress that weakens the immune system and causes people to become ill from pollution. The U.S. Census Bureau determines the federal poverty level each year. The poverty level is based on the size of the household and the ages of family members. If a person or family's total income before taxes is less than the poverty level, the person or family is considered in poverty. The indicator used by CalEnviroScreen is the percent of the population with incomes less than two times the federal poverty level. Seven census tracts have higher rates of people living below twice the poverty level than 75 percent of the California census tracts.
- **Unemployment.** The U.S. Census Bureau counts unemployed people if they are over 16 years old, are out of work, are able to work but not working. This does not include students, active-duty military, retired people, and people who have stopped looking for work. Stress from long-term unemployment can lead to chronic illnesses, such as heart disease, and can shorten a person's life. Ten census tracts face unemployment at higher rates than the rest of the State.
- **Housing Burden.** Housing affordability is an important determinant of health and well-being. Residents of low-income households with high housing costs may suffer adverse health impacts due to their limited ability to afford health care. The percentage of low-income households paying more than 50 percent of their income on housing is on the rise nationwide. The Housing Burden indicator considers the regional cost of living for both homeowners and renters and includes the cost of utilities. Four of the census tracts exceed the 75-percentile score for Housing Burden.

Healthy Places Index

This Healthy Places Index discussion presents data and analysis that identify the relationship between economic, education, healthcare, housing, transportation, and environmental decisions and their effects on health and wellness of disadvantaged communities and populations that historically have experienced inequities, institutionalized racism, exclusion, and/or isolation.

One's health is shaped dramatically by community characteristics—housing, education, economic, and other social factors, which often are shaped through policy. The California Healthy Places Index 3.0 (HPI) combines eight indicators comprising 23 community characteristics with weighted scoring into a single indexed HPI Score, as seen in Table EJ-6. Within the datasets, scores are displayed in quartiles, allowing for straightforward comparisons within a specific geography and across the State.

The results shown in Figure EJ-4 and Table EJ-7 can be used to explore, identify, and strategize existing healthy community conditions. In contrast to the CalEnviroScreen 4.0 data, where higher percentiles equate to worse conditions, lower HPI percentiles equate to worse conditions for both the overall HPI score and contributing indicators.

Table EJ-6: Healthy Places Index Indicator Weights and Community Characteristics

Economic Above Poverty Employed Per Capita Income	**Education** Pre-School Enrollment High School Enrollment Bachelors Attainment	**Transportation** Automobile Access Active (healthy) Commuting
Social 2020 Census Response Voting	**Neighborhood** Retail Density Park Access Tree Canopy	**Clean Environment** Clean Air - Diesel PM Clean Air - Ozone Clean Air - PM 2.5 Safe Drinking Water – Contaminants
Housing Low Income Homeowner Severe Housing Costs Burden Low Renter Severe Housing Costs Burden Homeownership Housing Habitability Uncrowded Housing	**Healthcare** Insured Adults	

Source: The California Healthy Places Index (HPI), Public Health Alliance of Southern California, 2020.

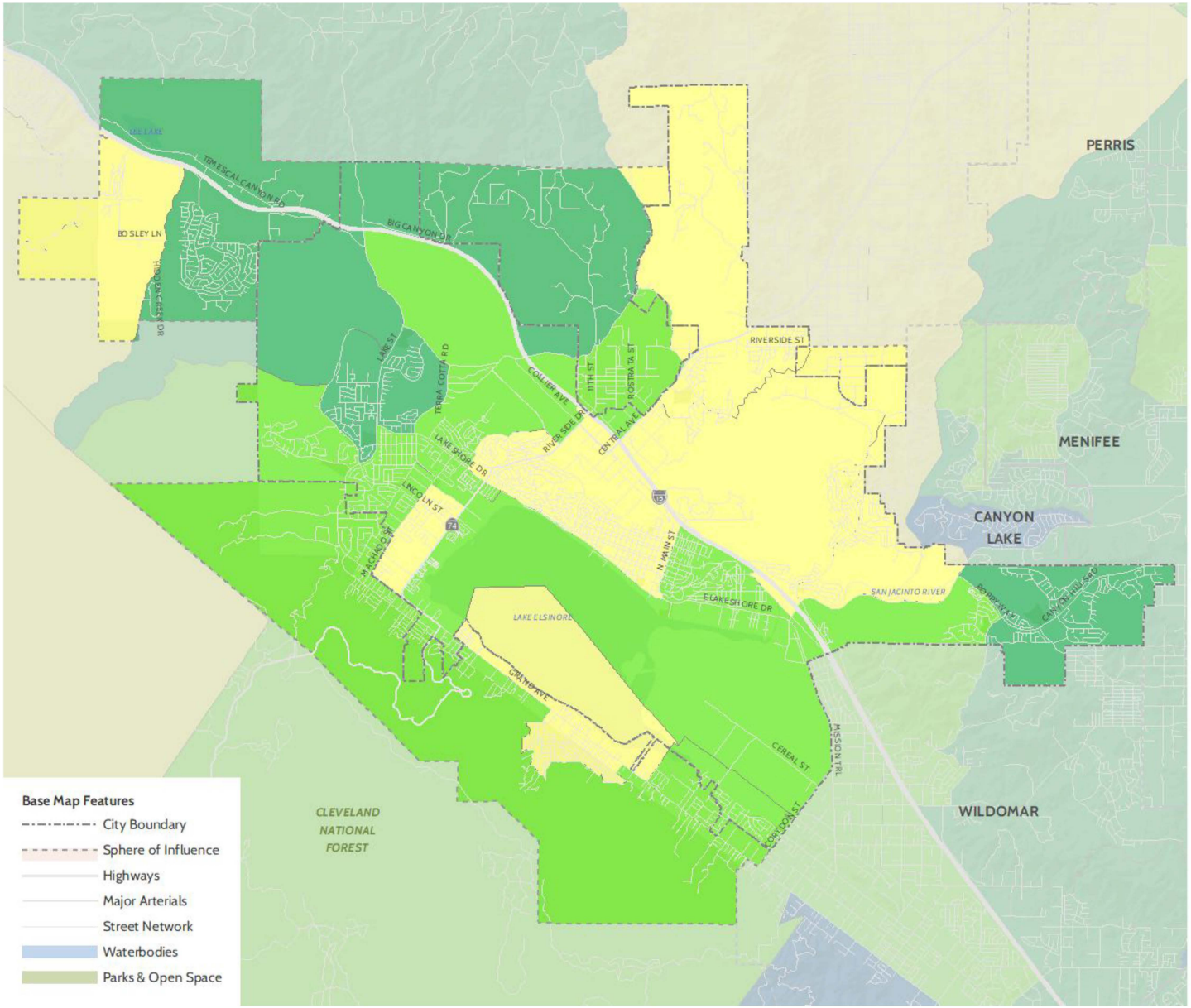


Figure EJ-4

HEALTHY PLACES INDEX

Healthy Places Index (Percentile Ranking)

- 1 - 20 (Less Healthy Conditions)
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100 (More Healthy Conditions)

Prepared by MIG, October 2023.
Source: Public Health Alliance of Southern California, 2022

0 ¼ ½ 1 1½ 2 Miles

Table EJ-7: Healthy Places Index Percentile Scores (Lake Elsinore City)

Healthy Places Index Indicators and Community Characteristics	Percentiles
Economic	34.8
Above Poverty	33.1
Employed	43.3
Per Capita Income	31.9
Education	23.4
Pre-School Enrollment	33.0
High School Enrollment	19.7
Bachelor's Degree Attainment	43.8
Transportation	31.9
Active (Healthy) Commuting	12.1
Automobile Access	64.0
Social	49.8
2020 Census Response	54.5
Voting	33.5
Neighborhood	31.0
Retail Density	48.7
Park Access	59.2
Tree Canopy	11.3
Healthcare Access	28.3
Insured Adults	33.0
Housing	34.8
Low-Income Homeowner Severe Housing Costs Burden	47.6
Low-Income Renter Severe Housing Costs Burden	31.8
Homeownership	53.5
Housing Habitability	52.0
Uncrowded Housing	25.1
Clean Environment	28.3
Clean Air - Diesel PM	42.8
Clean Air - Ozone	17.6
Clean Air - PM2.5	28.1
Safe Drinking Water – Contaminants	57.3
HPI Score for City of Lake Elsinore	**32.6**

Source: The California Healthy Places Index (HPI), Public Health Alliance of Southern California, 2022.
Note: Lower percentiles equate to worse conditions when compared to the rest of the State.

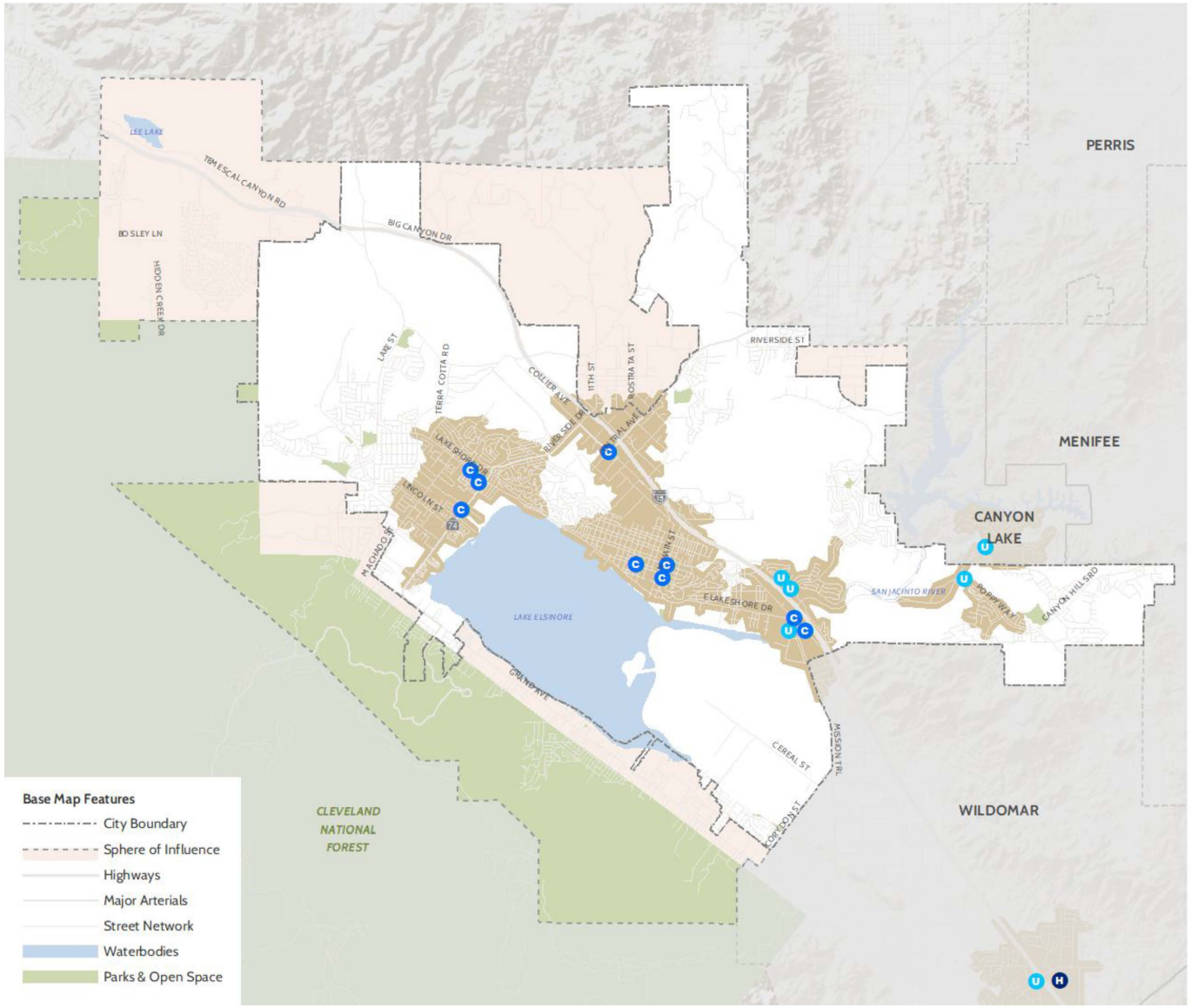


Figure EJ-5

HEALTHCARE AND MEDICAL ACCESS

Health Care and Medical Facilities

- Hospital
- Clinic
- Urgent Care

Healthcare and Medical Access

- One-Mile Access

Prepared by MIG, October 2023.
Source: MIG, 2023.

Miles
0 ¼ ½ 1 1½ 2

Comparative Health Indicators

Lake Elsinore's HPI Score of 32.6 means the City has healthier community conditions than just 32.6 percent of other California cities or 67.4 percent of other California cities have healthier community conditions. Particularly, the Education indicator and its contributing community characteristics score in the bottom 25 percent of California cities. Compared to other communities in southwestern Riverside County, Lake Elsinore scores lower than most of its neighbors. See Table EJ-8 for a comparison of Lake Elsinore to surrounding communities (with higher scores being more favorable).

Table EJ-8: Healthy Places Index Score

Jurisdiction	Healthy Places Index Score
Eastvale	75.8
Temecula	68.4
Canyon Lake	61.8
Murrieta	61.2
Corona	55.1
Menifee	53
Wildomar	44.9
Riverside	39.5
Lake Elsinore	32.6
Moreno Valley	27.3
Jurupa Valley	26.2
Perris	20.0
Hemet	12.5

Source: The California Healthy Places Index (HPI), Public Health Alliance of Southern California, 2020.
Note: Lower percentiles equate to worse conditions when compared to the rest of the State.

General Health Conditions

Table EJ-9 provides health estimates from UCLA Health Policy Center's California Health Interview Survey (CHIS), the largest state health survey in the United States. Survey respondents in Lake Elsinore show comparatively similar outcomes as other large neighboring cities, county, and state.

Table EJ-9: Health Condition and Healthcare Service Comparisons

Health Conditions (2016) for Population Age 18 and Older in Past 12 months	Lake Elsinore	Hemet	Eastvale	Riverside County	State of California
Fair or poor health	17.4%	18.4%	13.4%	15.6%	13.3%
Needed help for mental health problems	19.4%	20.0%	17.4%	19.7%	21.2%
Delayed prescriptions/medical services	23.9%	23.8%	21.3%	23.6%	22.0%
Serious psychological distress	12.1%	12.0%	11.7%	12.1%	12.6%
Ever diagnosed with:					
Diabetes	12.8%	16.3%	13.3%	12.9%	11.1%
Asthma	12.8%	14.3%	14.9%	13.0%	16.1%
Heart Disease	5.2%	8.0%	4.3%	6.0%	6.9%

Source: AskCHIS Neighborhood Edition, California Health Interview Survey (CHIS), UCLA, 2020.

Health Insurance and Healthcare Access

Access to comprehensive, quality health care services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all Americans. People without medical insurance are more likely to lack a usual source of medical care, such as a primary care provider, and are more likely to skip routine medical care due to costs, increasing their risk for serious and disabling health conditions. When they have access to health services, they are often burdened with large medical bills and out-of-pocket expenses. Increasing access to both routine medical care and medical insurance is vital toward improving health.

Table EJ-10 shows the percentage of Lake Elsinore's population with health insurance coverage. Lake Elsinore residents generally have good health insurance coverage and is on par with Riverside County. Additionally, Lake Elsinore residents have reasonable access to medical care facilities, as shown in Figure EJ-5. About 34 percent of residents live within one mile of a health clinic or urgent care facility. These medical facilities are small in scale and offer various outpatient services. The closest hospital is Southwest Healthcare Inland Valley, located six miles south of Lake Elsinore in the City of Wildomar.

Table EJ-10: Health Insurance Coverage

Health Insurance Status	Lake Elsinore	Riverside County
	Percent	
With Health Insurance Coverage	91.6%	91.5%
No Health Insurance Coverage	8.4%	8.5%
Demographics – With Health Insurance Coverage		
Age		
Under 19 years	95.8%	95.9%
19-64 years	88.7%	87.7%
65 years and older	96.3%	98.8%
Race and Ethnicity		
White Alone	94.5%	93.0%
Hispanic/Latino (of any race)	89.8%	88.3%
Black or African American Alone	87.8%	93.6%
Asian Alone	91.5%	94.2%
Native American Alone	92.7%	87.6%
Nativity and U.S. Citizenship Status		
Native Born	94%	93.8%
Foreign Born – Naturalized Citizen	90.9%	91.8%
Foreign Born – Not a Citizen	75.0%	73.7%

Source: U.S. Census, American Community Survey 5-Year Estimates, 2020.

Food Access

Food Insecurity

The U.S. Department of Agriculture defines food insecurity as a lack of consistent access to enough food for an active, healthy life. A household being unable to afford sufficient, quality food correlates with experiences of unemployment and poverty. Participation in programs designed to address hunger, such as the Supplemental Nutrition Assistance Program (SNAP or food stamps), rises in response to food insecurity.

Approximately 10 percent of households in Lake Elsinore received Food Stamps/SNAP (also known as CalFresh, California's food stamp program) in 2020 compared to about nine percent in Riverside County.[7] SNAP can buffer participants against food insecurity and poor health.

[7] 2020 ACS 5-Year Estimates Detailed Tables, S2201: Food Stamps/Supplemental Nutrition Assistance Program (SNAP)

Additionally, Supplemental Security Income (SSI) is a federal income supplement program designed to help aged, blind, and disabled people who have little or no income and to meet basic needs for food, clothing, and shelter. Participation in disability assistance programs is relatively high among adults with disabilities, particularly those who are unable to work due to their disability. Food insecurity is more prevalent among SSI recipients, including higher rates of food insecurity due to more severe disabilities. Approximately 4 percent of households in Lake Elsinore receive SSI income compared to about 3 percent of Riverside County residents.[8]

Families with school-aged children may receive free and reduced-price meals as part of the National School Lunch Program (NSLP), a federally assisted meal program that provides free, nutritionally balanced lunches to children whose families meet eligibility income requirements. The NSLP provides nutritious foods that help reduce the harmful impact of food insecurity and improve outcomes for children. Research sponsored by U.S. Department of Agriculture's Food and Nutrition Service found that children receiving free or reduced price NSLP lunches consume fewer empty calories and more fiber, milk, fruit, and vegetables than income eligible nonparticipants, both at lunch and during a full 24 hours. Free and reduced-price school meals also free up some household resources for other necessary purchases. Table EJ-11 summarizes the portion of students eligible for free or reduced priced meals at school districts located within and near the Planning Area. These school districts, except for Perris Elementary and Union High, have eligibility rates either on par or lower than Riverside County and the State of California, which have only 65 percent and 59 percent eligibility, respectively.

Table EJ-11: Students Eligible for Free or Reduced Priced Meals

Local School District	Percentage of Students Eligible for Free/Reduced Priced Meals
Lake Elsinore Unified	65.4%
Murrieta Valley Unified	35.2%
Corona-Norco Unified	42.6%
Menifee Union Elementary	45.8%
Temecula Valley Unified	27.7%
Perris Elementary	75.6%
Perris Union High	75.3%

Source: California Department of Education, Free and Reduced Prices Meals, 2020.

Grocery Store Access

Limited access to supermarkets, grocery stores, farmers' markets, and other sources of healthy and affordable food may make it harder for some residents to eat a healthy diet. Expanding the availability of nutritious and affordable food by developing and equipping grocery stores, small retailers, corner

[8] 2020 ACS 5-Year Estimates Detailed Tables, B19057: Public Assistance Income for Households

markets, and farmers' markets in communities with limited access is an important part of creating a healthy community. Food deserts are areas in which it is difficult to buy affordable or good-quality fresh food.

Figure EJ-6 shows the locations where healthy food options (e.g., produce, fresh meats and seafood, dairy) can be purchased. Only 24 percent of residents live within one-mile from an establishment that sells healthy foods and even fewer (7 percent of residents) live with a 10-minute walk.

Physical Activity and Park Access

Physical Activity

Research demonstrates that participating in regular moderate to vigorous physical activity provides many health benefits. Some benefits of physical activity can be achieved immediately, such as reduced feelings of anxiety, reduced blood pressure, improvements in sleep, some aspects of cognitive function, and insulin sensitivity. Other benefits—such as increased cardiorespiratory fitness, increased muscular strength, decreases in depressive symptoms, and sustained reduction in blood pressure—require a few weeks or months of participation in physical activity.

Physical activity can also slow or delay the progression of chronic diseases, such as hypertension and Type 2 diabetes and public health professionals recommend at least 30-minutes of daily moderate to vigorous exercise. Benefits persist with continued physical activity. Table EJ-12 shows the level of self-reported physical activity in the City and surrounding areas per the CHIS survey. Respondents in Lake Elsinore fair similarly to Riverside County and neighboring cities.

Table EJ-12: Weight and Physical Activity

Weight and Physical Activity	Lake Elsinore	Hemet	Eastvale	Riverside County	State of California
Obese Adults (BMI> 30) (Ages 18+)	32.6%	34.4%	24.5%	30.4%	28.2%
Overweight or Obese Teens (Ages 12 to 17)	31.3%	42.9%	25.6%	32.1%	31.2%
Overweight Children (Ages 2 to 11)	17.0%	19.0%	14.5%	16.9%	13.9%
Regular Physical Activity* (Ages 5 to 17)	12.6%	14.9%	15.6%	13.0%	16.5%
Walked at least 150 Minutes in Past Week (Ages 18+)*	36.8%	35.1%	37.3%	36.9%	38.9%

Source: AskCHIS Neighborhood Edition, California Health Interview Survey (CHIS), UCLA, 2020.
*Latest data available is from 2016.

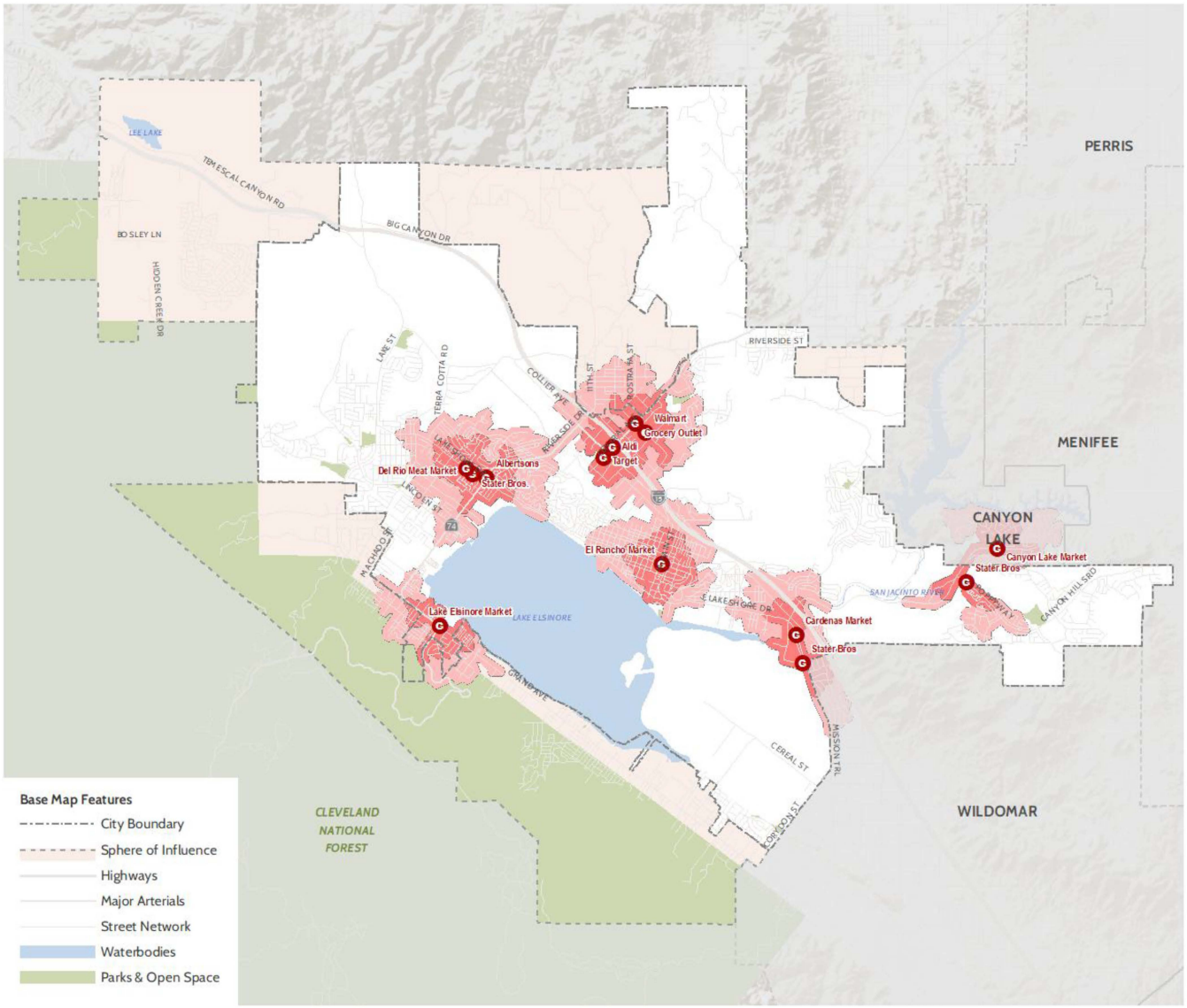


Figure EJ-6

GROCERY STORE ACCESS

Grocery Stores

Grocery Store

Grocery stores selected based on offering or availability of fresh produce.

Grocery Store Access

Half-Mile Access (10-Minute Walk)

One-Mile Access (20-Minute Walk)

Prepared by MIG, October 2023.
Source: MIG, 2023.

Miles
0 ¼ ½ 1 1½ 2

Park Access

Parks, playgrounds, greenways, trails, and community open spaces help keep residents fit and healthy by providing access to places that support physical activity. Physical activity increases strength, flexibility, and endurance; relieves symptoms of depression and anxiety; improves mood; and enhances psychological well-being.

According to the Centers for Disease Control and Prevention (CDC), a sedentary lifestyle contributes to an increased incidence of obesity along with obesity-related diseases, such as high blood pressure, diabetes, congestive heart failure, and stroke. As one solution to the increased incidence of obesity, the CDC has called for more parks and playgrounds. Studies have shown that when people have access to parks, they exercise more. Parks provide children with opportunities for play, and play is critical in the development of muscle strength and coordination, language, and cognitive abilities.

In Lake Elsinore, 22 percent of City residents live within one-half mile—or a 10-minute walk—to one of the City parks in the City limits (Figure EJ-7). While this percentage is lower than the national average of 55 percent, several recreational and open space opportunities are found throughout Lake Elsinore, particularly in the hillsides.[9] The City is adjacent to the Ortega Mountains and Cleveland National Forest, which provide opportunities for hiking, skydiving, and paragliding. The Lake is also a key recreational destination.

While the General Plan has little influence on health insurance access, the General Plan can provide policy direction that is likely to improve fresh food access, park access, and health care access. Similarly, the General Plan can provide policy direction to encourage civic engagement and improve local governance.

Climate Change and Disadvantaged Communities

Disadvantaged community members may be disproportionately impacted by climate change including exposure to extreme heat and poor air quality, as some DAC community members may have fewer resources to address the impacts. For example, people with limited income may not have access to air conditioning or may not be able to afford the additional utility costs necessitated by extreme weather conditions.[10]

[9] Trust for Public Land, 2018.
[10] See the Public Safety, Noise, and Air Quality Element for additional policies addressing climate change and community impacts.

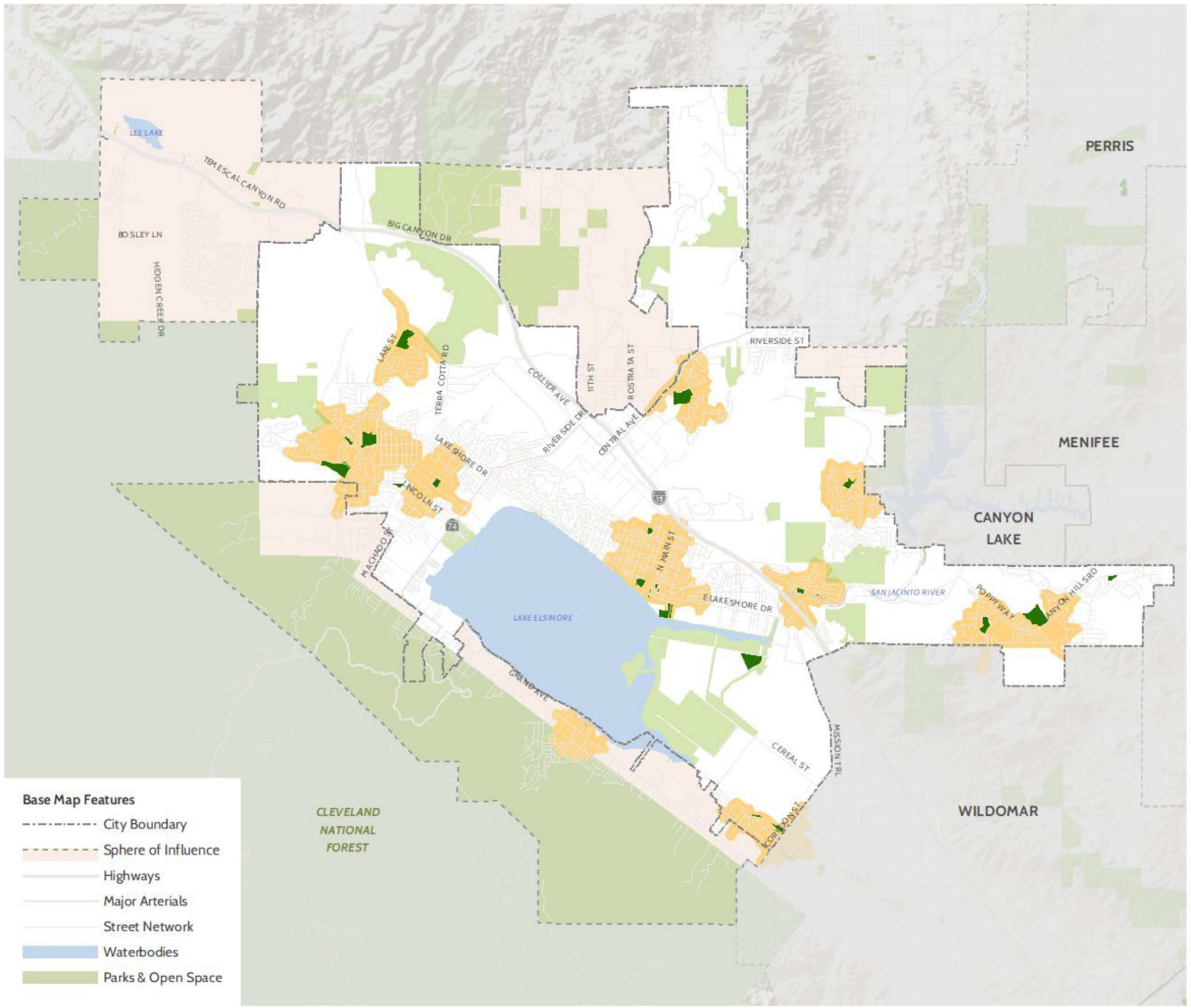


Figure EJ-7
PARK ACCESS

Parks and Open Space
- Lake Elsinore Parks
- Other Open Space

Park Access
- Park Half-Mile Access (10 Minute Walk)

Prepared by MIG, October 2023.
Source: City of Lake Elsinore and Riverside County, 2023.

0 ¼ ½ 1 1½ 2 Miles

Environmental Justice Goals and Policies[11]

GOAL EJ-1: REDUCE POLLUTION BURDEN

Policy EJ-1: Mitigate impacts on residential neighborhoods immediately adjacent to industrial uses, trucking uses, and I-15 from noise and air pollutant emissions.

Policy EJ-2: Decrease, to the extent feasible, exposure to air pollutants including ozone and particulate pollution.

Policy EJ-3: Monitor Elsinore Valley Municipal Water District's efforts to ensure clean drinking water.

Policy EJ-4: Decrease, to the extent feasible, polluted water bodies.

Policy EJ-5: Clean-up Brownfield sites.

GOAL EJ-2: REDUCE CLIMATE BURDEN [12]

Policy EJ-6: Reduce exposure to extreme heat.

Policy EJ-7: Reduce exposure to fire and mitigate fire risk.

GOAL EJ-3: IMPROVE COMMUNITY HEALTH AND WELLNESS THROUGH HEALTHIER FOOD OPTIONS

Policy EJ-8: Encourage the provision of safe, convenient opportunities to access healthy food products by ensuring that sources of healthy foods are easily accessible from all neighborhoods, especially the DACs.

GOAL EJ-4: IMPROVE ACCESS TO HEALTHCARE SERVICES

Policy EJ-9: Increase Lake Elsinore residents access to primary and emergency health care facilities and medical services.

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[11] In accordance with California State law, all General Plan Elements have equal standing and must be implemented accordingly. Policies in other elements may impact DACs as well as the areas not considered to be DAC. Refer to all General Plan Elements for additional information.

[12] Refer to the Public Safety, Noise, and Air Quality Element for additional climate and fire policies and programs.

GOAL EJ-5: ACCESSIBLE OPEN SPACES AND INCREASED LEVELS OF PHYSICAL ACTIVITIES

Policy EJ-10: Promote physical activity programs and education for residents and encourage them to participate regularly in physical activity and active lifestyles.[13]

GOAL EJ-6: ENSURE HOUSING IS SAFE AND SANITARY WHILE DECREASING THE RISK OF DISPLACEMENT AND GENTRIFICATION

Policy EJ-11: Improve housing safety and minimize existing residents' displacement.[14]

GOAL EJ-7: IMPROVE HEALTH AND WELL-BEING FOR ALL COMMUNITY MEMBERS BY EMPHASIZING COMMUNITY HEALTH IN CITY PROCEDURES AND PUBLIC FACILITIES

Policy EJ-12: Promote efforts to improve community health outcomes and ensure that City investments support community health goals, as feasible.

GOAL EJ-8: INCREASED GOVERNANCE AND CIVIC ENGAGEMENT FROM DISADVANTAGED COMMUNITIES

Policy EJ-13: Support an equitable and comprehensive approach to civic engagement and public outreach on all aspects of City governance and delivery of services.

Policy EJ-14: Evaluate DAC community residents' access to public services and City public facilities to determine if operational and/or physical improvements may provide additional resources.

Implementing Programs for Goals E-J1 through EJ-8

Zoning Code/Map Update

PRO-EJ-1: Update the Zoning Code/Map to:

- Require health risk assessments (HRA) for nonresidential projects of 100,000 square feet or more to identify and address any potential negative health implications of the project
- Require an HRA for new industrial or warehousing development projects that (1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and (2) are within 1,000 feet of a sensitive land use or DAC. The operational HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health

[13] Refer to the Conservation, Parks, and Open Space Element for additional policy and programs.
[14] Refer to the Housing Element for additional policies and programs.

Hazard Assessment and SCAQMD, as appropriate. If the operational HRA shows that the incremental cancer risk exceeds 10 in a million, the noncancer hazard index of 1.0, or the thresholds as determined by SCAQMD, require the project applicant to identify and demonstrate measures that can reduce potential cancer and noncancer risks to acceptable levels

- Require residential and/or other sensitive land use applicants (e.g., hospitals, nursing homes, day care centers) to implement the best practices identified by the SCAQMD;
- Require new development provide on-site and off-site bioswales
- Designate acceptable and unacceptable areas for industrial uses and freight trucking and/or diesel truck idling to limit impacts on DACs already overburdened by air pollution
- Streamline permitting for farmers markets, cottage food sales, and mobile food trucks selling healthy food in all Lake Elsinore areas, including non-residential
- Establish a "health and medical center" district
- Consider adopting development standards to allow small-scale produce markets or corner grocery stores in residential districts, enabling the small-scale vendors to sell fresh produce and healthy foods in the DAC.

Building, Municipal, and Other Code Updates

PRO-EJ-2: Continue to designate acceptable and unacceptable areas for industrial uses and freight trucking and/or diesel truck idling to limit impacts on DACs already overburdened by air pollution.

Review Process

PRO-EJ-3: Prepare streamlined permitting process for full-service grocery stores in DACs.

PRO-EJ-4: Require applicants for residential remodel and rehabilitation projects to remediate environmental health hazards, such as lead-based paint, mold, mildew, and asbestos, as a condition of approval.

New Plans, Programs, and Strategies

PRO-EJ-5: Increase green infrastructure including tree canopy in the DACs:

- Conduct a tree canopy assessment in identified DAC communities; and
- Create a tree planting program or work with a nonprofit organization to give away trees, provide tree maintenance information/courses, organize tree planting programs.

PRO-EJ-6: Consider expanding open space, existing wetland areas, and naturally occurring bioswales to improve stormwater runoff filtration, particularly those impacting the DACs.

PRO-EJ-7: Apply for EPA grant funds and partner with local developers to:

- Conduct a brownfields site inventory and site assessment for sites impacting identified DACs; and
- Cleanup and redevelop brownfield sites impacting identified DACs.

PRO-EJ-8: Consider adopting an Urban Agriculture Ordinance that includes strategies to increase access to healthy foods and standards for operation.

PRO-EJ-9: Consider using City facilities as sites for farmer's markets and community-support agriculture (CSA) food distribution.

PRO-EJ-10: Create healthy development guidelines or checklists to track and monitor how new developments are incorporating health-promoting features such as opportunities for physical activity, healthy food, drinking water, urban farming, affordable housing, and sustainable design.

PRO-EJ-11: Integrate health, equity, and sustainability considerations into City decision making across all sectors and policy areas.

PRO-EJ-12: Consider offering and/or expanding governance programs that increase participation of DAC residents in local government. Such programs can include IDEAL LE (Inclusion, Diversity, Equity, Accessibility, and Leadership in Lake Elsinore) with a focus on developing an equity strategic plan, and other programs such as implementing bill or fine forgiveness, diversifying local representation on boards/commissions, developing anti-displacement strategies, updating recruiting requirements and workforce practices, amplifying a diversity of voices including students, establishing a "wellness center", etc.

Special Studies and Projects

PRO-EJ-13: Ensure that future development in DACs will not result in a net loss of affordable housing or significant preventable displacement of residents.

PRO-EJ-14: Preserve the affordability of federal- and state-subsidized units at risk of conversion to market rate or other affordable housing resources.

PRO-EJ-15: Incentivize property owners to repair and rehabilitate all substandard housing, especially in DACs, and to maintain properties free of code violations.

PRO-EJ-16: Assist residents in DACs to retrofit their homes to be more energy efficient, weatherproof, and better protected from air and noise pollution.

PRO-EJ-17: Explore funding sources to reduce housing production and maintenance costs associated with improved housing conditions in the DACs for efforts such as removing lead exposure and other environmental hazards and improving weatherization.

PRO-EJ-18: Create a comprehensive community outreach strategy that:

- Serves as a framework for all departments to participate in meaningful communication with the public, prioritizing residents in DACs and those with language barriers;
- Re-evaluates City communication standards, style guidelines, and translation protocols, including for web and social media releases, and printed documents, to ensure accessibility to all community members, especially DAC residents;
- Considers providing translation and interpretation services at public meetings; and
- Continues to ensure that all publicly noticed meetings, materials, and other engagement opportunities that use technology are accessible by mobile devices and support access for people with disabilities.

PRO-EJ-19: Explore best practices and resources to:

- Provide language assistance for front desks or counters, meetings, telephone communications, services, events, documents, forms, materials, websites, apps, and other points of contact with community members;
- Fund the expansion of digital access and engagement opportunities by working with other public and private partners to support highspeed internet in communities that have low access to internet, particularly in DACs; and
- Fund free internet access in City-owned public facilities, particularly those in DACs.

Ongoing Processing and Procedures

PRO-EJ-20: As recommended by California Air Resources Board (CARB), the City shall continue to require projects that would result in construction activities within 1,000 feet of residential and other land uses that are sensitive to toxic air contaminants (e.g., hospitals, nursing homes, day care centers), as measured from the property line of the project, to prepare a construction health risk assessment in accordance with policies and procedures of the Office of Environmental Health Hazard Assessment and California Environmental Quality Act (CEQA) Guidelines that identifies mitigation measures and appropriate enforcement mechanisms capable of reducing potential cancer and non-cancer risks below the Southern California Air Quality District (SCAQMD) threshold.

PRO-EJ-21: Require applicants for residential and/or other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) to implement the best practices identified by the SCAQMD.

PRO-EJ-22: Expand trees and landscaping to build an extensive green buffer between residential neighborhoods and freeways, and industrial districts to help reduce air pollution impacts. Prioritize residential neighborhoods that are designated as DACs.

PRO-EJ-23: Identify cooling centers and increase availability of cooling centers in DAC identified communities.

PRO-EJ-24: Promote and expand urban agricultural opportunities, particularly community supported agriculture, within the DACs, including home gardens, community gardens, urban orchards, farmers' markets, and small-lot urban agricultural projects on underutilized sites, park or community facilities, schools, and remnant vacant properties.

PRO-EJ-25: Implement the Parks Master Plan and the Trails Master Plan.

PRO-EJ-26: Develop a process for interdepartmental collaboration to improve the health of Lake Elsinore residents.

PRO-EJ-27: Provide training for City staff and officials about how the built environment and transportation choices affect health equity, economic opportunity, well-being, and quality of life.

PRO-EJ-28: Seek resources to fund programs and projects to improve community health outcomes.

PRO-EJ-29: Identify specific City staff as dedicated community liaisons and identify DAC community leaders as a means of bridging the public-private gap.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-EJ-30: Consult with California Air Resources Board (CARB) and the South Coast Air Quality Management District (SCAQMD) to ensure the appropriate monitoring of stationary source emissions and to receive aid and assistance to reduce exposures to harmful air pollutants, especially in DACs.

PRO-EJ-31: Continue to coordinate with the SCAQMD to:

- Explore ways to initiate data collection efforts for a community emissions reduction and/or community air monitoring plan, including the identification of: information needed (new or updated), potential data sources and the resources needed, and strategies to engage residents and collect information;
- Provide/replace home air filters in the DACs with high efficiency particle arresting filtration (HEPA), minimum efficiency reporting value (MERV) ratings, or similar; and
- Continue the use of the PurpleAir monitoring, reporting, and response programs.

PRO-EJ-32: Collaborate with health service organizations, including Riverside County Department of Environmental Health and Riverside University Health System, among others, to identify environmental risk factors, especially in DACs and other areas where more than 10 percent of adults have asthma.

PRO-EJ-33: Encourage local water districts to:

- Conduct drinking water quality assessments in the DACs to determine types and sources of water pollution and identify mitigation and remediation strategies;

- Provide water filters to schools, workplaces, and residences within the DACs with lower local drinking water scores;
- Establish a monitoring, reporting, and response program to detect changes in drinking water quality and address changes in risk to users; and
- Conduct drinking water quality informational sessions to:
  - Raise awareness about local drinking water quality and potential health impacts; and
  - Address drinking water quality risks in homes, schools, and workplaces by increasing awareness of household water filtration system and critical system performance maintenance strategies such as mold clean out.

PRO-EJ-34: Continue to work with waterbody experts to create a water cleanup program particularly oriented to the DACs.

PRO-EJ-35: Continue to raise awareness regarding:

- Local waterbody quality and its potential health impacts on recreational uses, such as swimming or eating fish caught from the lake;
- Peoples' role in keeping the water clean and healthy, such as reducing use of fertilizers and proper disposal of chemicals;
- Brownfields impacting their communities and community members' role in supporting cleanup and redevelopment efforts; and
- The health impacts of extreme heat exposure and resources to mitigate and reduce exposure.

PRO-EJ-36: Continue to work with refuse collection companies to provide free disposal services for pollutants such paint, batteries, and vehicle oil and other fluids.

PRO-EJ-37: Create public-private partnerships to:

- Supply heat pump cooling systems to DAC residences and businesses;
- Provide temporary or mobile healthcare and medical services within DACs; and
- Partner with community-based organizations that have relationships with non-English-speaking and English-as-a- second-language residents in DACs to reach out on local initiatives and issues.

PRO-EJ-38: Consider conducting special environmental justice informational meetings for development projects that could pose impact on DACs, including projects that may handle hazardous materials, emit air pollution, and/or create truck traffic.

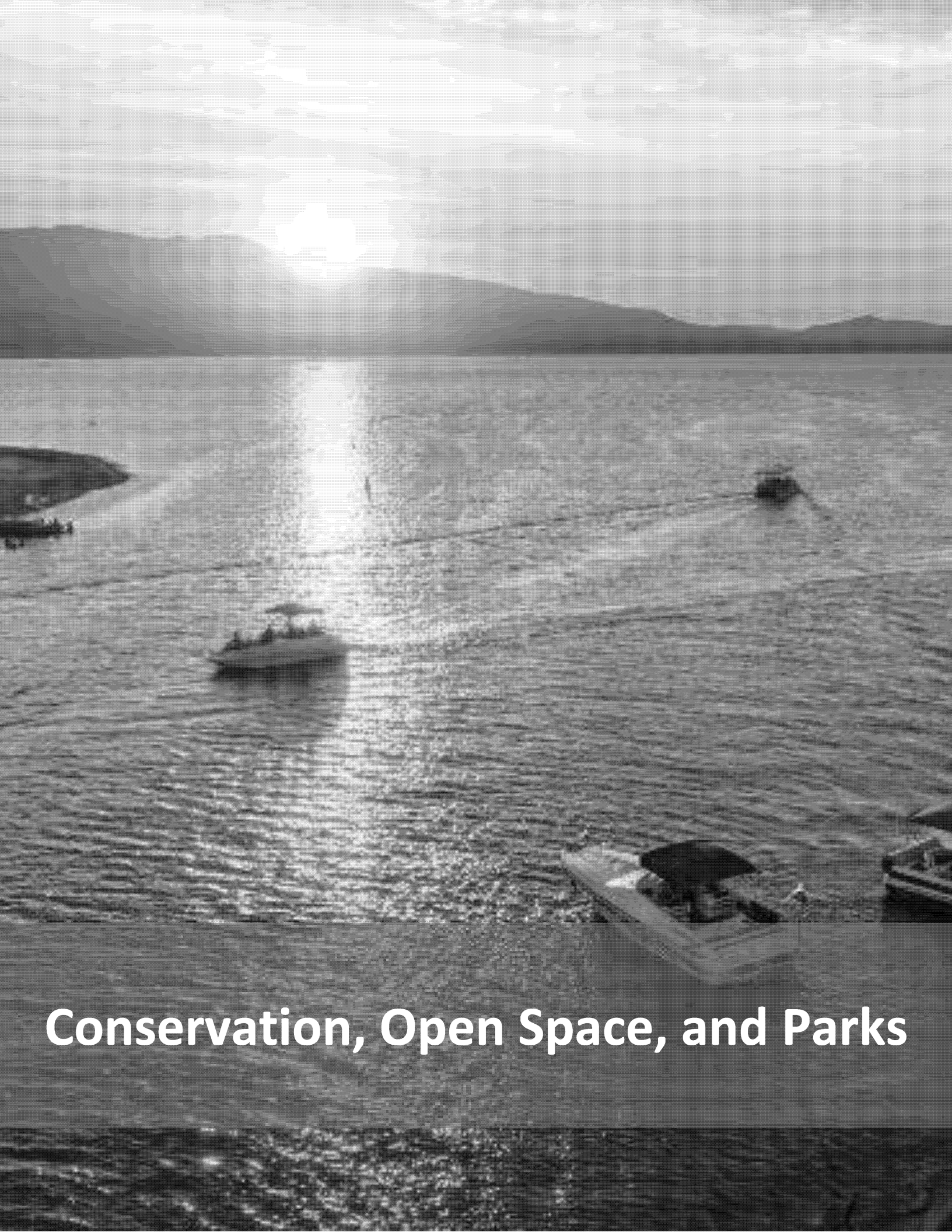
PRO-EJ-39: Use equitable outreach strategies that engage all segments of the community, giving priority to DACs, including:

- Using participatory facilitation techniques. Holding meetings in Americans with Disabilities Act (ADA)-compliant locations;
- Hosting pop-up outreach in popular community spaces and at well-publicized events, to reach people where they are already gathered;
- Holding engagement opportunities in different locations throughout the community at different times of the day and week and use parallel methods such as in-person and online;
- Collaborating with local community-based organizations to help plan and conduct outreach;
- Providing translation services for materials and discussions;
- Considering the provision of "in-language" presentations, hiring bi-lingual staff to engage non-English speakers in addition to providing translation services, working with nonprofit and other organizations to provide real-time communications;
- Identifying, evaluating, and eliminating existing barriers—such as age, income, and voter registration status—for Lake Elsinore residents to serve on and engage with City Council, boards, committees, and commissions, prioritizing the DAC residents;
- Consider paying elected and non-elected community members for their time spent on public outreach, attending committee meetings and hearings, and other civic duties;
- Consider providing childcare for outreach, committee and public meetings; and
- Implement strategies to ensure that the composition of City committees, boards, and commissions reflect the diversity of the community, with particular attention to including DAC members.

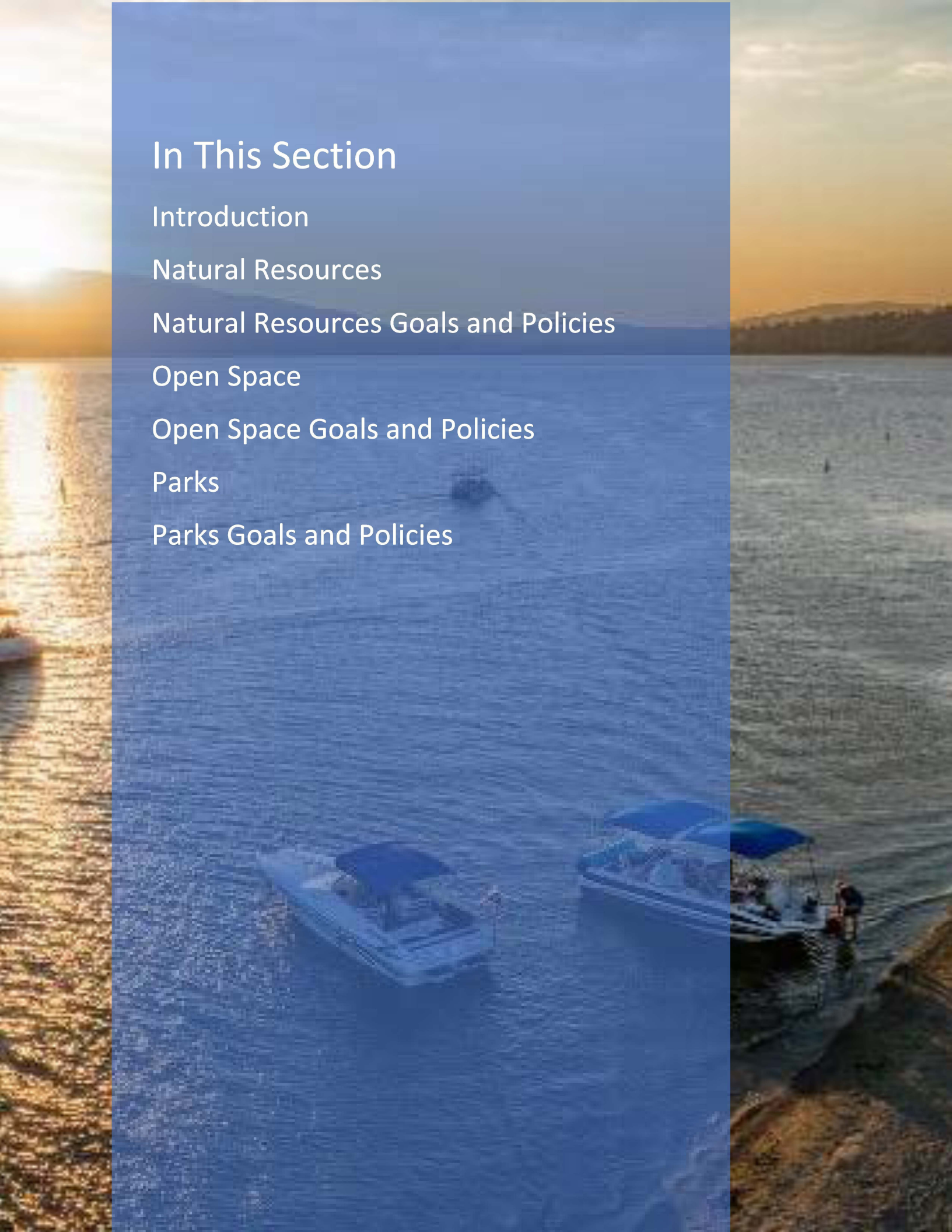
PRO-EJ-40: Support the establishment of neighborhood associations (regardless of ownership tenancy) throughout Lake Elsinore, particularly in DACs.[15]

[15] Refer to the Housing Element for additional policies and programs regarding housing and community building.

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Conservation, Open Space, and Parks



In This Section

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Natural Resources

Natural Resources Goals and Policies

Open Space

Open Space Goals and Policies

Parks

Parks Goals and Policies

Conservation, Open Space, and Parks Element

Introduction

The Conservation, Open Space, and Parks/Recreation Element focuses on the benefits of "open space", which includes visual enjoyment, natural resources, and recreational uses. Open space in and around Lake Elsinore includes limited agriculture, conservation areas, water/lake resources, and park and recreation areas. Preservation of open space for each of these uses is important to the quality of life valued by community members. Furthermore, a continuous network of open space land has more benefits for plant and habitat conservation than disconnected open spaces.

The natural resources section discusses natural communities and wildlife habitat; agricultural, fishery, timberland resources; mineral resources; topography/terrain; aesthetics; water resources; and air resources. Open space and natural areas in Lake Elsinore consist of local parks, mountains, rugged hillsides, and the lake. Lake Elsinore's park system consists of parks, dog parks, skate parks, pump track, gyms/auditoriums, sports fields, public beaches along Lake Elsinore, fitness trails including workout stations, and the 2.75-mile downtown riverwalk and nature trail.[1] The Cleveland National Forest, located to the west of the City, encompasses most of the Santa Ana Mountains. Natural resources within the City's mountains and hillsides include water, flora, and fauna. Mineral resources, such as sand, gravel, and clay, are also found in the Alberhill, Rice Canyon, Temescal Wash, and Cottonwood Hills areas.

Please refer to the:

- Historic, Cultural, and Tribal Cultural Resources Element for a discussion regarding Paleontological resources
- Mobility and Infrastructure Element for a discussion regarding transportation terminals/hubs and transportation routes

Baseline Conditions

- The natural communities and conservation areas are home to a variety of animal and plant species, some of which are either protected or threatened.
- The City will need to reconsider the challenges and benefits of future development growth in natural areas, particularly in the hillsides and around the Lake, versus focusing future growth around infill opportunities.
- Many developed areas in the Planning Area occur on varied terrain, including rolling hills and steep hillsides. These areas may experience unstable soils and high fire hazards associated with the steeper, highly vegetated slopes.

[1] "Parks," Lake Elsinore Visitors Bureau, October 20, 2023, https://visitlakeelsinore.com/parks/.

- Steep slopes and high elevations limit development on significant portions of the Planning Area's vacant lands and pose numerous natural hazard risks.
- The City's water resources play a major role in supporting several plant and animal species.
- Continued local, regional, and state coordination is required to maintain water quality that supports the well-being of residents and natural areas.
- Mining operations are slowly phasing out through careful reclamation processes; mining operations will ultimately be terminated.

Natural Resources: Biological Resources, Conservation Areas, Agricultural Resources, Fisheries, Timberlands, Mineral Resources, Topography and Terrain, Aesthetics, Water Resources, Air Resources

Biological Resources

Natural Communities and Wildlife Habitat

The Planning Area provides a range of complex vegetation communities and habitats resulting from the soils, slope, hydrology, and regional climate. Sixteen major natural communities have been identified in the Planning Area, several of which are considered "sensitive" or "special status" habitats due to their unique qualities, high wildlife value, and/or limited distribution across the region.[2] Natural communities include:

- Coastal sage scrub
- Riversidian sage scrub
- Diegan coastal sage scrub
- Riversidian alluvial fan sage scrub
- Chaparral
- Oak woodland
- Coast live oak woodland
- Dense englemann oak woodland
- Riparian forest
- Riparian scrub
- Southern willow scrub
- Southern cottonwood-willow riparian forest
- Southern sycamore-alder riparian forest
- Coastal and valley freshwater marsh
- Open water/reservoir/pond
- Vernal pools

[2] City of Lake Elsinore General Plan, 2011.

The natural communities are further discussed in Table COSP-1 and shown in Figure COSP-1.

Table COSP-1 : Planning Area Natural Communities

Type	Lake Elsinore (acres)	Sphere of Influence (acres)	Planning Area Total Acres
Nonnative Grassland	5,661	1,103	6,764
Coastal Sage Scrub			
Riversidian Sage Scrub*	6,727	3,262	9,989
Diegan Coastal Sage Scrub	32	680	712
Riversidian Alluvial Fan Sage Scrub*	112	205	317
Chaparral			
Chamise Chaparral	213	6	219
Chaparral	4,148	8,544	12,692
Woodlands			
Coast Live Oak Woodland*	73	392	465
Dense Engelmann Oak Woodland*	0	5	5
Oak Woodland	5	57	62
Riparian			
Riparian Forest	56	32	88
Riparian Scrub	186	111	297
Southern Cottonwood/Willow	0	22	22
Southern Willow Scrub*	27	30	57
Marsh			
Coastal and Valley Freshwater Marsh	32	0	32
Open Water/Reservoir/Pond	2,378	29	2,407
Vernal Pools**	-	-	-
Agricultural Lands			
Field Croplands	89	289	378
Grove/Orchard	26	198	224
Residential/Urban/Exotic	7,982	3,853	11,835
Total	27,747	18,818	46,565

*Considered to be a special-status/sensitive habitat because it is unique, has relatively limited distribution in the region, has high wildlife value, and/or is directly or indirectly protected federal, state, or local regulations and policies.

**Individual vernal pools and vernal pool complexes were not mapped in the MSHCP or for the City General Plan but are known to occur in the City and SOI.

Source: Lake Elsinore General Plan (2011), GIS Database for MSHCP (July 2003)

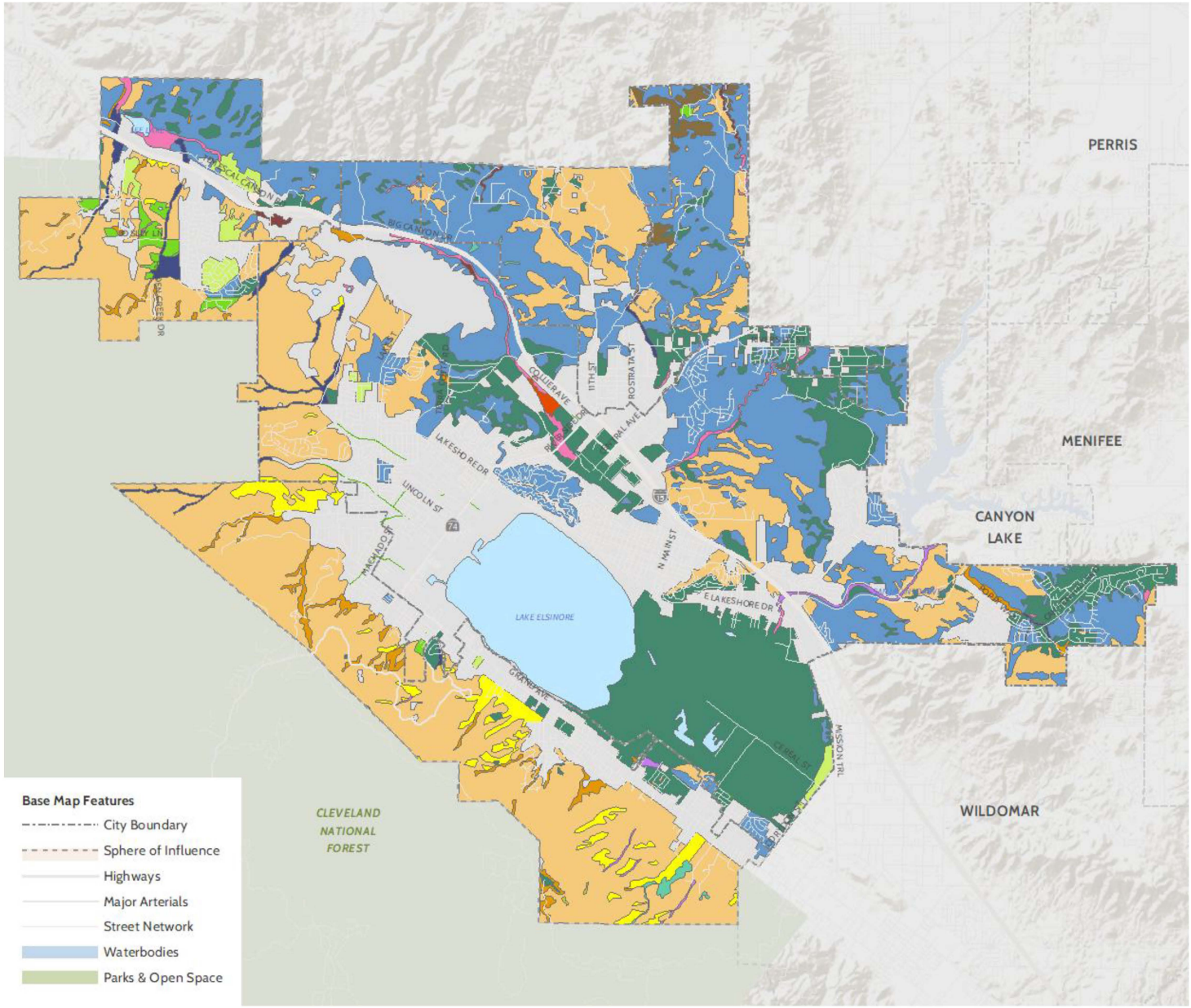


Figure COSP – 1
Vegetation Communities

Vegetative Communities

- Chamise Chaparral
- Chaparral
- Coast Live Oak Woodland
- Coastal and Valley Freshwater Marsh
- Dense Engelmann Oak Woodland
- Diegan Coastal Sage Scrub
- Field Croplands
- Grove/Orchard
- Non-native Grassland
- Oak Woodland
- Open Water/Reservoir/Pond
- Residential/Urban/Exotic
- Riparian Forest
- Riparian Scrub
- Riversidean Alluvial Fan Sage Scrub
- Riversidean Sage Scrub
- Southern Cottonwood/Willow Riparian
- Southern Willow Scrub

Prepared by MIG, October 2023.
Source: County of Riverside, 2023

0 ¼ ½ 1 1½ 2 Miles

Conservation Areas



North Peak Open Space Area, 2025

The City is part of a multi-jurisdictional species and habitat conservation effort known as the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP designates open space areas for either permanent conservation or authorizes a "takings" of these lands in exchange for the assembly of conservation areas.[3]

Authorized "takes" require plan participants to assemble a reserve system of approximately 500,000 acres to connect current and future conserved lands.[4] Approximately 3,500 acres in the City and the SOI are part of the existing reserve system within the MSHCP. The City's conservation target under the MSHCP is to add between 4,830 and 7,870 acres to the reserve system over the next 25 years. To achieve these targets, the City has focused on adding lands to existing core reserves and linkages within the Elsinore Area Plan, public and quasi-public lands that are part of the existing MSHCP conservation area, and the criteria area in and adjacent to the City and SOI as shown in Figure COSP-2. The 2021 MSHCP annual report shows that a total of 3,642 acres have been conserved between 2000 and 2021.

Rewilding

Rewilding aims to restore ecosystems by reintroducing native species and connecting/reconnecting habitat(s). Its goal is to restore or create resilient, self-sustaining ecosystems that benefit biodiversity, address climate change impacts, and provides natural resources for both animals and people to thrive. It differs from other ecological restoration efforts in that it considers new or emerging ecosystems that may encompass new species. Rewilding strategies typically acknowledge the changed environment and strive to create conditions for resilient ecosystems rather than replant or re-establishing what may have been there originally. Rewilding's framework focuses on the "3Ds":

- **Diversity:** Restoring diversity, often by reintroducing species.
- **Disturbance:** Allowing natural disturbances to shape the landscape.
- **Dispersal:** Creating conditions that allow for species and ecological processes to spread and establish.

Successful rewilding projects are steeped in scientific local research, active long-term community involvement and support, and traditional ecological knowledge.

[3] Riverside County Multiple Species Habitat Conservation Plan, 2003.
[4] Ibid.

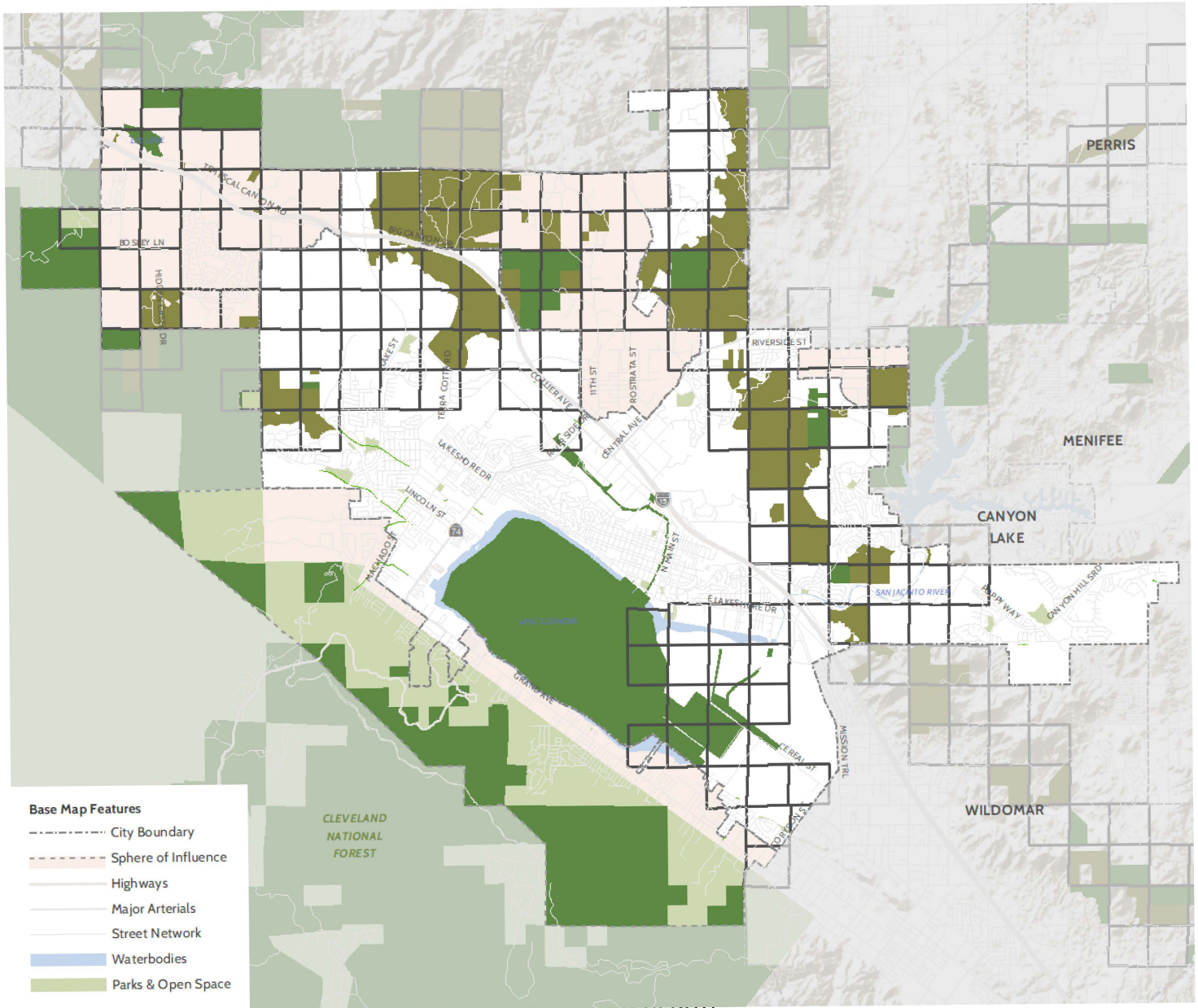


Figure COSP – 2
MSHCP Conservation Areas

Conserved Lands

- Criteria Cells
- RCA MSHCP Conserved Lands / Easements
- Public / Quasi-Public Conserved Lands

Public / Quasi-Public Conserved Lands: Properties owned, managed, or maintained by public agencies for the purposes of conservation.

RCA MSHCP Conserved / Easements: Additional reserve lands that contribute toward MSHCP conservation goals.

Criteria Cells / Area: A roughly 160-acre rectangle overlaid onto parcels within the MSHCP Plan Area and that has areas described for conservation.

Prepared by MIG, October 2023.
Source: County of Riverside, 2023

0 ¼ ½ 1 1½ 2 Miles

Agricultural Resources

The California Department of Conservation (CDC) categorizes agricultural land into one of the following eight classifications based on soil quality and irrigation status. The classifications are used to evaluate farmland by type, rather than to designate parcels appropriate for land use and use regulations (i.e. General Plan designations and zoning). Six of the classifications are found within the Planning Area as shown in Table COSP-2 and Figure COSP-3. The vast majority of the Planning Area is located within the three categories: Urban Built-Out Land, Water, and Other Land. Much of the land within the City's boundary designated as Farmland of Local Importance, Other, and Grazing Land have been entitled through previous Specific Plan approvals.

Table COSP-2: Agricultural Land Classification

Category and Definition	Lake Elsinore Acres	SOI Acres
Prime Farmland – is the ideal physical composition for crop production. It has been used for irrigated production in the four years prior to classification and can produce sustained yields.	0	0
Farmland of Statewide Importance - used for irrigated production in the four years prior to classification and is slightly lower quality than Prime Farmland.	0	0
Farmland of Local Importance – is important to the local agricultural economy as determined by the County's board of supervisors and a local advisory committee.	2,916	1,071
Unique Farmland - farmed in the four years prior to classification but does not meet the Prime Farmland or Farmland of Statewide Importance criteria; however, the land has produced specific crops with high economic value.	13	27
Grazing Land - suited to the grazing of livestock.	3,288	4,217
Urban and Built-Up Land - occupied by structures with a building density of at least 1 unit to 1.5 acres. Land uses may include residential, industrial, commercial, institutional, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.	7,654	2,897
Water - perennial water body of at least 40 acres	3,038	144
Other Land - is not included in any other mapping category. Examples may include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is also mapped as Other Land.	10,966	9,823

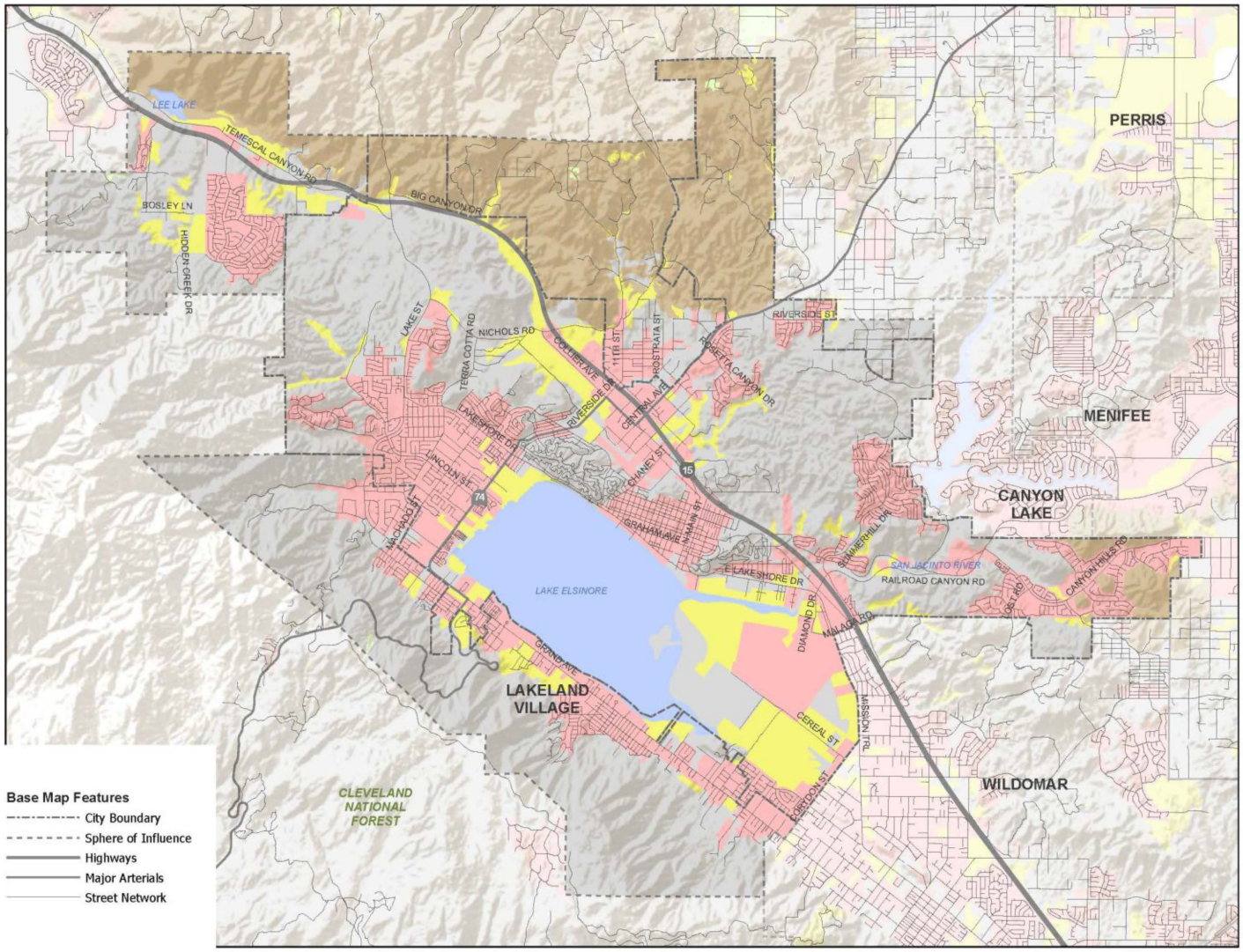


Figure COSP – 3
Agricultural Land

Fisheries

Lake Elsinore is a warmwater fishery with stocked fish species like largemouth bass, channel catfish, crappie, bluegill, wipers, carp, among others. The 2020 Lake Elsinore Fisheries Management Report assessed the fishery status including imbalances such as overpopulation of small fish (silverside minnows and mosquitofish) and recommended management measures. Key findings include the high number of small fish negatively affect the aquatic food web and lead to low zooplankton levels, which are essential for controlling algae blooms. The Fisheries Management Report finds that contaminant levels (DDT and PCB) in fish were below the stated goals, suggesting the Lake can be delisted from the EPA's impaired water list for those contaminates. In 2005, a Total Maximum Daily Load (TMDL) for nutrients was adopted by the Santa Ana Regional Water Quality Control Board and approved by the EPA (US Environmental Protection Agency) for the Lake. In 2020, the Lake Elsinore/Canyon Lake TMDL Task Force and the Santa Ana Water Board agreed to update the 2018 TMDL Revisions in an incremental manner. The TMDL sets numeric targets for dissolved oxygen, chlorophyll A, and nutrient concentrations/sources. The Lake Elsinore Fisheries Management Report recommends:

- Stocking sport fish (striped/white hybrids, black crappie, and bluegill) to help restore a more balanced food web and improve the fishery;
- Discontinuing stocking of channel catfish, largemouth bass, redear sunfish, baitfish, silverside, and mosquitofish; and
- Focusing on improving the habitat to better support the fishery, particularly as water levels fluctuate and to remain in alignment with the revised nutrient TMDL.

Ongoing monitoring and reporting continue to assess potential impairments and TMDL implementation.

Pollution in Lake Elsinore comes from a number of sources, including:

- Runoff (stormwater runoff from highways/streets/urban areas and agricultural/yard runoff);
- Wastewater discharges from wastewater treatment facilities/leaky on-site septic systems;
- Contaminated soils;
- Atmospheric deposits (pollutants in the air settling onto the lake surface); and
- Natural sources (nutrient-rich sediment from the San Jacinto River watershed).

The pollutants include nutrients (phosphorous and nitrogen), PCBs (polychlorinated biphenyls), and bacteria, which lead to nutrient enrichment and toxic algal blooms.

The Santa Ana Water Board has adopted stricter pollution limits for nutrients to help address the problem. Strategies include aeration to increase oxygen levels and adding chemicals (such as aluminum sulfate) to bind with excess nutrients. In addition, the City of Lake Elsinore encourages residents to reduce runoff and pollution through practices like using native plants, and converting septic systems to sewer.

Timberlands

The Cleveland National Forest, specifically the Elsinore Place geographical unit, covers the east-facing slopes of the Santa Ana Mountains. Elsinore Place does not have commercial timber industry; timber harvesting is not prominent. The Cleveland National Forest is, however, prone to wildfires leading to forest management and restoration by state and federal agencies. Forest resources in the Lake Elsinore area are subject to wildfire prevention and watershed health regulations.



Lake Elsinore
Source: www.komoot.com/guide

Mineral Resources

Significant clay resources are in the northern portions of the Planning Area, particularly in the Alberhill area. Clay resources have been used to produce heavy products such as brick and tile and refractory products such as fire brick and pottery.[5] In addition, red "bone clay" is sold directly for cement use. The mining activity is being phased out and reclamation processes are addressed in the specific plans for the areas with mineral resources.

The California Surface Mining and Reclamation Act of 1975 (SMARA) seeks to promote conservation and protection of valuable lands within the state subject to urban expansion. SMARA requires general plans to classify and map mineral resources designations approved by the State Mining and Geology Board. Mineral Resource Zones (MRZ) are used to classify lands according to availability of mineral resources:

- MRZ-1: Available geologic information indicates little likelihood for the presence of significant mineral resources.
- MRZ-2: Areas identified with mineral resource significance:
  - MRZ-2a contains discovered mineral deposits that are either measured or indicated reserves, and MRZ-2a classification is of prime importance since it contains known economic mineral deposits.
  - MRZ-2b areas contain discovered reserves that are either inferred reserves or are deposits presently considered sub-economic.
- MRZ-3: Known or inferred mineral occurrences are of undetermined mineral resource significance.

[5] Lake Elsinore General Plan, 2011.

- MRZ-4: No known mineral occurrences where geologic information does not rule out either the presence or absence of significant mineral resources. Data is insufficient to assign any other designation.

The City and SOI encompass areas with economically viable deposits of clay, sand, and gravel. As depicted in Figure COSP-4, the Planning Area has three areas designated as MRZ-2 (mineral resources with significance), two of which occur within City boundaries. One area, also within the City's jurisdictional boundary, is designated as MRZ-1 (likelihood of significant mineral resources).

Topography and Terrain

Elevations in the Planning Area range from 1,230 to 2,932 feet above sea level. The shoreline areas along Lake Elsinore and the Lake View District, Lake Edge District, and East Lake District to the west and east of the lake are predominantly flat. Terrain in the remaining areas of the Planning Area consists of rolling hills and heavily vegetated steep slopes that steadily increase outward from the Lake. As a result, Lake Elsinore's land use includes a high amount of vacant, development-constrained land across its many steep slopes. These steep slope areas pose various natural hazard concerns such as heightened landslide susceptibility and wildfire risk. Lake Elsinore is also located within the Elsinore Fault Zone, which includes multiple active faults directly to the northwest and southwest. Refer to the Public Safety, Noise, and Air Quality Element for more information on the City's active faults and natural hazards.

Aesthetics

Lake Elsinore and its SOI are located within or adjacent to the picturesque Elsinore Valley. Elsinore Valley is bordered by the Santa Ana Mountains to the west and the Temescal Mountains to the east. The City is at the base of the Cleveland National Forest foothills. The mountains provide an impressive, surrounding frame where cliffs, rock outcroppings, canyons, and rolling hills are highly visible from the Elsinore Valley floor.

The Santa Ana Mountains and Temescal Mountains are characterized by flora associated with the Coastal, Riversidian, Riversidian alluvial fan, and Diegan coastal sage scrub; Chaparral; and Oak woodland, Coast live oak woodland, and Dense Englemann oak woodland. These habitats include dense, scrubby thickets of low-lying, woody shrubs in a variety of shades ranging from grey-green to darker green. In addition, oak trees are seen standing alone or in small groupings; these trees are characterized by thick, leathery blue-green leaves, which provide year-round color and complement the gray-green landscapes beneath their overstory. Mature trees often have picturesque, gnarled trunks and wide-spreading branches. The occasional "super bloom" of California poppies and other wildflowers provide a spectacular colorful juxtaposition from the softer green-grey scrub, chaparral, and oak woodlands. Views of the Santa Ana Mountains and the Temescal Mountains are readily available from almost any area of the community.

Figure COSP – 4
Mineral Resources

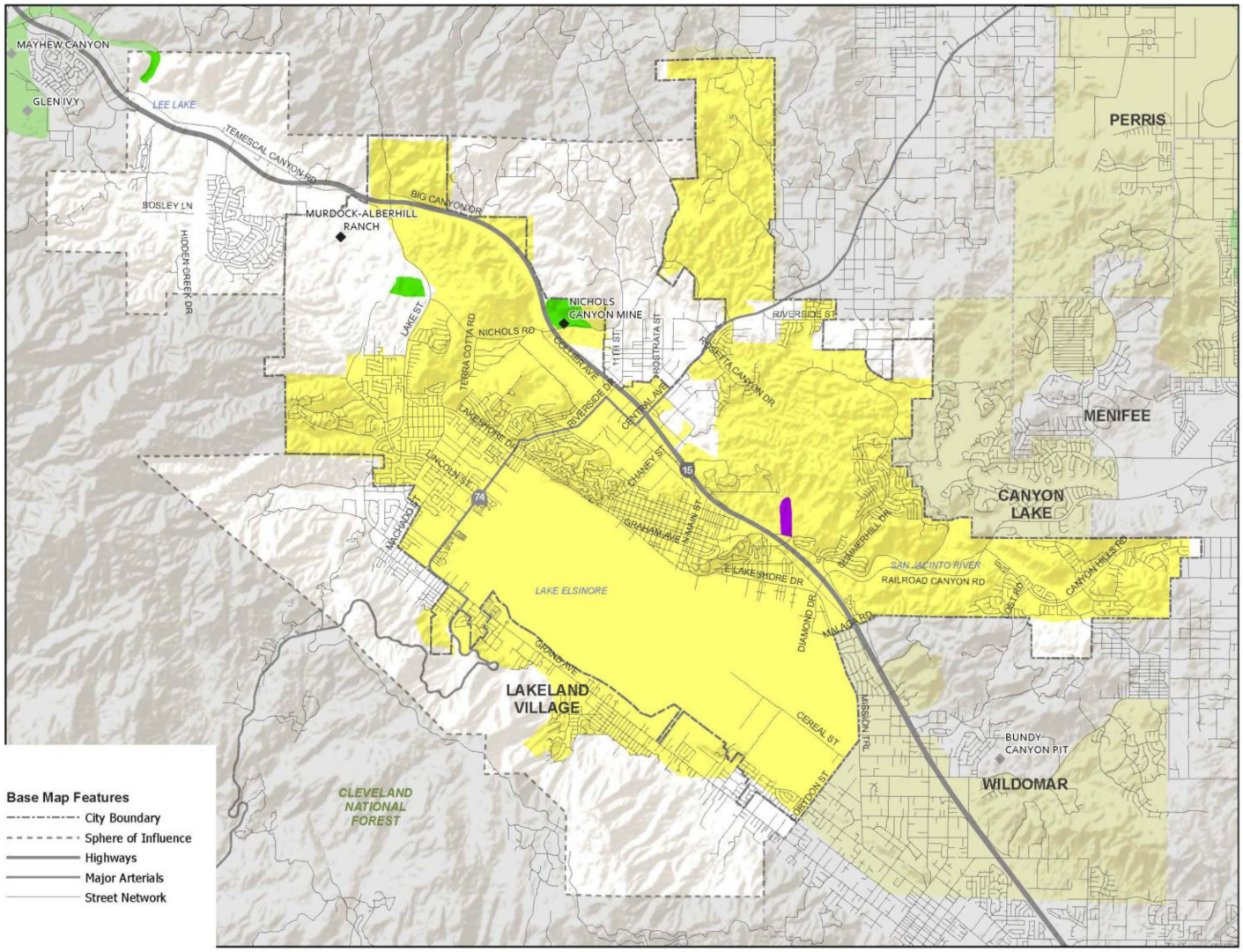
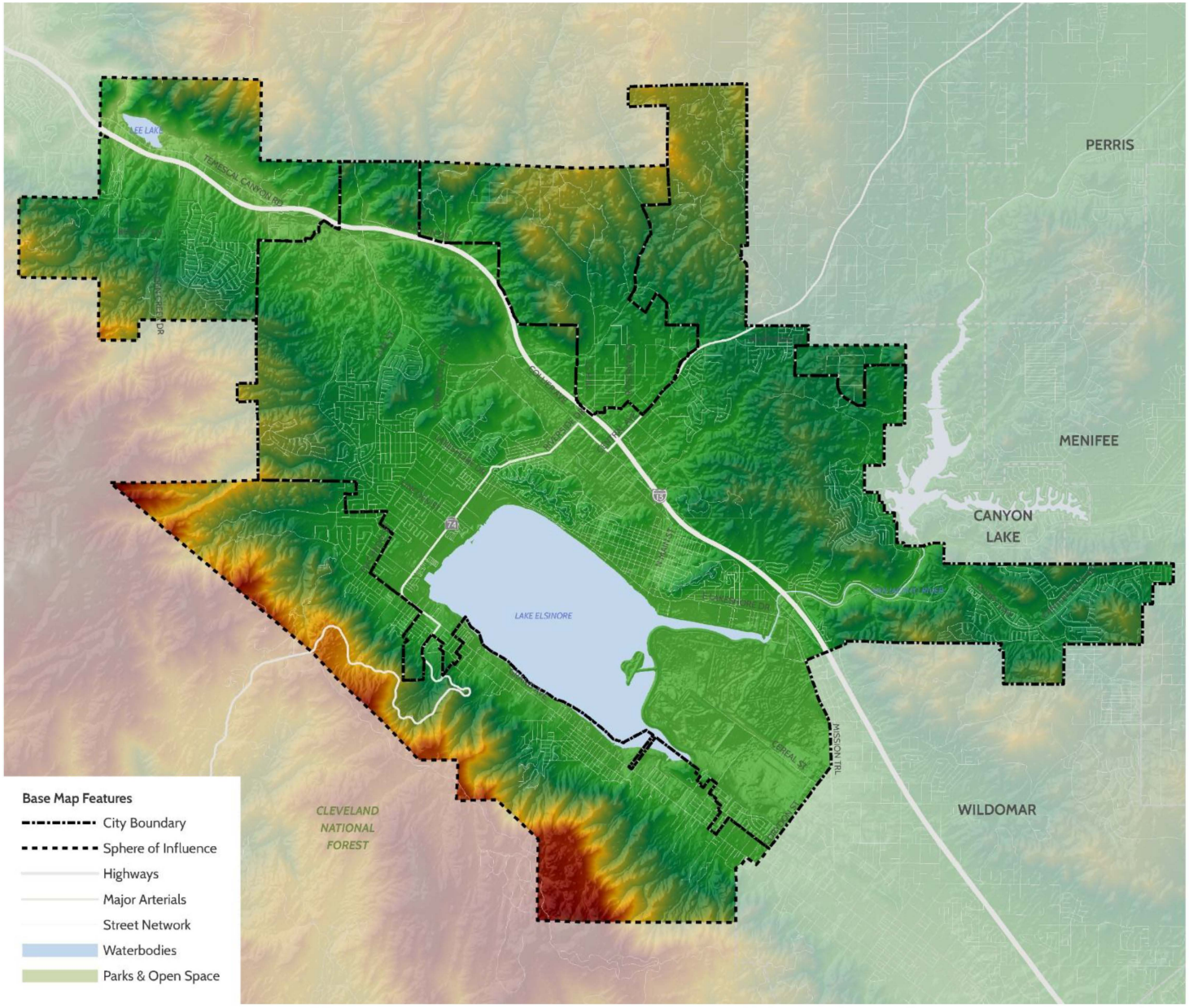


Figure COSP – 5
Topography



Prepared by MIG, October 2023.
Source: California Department of Water Resources, 2023

Miles
0 ¼ ½ 1 1½ 2

Within the Elsinore Valley, sits Lake Elsinore, a large rectangular-shaped natural freshwater lake. Lake Elsinore is a shallow lake of approximately 3,000 surface acres with over 14 miles of shoreline. The Lake is nutrient-rich and is susceptible to algae blooms, which can change the water from clear to murky in the hotter months. The Lake's water quality and appearance are improving because of the City and other agencies' ongoing water quality improvement programs. The Lake is used for water sports including kayaking, boating, fishing, jet skiing, and others. The Lake has several sandy beaches with public amenities such as picnic tables, restrooms, and other recreational facilities. Depending on location, scenic vistas of the Lake can be seen from:

- Mountain lookouts/vista points along Ortega Highway;
- Hiking trails in the Santa Ana Mountains and the Ortega Mountains;
- Adjacent streets such as Lakeshore Drive, Diamond Circle, and Grand Avenue; and
- Local open spaces i.e. Lakepoint Park, Lake Elsinore Levee, Elm Grove Beach among others.

Water Resources

Lake Elsinore is located within an arid region of southern California where water is a limited resource. Fortunately, the City has access to multiple water resources such as Lake Elsinore, San Jacinto River, Temescal Wash, and treated water plants. Lake Elsinore's water supply is managed by the Elsinore Valley Municipal Water District (EVMWD) and consists of a blend of local groundwater, surface water from Railroad Canyon Reservoir (Canyon Lake), and imported water.[6] EVMWD's 2020 Urban Water Management Plan states that no water shortages are anticipated within the next 25 years under normal, single dry, and five consecutive dry years conditions, including a five-year drought extending through 2025. Implementation of local water projects is crucial to ensure EVMWD's water supplies are reliable, while reducing EVMWD's reliance on imported water.[7]

Watershed

The Lake Elsinore Planning Area is located in the Santa Ana River and San Jacinto River Watersheds (Figure COSP-6). The Santa Ana River Watershed includes the approximately 100-mile-long Santa Ana River and more than 50 tributaries, making it the largest river basin in Southern California. The San Jacinto River Watershed includes the 42-mile-long San Jacinto River. The river's headwaters are in Santa Rosa and the San Jacinto Mountains National Monument from which water flows downstream until reaching Lake Elsinore.[8] The San Jacinto River includes 23 tributaries. The City of Lake Elsinore is primarily located within the Lake Elsinore sub-watershed area, which covers 45 square miles at the lowest point of the San Jacinto River watershed at the end of the San Jacinto River.

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[6] "Water Resources," Elsinore Valley Municipal Water District, November 22, 2023, https://evmwd.com/who-we-are/water-resources/.
[7] 2020 Urban Water Management Plan, Elsinore Valley Municipal Water District, June 2021
[8] "The San Jacinto River Watershed," Lake Elsinore and San Jacinto Watersheds Authority LESJWA, n.d., https://mywatersheds.com/the-san-jacinto-river-watersheds/.

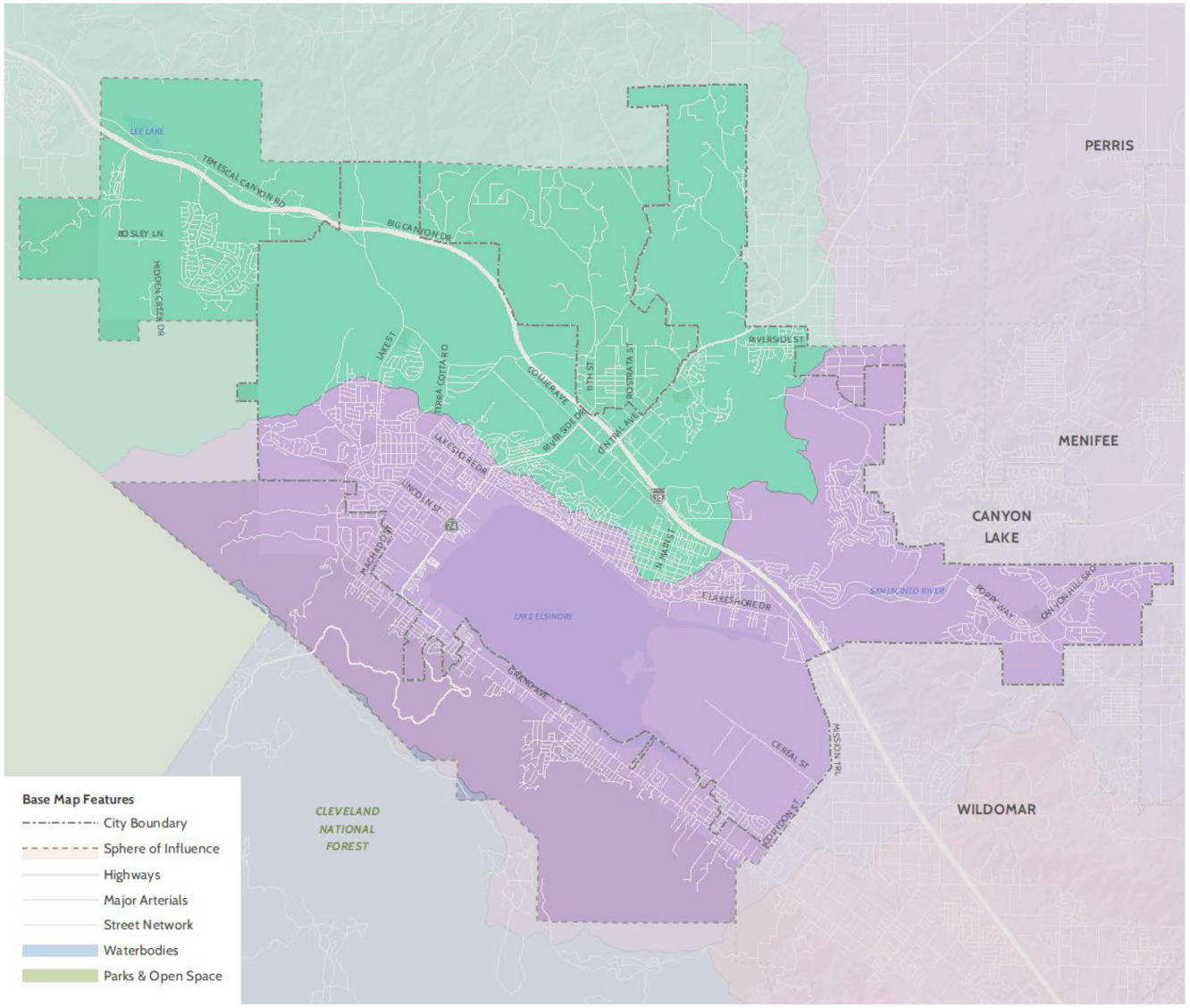


Figure COSP – 6
Watersheds

Groundwater

Lake Elsinore is underlain by the Elsinore Groundwater Basin, which covers 25,700 acres (40.2 square miles) in western Riverside County (Figure COSP-7).[9] The Basin is bounded by the Santa Ana and Elsinore Mountains along the Willard fault to the southwest, the Temecula Valley Groundwater Basin to the southeast, the Temescal Sub-basin of the Upper Santa Ana River Valley Groundwater Basin to the northwest, and the Peninsular Ranges along the Glen Ivy fault to the northeast.[10] The Basin is primarily served by precipitation infiltration as well as infiltration along the San Jacinto River channel upstream of Lake Elsinore and agricultural and residential return flows.[11] Average annual precipitation ranges from 12 to 14 inches. Municipal pumping for potable water is the only major outflow from the Basin.

The EVMWD has 13 active municipal wells that provide quality drinking water from 35% of the District's groundwater wells.[12] Groundwater is disinfected with chlorine and chloramines and represents 40-50% of Lake Elsinore's drinking water supply.[13]

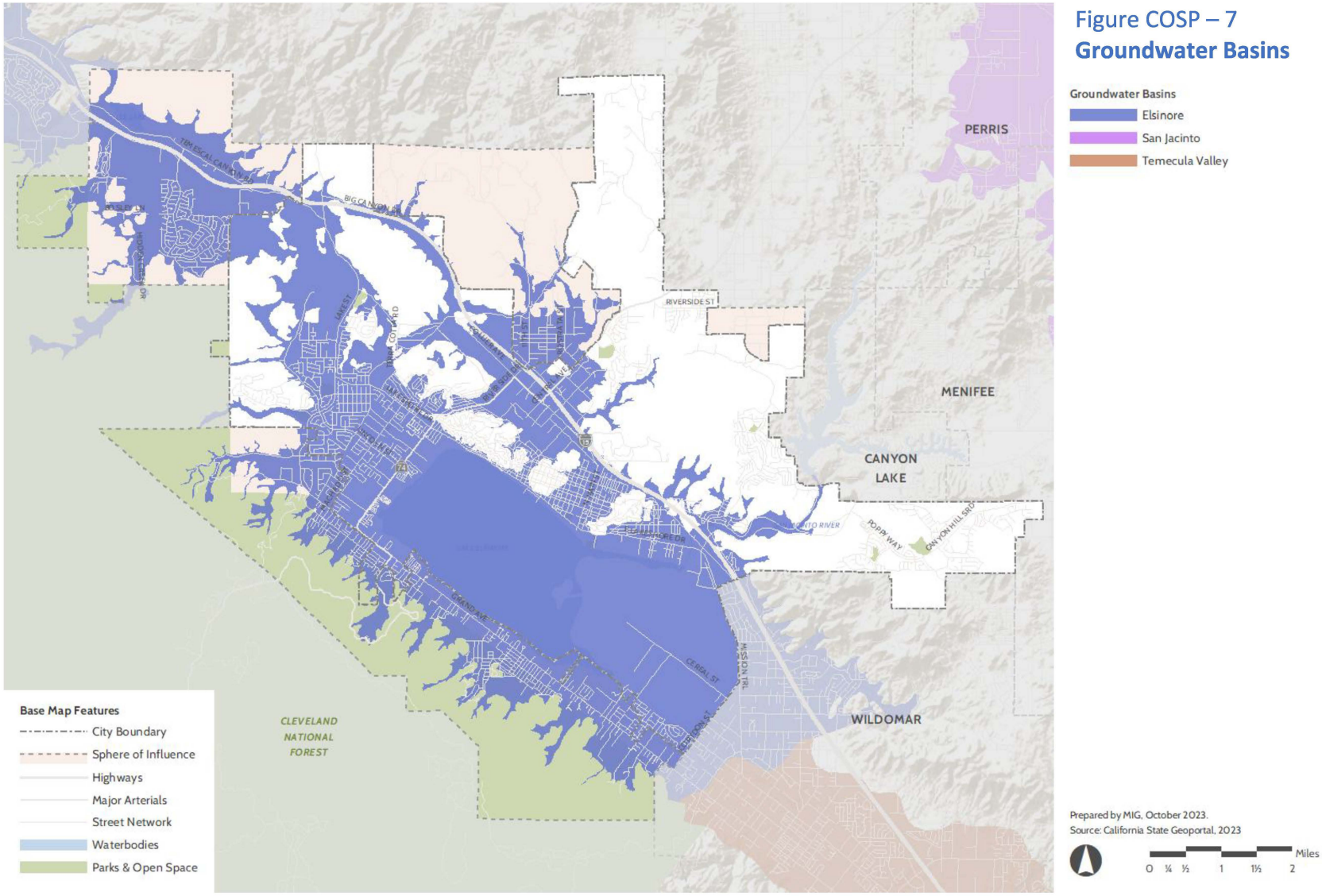
Surface Water

Surface water features in the Planning Area include Lake Elsinore, San Jacinto River, and Temescal Wash. Surface waters released from the Railroad Canyon Reservoir flow into the San Jacinto River, which flows into Lake Elsinore and lastly into the Temescal Wash during periods of high lake levels (Figure COSP-8).[14] These flows are supported by over a dozen tributaries, including intermittent streams and creeks. Intermittent streams contribute to distinctive riparian vegetation and play a major biological role by supplying sediment, water, and organic materials to downstream water channels.

Lake Elsinore is southern California's largest natural freshwater lake, measuring approximately 5 miles long by 2 miles wide. To maintain consistent lake levels, a levee was constructed in 1995 to reduce water surface size, minimize evaporation, and provide flood protection for the southern end of the lake. Lake Elsinore is fed by four primary water sources including runoff from local tributaries, direct precipitation, reclaimed water (Elsinore Valley Municipal Water District's Regional Water Reclamation Facility located near Chaney/Strickland intersection), and inflows from the San Jacinto River. The Lake's reliance on runoff water brings water quality issues and associated ecological concerns such as fish die-offs and algal blooms.[15]`

[9] "B118 Basin Boundary Description" (California Department of Water Resources, January 2006).
[10] Ibid.
[11] City of Lake Elsinore General Plan, 2011.
[12] "Water Resources," Elsinore Valley Municipal Water District, November 22, 2023, https://evmwd.com/who-we-are/water-resources/.
[13] Ibid.
[14] City of Lake Elsinore General Plan, 2011.
[15] "The San Jacinto River Watershed," Lake Elsinore and San Jacinto Watersheds Authority LESJWA, n.d., https://mywatersheds.com/the-san-jacinto-river-watersheds/.

Figure COSP – 7
Groundwater Basins



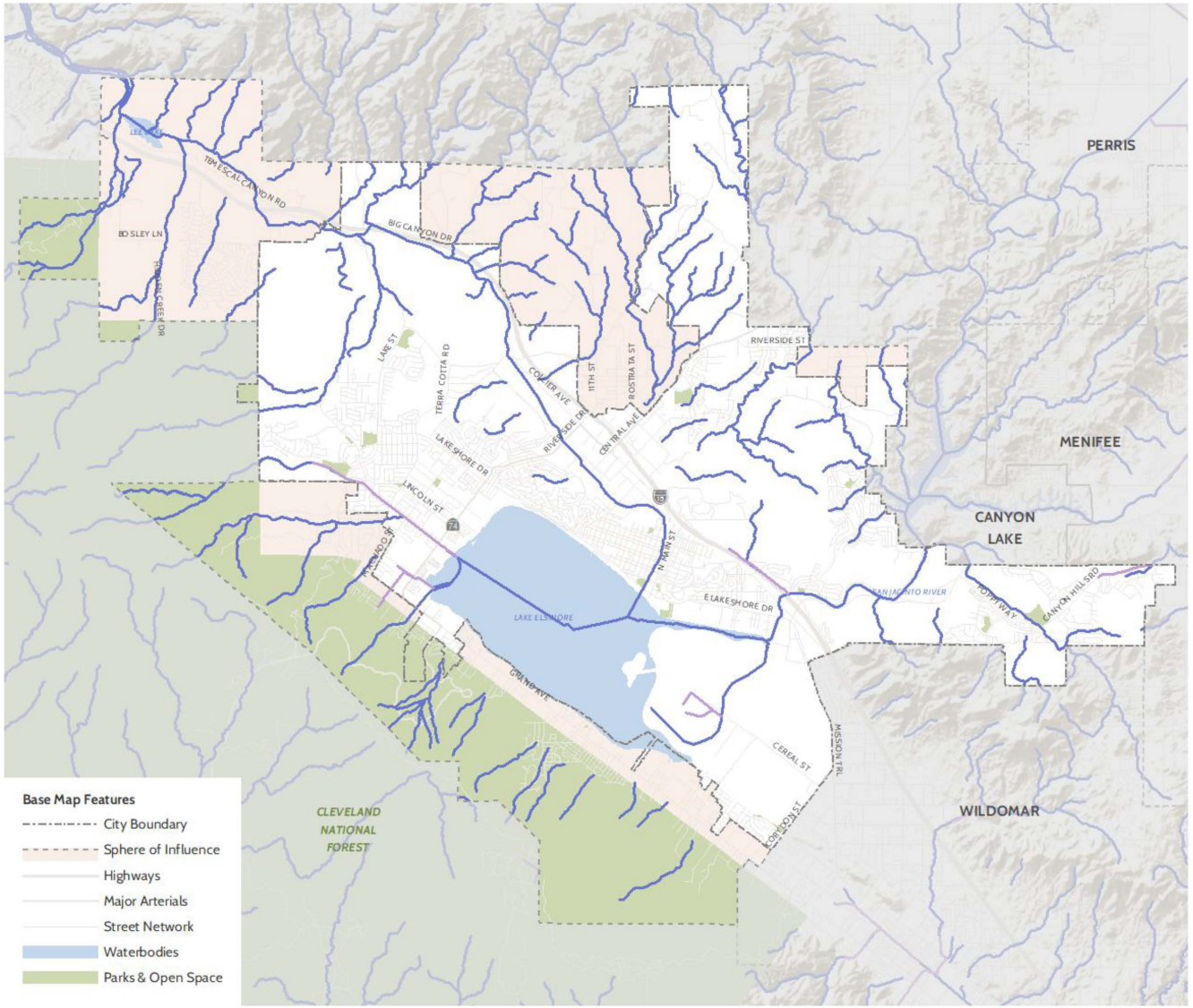


Figure COSP – 8
Water Courses

Flood Protection

The Riverside County Flood Control District (RCFCD) manages the region's flood protection and drainage. The District oversees several flood control facilities such as debris dams, storm channels, and storm drains that are referred to as the "backbone" system of flood control for the region.[16] The City of Lake Elsinore also owns and maintains multiple flood control facilities that are generally constructed as part of the drainage plans for individual projects. Naturally occurring flood protection, such as natural channelization, allows water to percolate into local groundwater basins. Two dams operated by the EVMWD impact the Planning Area. The Canyon Lake Dam (also referred to as the Railroad Canyon Dam), located at Canyon Lake northeast of the Planning Area, maintains the level of Canyon Lake Reservoir and regulates flows from the San Jacinto River watershed to Lake Elsinore.[17] The Elsinore Valley Dam (also referred to as the Lee Lake Dam), located at Corona Lake in the northwest corner of the Planning Area, regulates a man-made storage reservoir for non-drinking water that was previously used for agricultural irrigation and recreation but dried up almost completely during the five-year drought.[18]

For more information, see Flooding and Dam Inundation Section of the Public Safety, Noise, and Air Quality Element.

Air Resources

The Lake Elsinore Planning Area lies in the South Coast Air Basin (SCAB), which is under the South Coast Air Quality Management District (SCAQMD). The SCAB includes Orange County and portions of Los Angeles, San Bernardino, and Riverside Counties. Southern California's topography and climate combine to create an area of high air pollution potential in the SCAB.

Southern California's air quality is largely influenced by the position and strength of the subtropical high-pressure cell over the Pacific Ocean. This cell produces a Mediterranean climate with warm summers, mild winters, and moderate rainfall. This weather pattern is occasionally interrupted by periods of extremely hot weather and Santa Ana winds originating in the desert. Lake Elsinore's precipitation occurs between November and April, but the area remains dominated by sunny or partly sunny conditions during these months. Specific to this subregion is the Elsinore Convergence Zone, where two major airstreams in western Riverside County meet and act as an boundary, obstructing much of the inland basin air pollutants from continuing south beyond the Lake Elsinore area.

Lake Elsinore's air quality is generally considered "moderate to good". The Lake Elsinore area's annual average Air Quality Index (AQI) recent values are 37 and 38 for 2023, 2022, and 2021 where values between 0-50 are good, 51-100 are moderate, and 101 – 150 are poor. In both 2023 and 2024 Lake Elsinore experienced only one day where the AQI value exceeded 101. The primary pollutants of

[16] Lake Elsinore General Plan, 2011.
[17] "EVMWD Dams and Dam Safety," Elsinore Valley Municipal Water District, July 31, 2023, https://evmwd.com/who-we-are/operations/evmwd-dams-and-dam-safety/.
[18] Ibid.

concern are PM10 (particulate matter) and O3 (ozone). The primary sources of regional greenhouse gas (GHG) emissions are light-duty vehicles and electric power generation using fossil fuels. Other large contributors are heavy-duty vehicles, petroleum refining, and similar stationary sources.

Table COSP-3: 2023 Air Quality, Lake Elsinore Area (AQS060659001)

	Standard	Lake Elsinore Station
Carbon Monoxide (CO)	1-hour standard 33 ppm (Federal), 20 ppm (State) 8-hour standard 9 ppm (Federal and State)	1.3 Maximum 1-hour concentration, ppm 0.7 Maximum 8-hour concentration, ppm 0 Days exceed standard
Ozone (O3)	1-hour standard State <0.09 ppm 8-hour Federal and State <0.070	0.120 Maximum 1-hour concentration, ppm 0.103 Maximum 8-hour concentration, ppm 0.086 Fourth high 8-hour concentration, ppm 10 days exceed State 1-hour standard 31 days exceed Federal 8-hour standard 35 days exceed State 8-hour standard
Nitrogen Dioxide (NO2)	1-hour Federal 100 ppb; Federal annual 53.4 ppb 1-hour State 0.18 ppm; State annual 0.30 ppm	41.7 Maximum 1-hour concentration, ppb 33.4 98th percentile 1-hour concentration, ppb 6.7 Annual average concentration, ppb
Suspended Particulates (PM10)	24-hour Federal 150ug/m 24-hour State 50ug/m	186 ug/m Maximum 24-hour concentration 1 (0%) Sample exceeding Federal 24 hour 5 (1%) Sample exceeding State 24-hour 20.8 Annual Average Concentration

Not measured: Sulfur Dioxide, PM2.5, Lead, PM10 Sulfate

Source: 2023 Air Quality, SCAQMD

For additional air quality and air pollution information, see the Public Safety, Noise, and Air Quality Element. For additional information regarding air quality and Environmental Justice, see Environmental Justice Element.

Natural Resources Goals and Policies

GOAL COSP-1: CONSERVE, PROTECT, AND EXPAND NATURAL OPEN SPACES THAT CONTAIN SIGNIFICANT NATURAL RESOURCES, INCLUDING SENSITIVE BIOLOGICAL RESOURCES, NATIVE HABITATS, AND VEGETATION COMMUNITIES SUPPORTING WILDLIFE SPECIES

Policy COSP-1: Preserve open space areas with a diversity of habitats and plants native to Lake Elsinore while balancing the community's recreational, scientific, economic, educational, and scenic needs.

Policy COSP-2: Promote native habitat preservation including efforts to restore native vegetation damaged due to construction, overuse, or wildfire consistent with MSHCP and applicable State and federal environmental laws.

Policy COSP-3: Encourage revegetation with native plants compatible with natural surrounding habitat where soils have been disturbed during construction, and discourage plants identified in the MSHCP as unsuitable for conservation areas.

Policy COSP-4: Encourage preservation of continuous open space, consistent with MSHCP and applicable State and federal environmental laws, that promotes movement of wildlife, such that wildlife corridors are maintained and/or reestablished.

Policy COSP-5: Explore options that help to conserve rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special- status species, such as:

- Avoidance of sensitive habitat;
- Clustered development;
- Transfer of development rights; and
- Compensatory mitigation, such as habitat restoration or creation.

Policy COSP-6: Use existing (and/or restore historical) natural features and ecosystem processes for conservation, preservation, or sustainable management of open space, including but limited to, aquatic or terrestrial vegetated open space, systems that provide clean water, conserve ecosystem values and functions, and provide a wide array of benefits to people and wildlife.

Policy COSP-7: Maintain, restore, and protect the city's waterways.

Policy COSP-8: Ensure that construction adjacent to creek channels is sensitive to the natural environment, preserves topography and vegetation along the creek, minimizes impacts to the waterway, and provides an adequate setback buffer.

Policy COSP-9: Restore channelized waterways and avoid creating additional channelized waterways unless no other alternative is available to protect human health, safety, and welfare.

Policy COSP-10: Encourage multiple uses of waterways, including:

- Flood mitigation and storage;
- Groundwater recharge;
- Opportunities for restoration and stewardship;
- Climate adaptation;
- Wildlife habitat;
- Passive recreational open space uses;
- Nature study;
- Pedestrian and bicycle circulation; and
- Other compatible outdoor uses.

GOAL COSP-2: PROTECT SOIL RESOURCES FROM POOR MANAGEMENT PRACTICES AND POLLUTION

Policy COSP-11: Encourage soil conservation practices that retain native vegetation, maximize water filtration, and provide slope stabilization.

Policy COSP-12: Reduce impermeable surface coverage citywide by replacement with natural vegetation and soils to reduce runoff and flood hazards.

GOAL COSP-3: PROTECT SENSITIVE PLANT AND WILDLIFE SPECIES OCCURRING WITHIN THE CITY

Policy COSP-13: Ensure proposed projects consider/evaluate potential impacts of the development on plant or wildlife species as required by the MSHCP and/or applicable State and/or federal laws.

Policy COSP-14: Minimize development or the modification of riparian high functioning habitat or along corridors with 80% or more of natural habitat linking to larger patches of native habitat or native plant species.

Policy COSP-15: Consider adopting a native tree planting and maintenance program.

Policy COSP-16: Consider adopting an invasive species management program.

GOAL COSP-4: RE-ESTABLISH OPEN SPACE THAT PROVIDES CLIMATE RESILIENCE (E.G., FLOOD MITIGATION, HEAT REDUCTION, CARBON SEQUESTRATION) AND OTHER ECOLOGICAL CO-BENEFITS

Policy COSP-17: Identify and map core natural habitats, habitat corridors, possible wildlife passages, and other areas suitable for rewilding and creating wildlife passageways.

Policy COSP-18: Support increased biodiversity, native habitat restoration, and improved ecosystem health across both sensitive natural areas and the broader urban landscape.

Policy COSP-19: Recognize and integrate tribal, historic, and cultural landscapes within the rewilding and open-space network, honoring Indigenous stewardship and heritage, as appropriate.

Policy COSP-20: Ensure infrastructure and development are designed, constructed, or retrofitted to minimize light, habitat fragmentation and degradation, and urban heat impacts on open space and rewilded natural spaces.

GOAL COSP-5: CONSERVE AGRICULTURAL LAND AND SOILS

Policy COSP-21: Discourage the conversion of agricultural land to nonagricultural uses.

Policy COSP-22: Promote restorative agricultural and landscaping techniques that incorporate techniques such as cover crops, mulching, compost application, field borders, alley cropping, conservation crop rotation, prescribed grazing, and reduced tillage to promote healthy soils and soil conservation.

GOAL COSP-6: BALANCE THE NEED FOR EXTRACTED MATERIALS, WHICH HAVE BEEN DETERMINED TO BE SIGNIFICANT, WITH THE NEED FOR RESOURCE CONSERVATION

Policy COSP-23: Encourage land uses that have a higher level of compatibility with mining activities, such as industrial and manufacturing.

Policy COSP-24: Consider the benefits in allowing extraction activities of mineral resources when making land use decisions.

Policy COSP-25: Require mined property to be left in a condition suitable for reuse in conformance with the General Plan land use designations and the California Surface Mining and Reclamation Act (SMARA).

Policy COSP-26: Encourage the reuse and recycling of existing aggregate construction material for new development.

GOAL COSP-7: PROTECT AND ENHANCE LAKE ELSINORE'S SURROUNDING NATURAL ENVIRONMENT AND ITS DISTINCTIVE BEAUTY

Policy COSP-27: Minimize significant landform alterations that degrade the Santa Ana Mountains' and Temescal Mountains' visual character.

Policy COSP-28: Promote public views of the Lake.

Policy COSP-29: Maintain and improve the quality of existing landscaping in parkways, parks, civic facilities, rights-of-ways, and other public open areas

Policy COSP-30: Incorporate the City's identification symbol into street signage, planters, benches, public buildings, City vehicles, streetscape furnishings, and other appropriate applications. Support a high level of Code Enforcement to encourage neighborhood beautification and to maintain property values and quality of life.

GOAL COSP-8: IMPROVE WATER QUALITY AND ENSURE THE WATER SUPPLY IS NOT DEGRADED AS A RESULT OF URBANIZATION OF THE CITY

Policy COSP-31: Require developers to provide clean water systems that reduce pollutants being discharged into the drainage system to the maximum extent feasible and meet required federal National Pollutant Discharge Elimination System (NPDES) standards.

Policy COSP-32: Require Best Management Practices through project conditions of approval for development to meet the Federal NPDES permit requirements.

Policy COSP-33: Support public education and awareness programs to reduce pollutant discharges into the drainage system.

Policy COSP-34: Protect groundwater recharge areas, particularly creeks and riparian corridors.

Policy COSP-35: Integrate green infrastructure into planned and future city infrastructure projects, including road improvements, parks, and private development.

GOAL COSP-9: PROTECT SOIL RESOURCES FROM POOR MANAGEMENT PRACTICES AND POLLUTION

Policy COSP-36: Access reliable data and information on water use (based on customer usage reports) and supply to evaluate water supply impacts and the needs of proposed development projects to promote effective decision-making.

Policy COSP-37: Encourage the use of site and landscape designs that minimize surface runoff and retain or detain stormwater runoff, minimizing volume and pollutant concentrations.

Policy COSP-38: Require the use of innovative stormwater best management practices in all new development, including water quality monitoring during construction projects in the vicinity of sensitive water resources.

Policy COSP-39: Encourage, facilitate, and/or require the use of water-conserving appliances and fixtures in new developments.

Policy COSP-40: Create urban forest along street corridors, in parks, and on City-owned properties to provide soil stabilization and erosion reduction as well as reduce flood hazards.

Policy COSP-41: Encourage the use of native and climate-appropriate and drought tolerant landscaping to reduce overall and per capita water demand.

Policy COSP-42: Discourage use of chemical fertilizers and other harmful soil treatments.

GOAL COSP-10: IMPROVE, AS FEASIBLE, LOCAL AIR RESOURCES

Policy COSP-43: Capture and sequester more carbon in soils and plants citywide.

Policy COSP-44: Achieve and maintain ambient air quality standards.

Policy COSP-45: Reduce communitywide and municipal GHG emissions, achieving at least an 85 percent reduction of GHG emissions from community sources below 1990 levels by no later than 2045 with a commitment to accelerate reductions, as feasible, in support of the State's carbon neutrality goals.

Policy COSP-46: Reduce energy use and increase energy efficiency in existing and new residential, commercial, industrial, and public structures.

Regenerative land management is an approach to land management that seeks to improve the overall health of the ecosystem. It emphasizes strategies that protect and enhance the ecosystem in a holistic and interconnected manner, promoting the use of natural systems and processes to repair environmental damage.

Policy COSP-47: Increase the use of renewable, carbon-free, and distributed energy resources throughout the city.

Policy COSP-48: Reduce the use of fossil fuels as an energy source in new and existing buildings.

Implementing Programs for Goals COSP-1 through COSP-10

Zoning Code/Map Update

PRO-COSP-1: Update the Zoning Code/Map to:

- Encourage preservation of continuous open space that promotes movement of wildlife, such that wildlife corridors are maintained and/or reestablished;
- Require new development to maintain an adequate setback from waterways to recognize the 100-year flood elevation at a minimum;
- Require new development to be electric vehicle charging ready, at a minimum;
- Facilitate the installation of electric vehicle charging infrastructure; and
- Require new development to install electric vehicle charging infrastructure beyond the minimum State requirements.

Building, Municipal, and Other Code Updates

PRO-COSP-2: Update local codes to:

- Encourage the use of locally propagated native plants and climate-appropriate landscaping to reduce overall water demand and soil erosion;
- Control invasive and non-native vegetation in natural open spaces;
- Periodically update the City's surface mining reclamation ordinance to ensure the City's ordinances reflect the most current SMARA requirements;
- Incentivize building owners to upgrade residential appliances, including water and space heaters, to increase energy efficiency and reduce GHG emissions;
- Increase the use of low-carbon construction materials; and
- Require all new electric vehicle (EV) chargers installed by the City to have bi-directional charging capabilities. Encourage private property owners to select EV chargers with bi-directional charging capabilities when installing EV chargers on their properties.

PRO-COSP-3: Evaluate and adopt changes to the building code or other municipal codes and policies to decarbonize the building stock while also maximizing energy efficiency.

PRO-COSP-4: Require new infrastructure (bridges, culverts, fences) to incorporate wildlife-friendly features, and limit artificial lighting in and shining on open space and natural corridors.

PRO-COSP-5: Require new development adjacent to open space, storm drainage infrastructure (including washes and channels) to include ecological corridors and buffers.

Review Process

PRO-COSP-6: Impose conditions, as necessary, on mining operations to minimize or eliminate the potential adverse impact of mining operations on surrounding properties and the environment.

PRO-COSP-7: Require the reuse and recycling of existing aggregate construction material for new residential, commercial, and industrial development.

PRO-COSP-8: Ensure that natural wetlands are observed, floodway regulations are followed, and measures are taken to address possible conflicts because of mining.

PRO-COSP-9: Require all new trails, trailheads, conservation signage, interpretive centers, and maintenance facilities established within MSHCP Conservation areas to follow the MSHCP's Guidelines for the Siting and Design of Trails and Facilities.

PRO-COSP-10: Require a qualified biologist to prepare a biological resource assessment (BRA) for proposed development on sites that may support or have the potential to affect special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat prior to, during, and after project construction. The BRA shall be prepared to address conformance with all applicable federal, state, and local regulations and protocols.

PRO-COSP-11: Require that construction or other ground disturbing activities that may affect bird nests or nesting habitat avoid nests of native birds when the nest is in active use by implementing protection measures specified by a qualified ornithologist or biologist to ensure compliance with the California Fish and Game Code and federal Migratory Bird Treaty Act. If demolition, construction, ground disturbing, or tree removal/pruning activities occur during the nesting season (February 1 and August 31), preconstruction surveys shall be conducted by a qualified ornithologist or biologist and approved by the City prior to issuance of building permits. Preconstruction surveys are not required for construction, ground disturbing, or tree removal/pruning activities outside the nesting season.

PRO-COSP-12: Require new development along waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for multiuse trails and recreation purposes and rewilding purposes.

PRO-COSP-13: Guide project applicants toward site planning, solar orientation, cool roofs, and landscaping that decrease summer cooling and winter heating needs.

PRO-COSP-14: Through the development review process, encourage:

- Planting of native plants to enhance the scenic setting of public and private lands;
- Development design and construction to be lower than ridgelines;
- Development design to provide public views of local ridgelines and Lake Elsinore;
- Dedication of open space land in hillside development proposals to preserve and enhance view opportunities from transportation corridors and surrounding development; and
- New development and redevelopment to incorporate views of Lake Elsinore from roadways and other public spaces.

PRO-COSP-15: Require grading plans for any hillside development to include specifications for revegetation and new planting to minimize hillside scarring.

PRO-COSP-16: Avoid isolated development in sensitive hillside areas that can create adverse visual impacts.

New Plans, Programs, and Strategies

PRO-COSP-17: Acquire or enable the acquisition of properties for open space that will provide values that support scientific, educational, scenic, and cultural values while also maintaining wildlife habitat and ecosystem services.

PRO-COSP-18: Team with landowners and wildlife agencies to promote the creation of and the re-establishment of wildlife corridors, sustainable land use, and reduce impacts on the environment and wildlife habitats consistent with the MSHCP and applicable State and/or federal environmental laws.

PRO-COSP-19: Evaluate barrier fencing or other buffers between MSHCP Conservation Areas and proposed public and private land uses that may be incompatible with the Conservation Areas in order to minimize illegal/unauthorized public access, domestic animal predation, or dumping in the Conservation Areas while not impeding wildlife movement.

PRO-COSP-20: Identify tree types and establish standards for native tree planting and maintenance program that supports wildlife, improves air and water quality, and reduces energy consumption.

PRO-COSP-21: Restore and enhance the ecological function of channelized waterways, consistent with rewilding best practices, and avoid channelizing additional segments of the waterways system.

PRO-COSP-22: Identify and map groundwater recharge areas and provide groundwater recharge area maps to local agencies to foster planning that protects groundwater supplies.

PRO-COSP-23: Promote projects that use green infrastructure, such as bioswales, rain gardens, planter boxes, permeable pavements, and green roofs.

PRO-COSP-24: Expand installation and operation of electric vehicle charging stations on City properties, including curbside in areas of the community where other options are limited.

PRO-COSP-25: Integrate GHG emissions reduction and climate resilience into all municipal projects, policies, and procedures as applicable.

PRO-COSP-26: Implement Lake Elsinore Fisheries Management Report recommendations.

PRO-COSP-27: Develop standards and guidelines:

- Protect local ridgelines through proper siting, grading, building design, and landscape design;
- Lighting and light-shielding standards to minimize light pollution and glare; and
- Architecture and landscape design, appropriate themes and design features, signage, outdoor furniture, bus shelters, gateway enhancements, and other distinctive improvements.

PRO-COSP-28: Prepare and adopt a Street Tree Master Plan that promotes distinct and identifiable street corridors which reflect cohesive design, functionality and safety.

PRO-COSP-29: Develop and work with other public agencies to develop and implement retrofitting programs that minimize existing infrastructure's impact on natural open space and habitat, and rewilded areas.

PRO-COSP-30: Identify opportunities for hardscape removal to increase urban permeability for groundwater replenishment, filtration, and rewilding.

Special Studies and Projects

PRO-COSP-31: Inventory wetlands, floodplains, marshlands, and adjacent lands that could potentially support climate adaptation (e.g., through flood management, filtration, or other beneficial ecosystem services) and mitigation (e.g., carbon sequestration).

PRO-COSP-32: Develop and adopt a bird-safe design ordinance in consultation with a qualified biologist and require projects to demonstrate compliance with the ordinance prior to project approval. Apply the ordinance to all new development and redevelopment projects and include the latest bird-safe design guidelines and best management practice strategies, such as those from the National Audubon Society, to provide specific criteria and refined guidelines as part of design review and/or project approval process of new buildings and taller structures to protect birds from injury and mortality from collisions with buildings, towers, and other human-made structures.

PRO-COSP-33: Seek funding to maintain and restore citywide creeks and waterways, including for recreational opportunities linked to creeks as well as for flood control.

PRO-COSP-34: Use the US Environmental Protection Agency (EPA) Storm Smart Cities guidance to integrate green infrastructure during project review, and updates to the Local Hazard Mitigation Plan.

PRO-COSP-35: Conduct a carbon sequestration feasibility study of City-owned open space, parks, agricultural lands, and conservation lands, and implement the recommendations as feasible. This study should assess carbon storage potential by land use type and identify strategies to facilitate carbon sequestration.

PRO-COSP-36: Implement regenerative land management practices at the city scale to reduce GHG emissions and improve watershed and human health.

PRO-COSP-37: Explore efforts to require charging or clean fuel stations on private property, including hydrogen and sustainably sourced biofuels.

PRO-COSP-38: Budget for clean fuel and zero emission vehicles in the City's long-range capital expenditure plans to transition the existing fleet of gasoline- and diesel-powered vehicles, and work to make the City's fleet among the cleanest in the region by:

- Purchasing zero-emission vehicles whenever possible that meet or exceed requirements under the California Advanced Clean Fleets Regulation. If zero-emission vehicles are not available, purchase plug-in hybrids, or other vehicle types to minimize emissions; and
- Using biodiesel and pollution-reducing fuel additives in the City's diesel fuel vehicles.

PRO-COSP-39: Develop a capital project list and funding strategy to complete energy-efficiency projects for City owned and operated structures and adjust the list annually to add new projects as needed.

PRO-COSP-40: Identify incentives and other means to encourage new and existing buildings to include battery energy storage systems, especially buildings with solar energy installations and municipal buildings that provide essential community services.

PRO-COSP-41: Identify incentives to encourage new buildings to exceed State energy efficiency requirements and/or meet or exceed the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Program or equivalent standards.

PRO-COSP-42: Seek and identify resources to assist low-income homeowners and small business owners with identifying financing options for installation of rooftop solar energy systems, energy storage, and electrification of existing buildings.

PRO-COSP-43: Consider creating an interdepartmental Climate Action Implementation Committee.

PRO-COSP-44: Develop new and retrofit existing City facilities to be zero net energy.

PRO-COSP-45: Prepare, and adopt as appropriate, a Rewilding Master Plan. Ensure the Rewilding Master Plan process:

- Adopts restoration best practice guidelines (e.g., no invasive species, use of native species, adaptive management) for all rewilding efforts;
- Identifies priority parcels (public land, underutilized land, city-owned open space) for rewilding projects;
- Incorporate rewilding considerations into city acquisition strategy;
- Considers rewilding into Lake Elsinore's natural land acquisition;
- Collaborates with local Native American tribes in planning and management of open space, including rewilding, cultural burning, and traditional ecological knowledge;
- Considers partnering with Native American tribal communities and community-based organizations for open space co-stewardship;
- Engages residents, especially underserved communities, in stewardship, restoration, and rewilding projects, fostering a sense of ownership and ecological literacy; and
- Works with schools and community groups to develop programs to support volunteer restoration, resident science, and ecology/rewilding educational outreach.

Ongoing Processes and Procedures

PRO-COSP-46: Continue to promote the Alberhill area's transition from extractive/mining activities to residential and other supporting uses.

PRO-COSP-47: Continue to participate in the Western Riverside County Multiple Species Habitat Conservation Plan, the LEAPS program, and the Implementing Agreement; with a strategy that focuses on quality assemblage of conservation acreage.

PRO-COSP-48: Work with public and private landowners to decrease the risk of flooding through projects that reduce and/or store runoff during rainfall events.

PRO-COSP-49: Continue to implement the SCAQMD's control measures, subsequently revised, supplemented, or replaced, to control fugitive dust (i.e., particulate matter PM2.5 and PM10) during demolition, ground disturbing activities, and/or construction.

PRO-COSP-50: Conduct inventories of communitywide and municipal GHG emissions, at least every five years, consistent with State law.

PRO-COSP-51: Require regular energy audits of existing City-owned and operated structures, identifying levels of existing energy use and potential conservation and efficiency measures.

PRO-COSP-52: Continue to monitor and mitigate the impacts of new and evolving uses, such as logistics use developments, on local air, water, and soil resources.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-COSP-53: Collaborate with wildlife and conservation agencies to identify areas to target for conservation and preservation of native habitats, creating wildlife corridors, while allowing open space to be accessed for recreation, resource management, and public safety purposes.

PRO-COSP-54: Continue to participate in the Santa Ana Regional Water Board's TDML Revision Task Force and its programs.

PRO-COSP-55: Coordinate with the Regional Conservation Authority to support native habitat acquisition and native species plantings.

PRO-COSP-56: Consult with the Regional Conservation Authority (RCA) and adjacent jurisdictions to ensure MSHCP guidelines adherence and maximize regional trails interconnectedness.

PRO-COSP-57: Consult with the California Department of Fish and Wildlife (CDFW) to identify significant environments and priorities for acquisition or maintenance of open space areas based on biological and environmental concerns and develop a strategy for maintaining areas that will preserve the protected and sensitive populations of plants and animals. Strategies shall be based on federal, state, and local regulations relevant to the protection of the identified species, including, but not limited to, Federal or California Endangered Species Act, and United States Fish and Wildlife Services Programmatic Biological Opinion, as subsequently revised, supplemented, or replaced.

PRO-COSP-58: Implement stormwater pollution prevention outreach to increase community awareness of pollution impacts to creeks and preserve waterways.

PRO-COSP-59: Coordinate with local and regional stakeholders to review and implement suggestions in the State's Healthy Soils Initiative.

PRO-COSP-60: Explore opportunities to partner with US EPA to develop sustainable design strategies through the Greening America's Communities Program.

PRO-COSP-61: Work with regional partners on strategic land protection and stewardship actions that increase carbon sequestration, minimize conversion to land uses that have a lower capacity to sequester carbon, and preserve contiguous open space areas to better

protect ecosystems that are under pressure from a changing climate, allowing greater mobility of species.

PRO-COSP-62: Coordinate with the County and private landowners to support local agricultural producers to plan, implement, and scale natural carbon sequestration.

PRO-COSP-63: Provide public information to educate residents and businesses on the GHG reduction strategies and to support individual changes in energy and water use, transportation mode choices, material use, and waste reduction.

PRO-COSP-64: Provide information on the cost savings potential and other benefits of energy audits and energy-efficient retrofits to encourage their preparation for buildings throughout Lake Elsinore.

PRO-COSP-65: Use education and incentives to promote and sustain energy conserving design and practices.

PRO-COSP-66: Participate in state and regional efforts to develop appropriate policies and review procedures for the installation of photovoltaic solar and other forms of distributed energy generation.

PRO-COSP-67: Seek to participate in utility sponsored renewable energy programs that allow the city to receive a significant portion of energy from renewable sources.

PRO-COSP-68: Support the development of local-serving renewable energy projects that expand the availability of local renewable energy, provide sustainable local jobs, and support local and regional housing, economic development, and sustainability goals and initiatives.

PRO-COSP-69: Support State and utility efforts to improve grid resilience and capacity.

Open Space

In addition to City-owned park facilities (discussed later in this element), hundreds of acres of public and private open space are located within the Planning Area as identified in Figure COSP-9 . The open space is managed by several agencies including the City of Lake Elsinore, Riverside County, United States Forest Service, Bureau of Land Management, Western Riverside County Regional Conservation Authority, and the Riverside County Regional Park and Open Space District. Table COSP-4 is an inventory of open space land and the agency managing the land.

Table COSP-4 : Open Spaces

Name	Agency	Acres
Lake Elsinore State Recreation Area	City of Lake Elsinore	5,436
Alberhill Conservation Area	Riverside County	1,075
Perret Park	Riverside County	3
North Peak Preserve	Riverside County	280
Unnamed BLM Land	Bureau of Land Management	951
Steele Peak Reserve	Bureau of Land Management	228
Cleveland National Forest	U.S. Forest Service	7,392
Unnamed Western Riverside County Regional Conservation Authority Land	Western Riverside County Regional Conservation Authority	3,253
Unnamed Riverside County Parks and Open Space District Land	Riverside County Parks and Open Space District	19

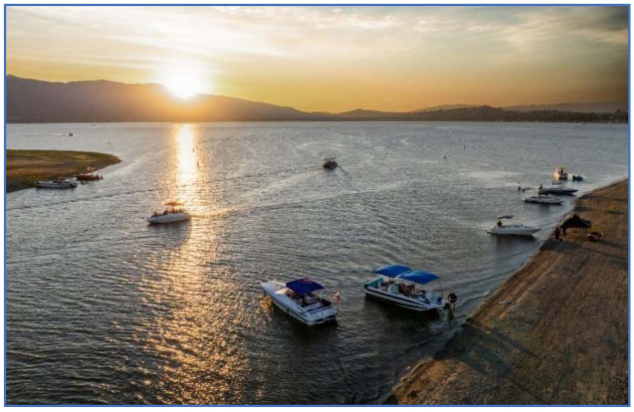
Source: Riverside County GIS, 2025

A portion of the Cleveland National Forest is also within the Planning Area. The Cleveland National Forest is the southernmost national forest in California and encompasses approximately 460,000 acres in total. Landscapes range from dense forests, canyons, high desert, and meadows. The national park offers opportunities for hiking, camping, horseback riding, and hunting.

In addition to these formal open spaces, other open spaces include the Lake Elsinore levee (that includes a 3.5 mile multi-use trail), campgrounds, and undeveloped spaces including wetlands, steep slopes, and wooded areas not suitable for development.

Lake Elsinore

With over 3,000 surface acres of water and 14 miles of shoreline, Lake Elsinore is one of the most valuable recreational assets for the City of Lake Elsinore. The Lake is a popular destination for fishing, motorboating, kayaking, jet skiing, and swimming. It features public beaches, campgrounds, and picnic areas. The Lake also features a three-mile levee for hiking, nature walking, and fishing in some areas. As Southern California's largest natural freshwater lake, Lake Elsinore can have a complex biology. While it contains several varieties of freshwater fish, it is also susceptible to algae blooms and other water quality issues. The City's pilot study, funded by a Proposition 1, Round 1 grant, includes five different treatment technologies. As part of the Proposition 1 efforts, the City installed nanobubble technology on three barges, which has improved dissolved oxygen levels.



Lake Elsinore

Open Space Goals and Policies

GOAL COSP-11: CONSERVE AND MANAGE SIGNIFICANT WILDLIFE AND VEGETATION RESOURCES AND PROVIDE RESIDENTS WITH A HEALTHY ENVIRONMENT

Policy COSP-49: Protect existing and future areas of natural resources including sensitive biological resources, native habitats, and vegetation communities supporting wildlife.

Policy COSP-50: Maintain and enhance the quality of Lake Elsinore's water.

GOAL COSP-12: MAXIMIZE THE OPPORTUNITY FOR RECREATION OF LAKE ELSINORE AND ENSURE EASY PUBLIC ACCESS TO THE LAKE

Policy COSP-51: Preserve and enhance the natural, scenic, and recreational value of Lake Elsinore.

Policy COSP-52: Provide public access to the Lake to ensure access for all residents.

Programs Implementing COSP Goals 11 and 12

Zoning Code/Map Update

PRO-COSP-70: Require new commercial development to provide public access to the Lake at destination spots such as Downtown.

PRO-COSP-71: Require new development to provide open space preservation areas and connections as identified in the natural resources section.

PRO-COSP-72: Consider requiring public access easements along the shoreline and to the shoreline from public rights-of-way.

Review Process

PRO-COSP-73: Require tree planting for all new development projects with trees that are climate appropriate, add quality and character to a site, and forward the City's climate adaptation goals.

New Plans, Programs, and Strategies

PRO-COSP-74: Establish an urban forestry program that provides shaded green spaces citywide and provides incentives for tree planting and preservation on private properties.

PRO-COSP-75: Create and adopt a city tree policy and ordinance. Consider incorporating the City's existing tree policy regarding the management and removal of palm trees.

PRO-COSP-76: Increase impermeable surface coverage citywide by replacement with pervious materials, natural vegetation and soils.

PRO-COSP-77: Provide and maintain a public boat ramp at low- and high-lake levels.

PRO-COSP-78: Promote water-related uses and facilities on vacant or developed lakefront lands where construction and operation impacts are mitigated to the extent feasible.

Special Studies and Projects

PRO-COSP-79: Maintain an inventory of known sources of groundwater and soil contamination to monitor lake water quality and better understand impacts of water-related projects on environmental resources.

PRO-COSP-80: Consider establishing a community benefits program that incentivizes privately owned, publicly operated open space along shoreline development and incentivizes the creation of connections between existing easements.

Ongoing Processing and Procedures

PRO-COSP-81: Monitor status of wetlands and stream corridors to ensure healthy habitats.

PRO-COSP-82: Implement the Community Services Master Plan to improve and increase public access to Lake Elsinore.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-COSP-83: Collaborate with local, state, and regional agencies and organizations to identify resource conservation opportunities and share information.

PRO-COSP-84: Continue to convene community events and programs that allow community members to provide feedback on natural resources and parks/open space policies and programs.

PRO-COSP-85: Promote and encourage community involvement in urban ecology projects that preserve or expand neighborhood green space, create space for communities to gather, and connect people to nature.

PRO-COSP-86: Support and encourage water conservation and inform the public about practices and programs to minimize water pollution.

Parks

The City of Lake Elsinore's park system consists of 20 parks, five dog parks, three skate parks, one BMX pump track, two gyms/auditoriums, sports fields, public beaches along Lake Elsinore, four fitness trails including workout stations, and the 2.75-mile Downtown Riverwalk and nature trail. These facilities are classified as described below. These classifications help the City determine the level of funding and services that each facility should be allocated.



Lake Elsinore Park Facilities, 2025

Classifications

The City of Lake Elsinore provides the following types of recreational facilities for its residents and visitors:

1. **Pocket Parks** (less than 3 acres) – Parks of this nature are typically developed in conjunction with specific plans. Linear Park is an example of a pocket park.
2. **Neighborhood Parks** (4 – 15 acres) – These facilities are typically population based to serve the immediate and surrounding residents, which is usually 3,500 – 5,000 persons within a 1/2 to 3/4 mile radius. Neighborhood parks may adjoin school sites, where possible, to encourage joint use. Typical amenities include play areas, turf, multi-purpose courts, and picnic facilities. Tuscany Hills Park and Yarborough Park are examples of neighborhood parks.

3. **Community Parks** (16 - 75 acres) – These parks are designed to serve 15,000-20,000 residents within a 1 ½ miles service radius and are utilized for active and passive recreation. The actual size and development depend on the specific resource involved, available land, anticipated use, and location. Typical amenities include lighted sports fields and courts, picnic facilities, play areas, restrooms, and off-street parking. McVicker Canyon Park and Lakepoint Park are examples of community parks.
4. **Regional Parks** (25 – 500 acres) – Regional parks offer a broad range of amenities to attract the greatest range of users from within and beyond the City limits. Amenities can include open space, bodies of water, structures (such as museums and nature centers), and trails. Their typical service radius typically corresponds to a one-hour drive.
5. **Recreational Facilities** – The City also provides recreational facilities that can service either residents or visitors. These facilities range from passive landscaped areas, hang-gliding, hiking trails, and community centers. These facilities also feature special programs, activities, and classes that help make up the City of Lake Elsinore's public recreation system. Examples of recreation facilities include Lake Community Center, the Senior Activity Center, and the Cultural Center.

Park Standards



Park play equipment, 2025

The Parks and Recreation Master Plan (2008-2030) identifies the approximate park land to population ratio is approximately 2.6 acres per 1,000 population. An additional 114 acres of developed park facilities were needed to serve the 2007 population. Since the creation of that plan, Lake Elsinore's population has grown significantly, and additional parks and facilities have been developed. Lake Elsinore now has approximately 194.7 acres of park land. With a population of 70,244 (2020 Census), the current park land to population ratio is approximately 2.8 acres per 1,000 residents, requiring an additional 156 acres of park land to meet the 2007 Master Plan ratio. The Master Plan sets a minimum park land standard of 5 acres per 1,000 residents.[19] Table COSP-5 shows the established facility standards by amenity type established in the Parks Master Plan. Figure COSP-9 shows park and recreation facilities' locations.

[19] Parks and Recreation Master Plan, 2008-2030, City of Lake Elsinore.

Table COSP-5 : Recreational Facility Standards (2008)

Facility Type	Standard per Population
Softball Field	
Organized Youth	1/7,300
Organized Adult	1/5,500
Baseball Field	
Little League	1/5,300
Adult League	1/8,000
Multi-Purpose Fields	1/5,000
Picnic Tables	1/1,000
Picnic Shelter	1/5,000
Tot Lot / Playground	1/5,000
Swimming Pool	1/50,000
Tennis Court	1/10,000
Basketball Court	1/30,000
Volleyball Court – Sand	1/10,000
Racquetball Court	1/10,000
Exercise Course	1/10,000
Horseshoe Pit	1/5,000
Handball Court	1/10,000
Restroom Facilities	1/4,000
Classrooms	1/5,000

Parks and Recreation Facilities

The City of Lake Elsinore provides the following types of recreational facilities for its residents and visitors:

Table COSP-6: Park Facilities

Map ID	Park Name	Amenities	Acres
1	**Alberhill Community Park** 28200 Lake Street	Barbeques, Basketball Court, Community Building, Concession Stand, Drinking Fountains, Football Field, Picnic Shelters, Picnic Tables, Playground, Restrooms, Soccer Field	22
2	**Canyon Hills Community Park** 34360 Canyon Hills Road	Barbeques, Baseball / Softball Diamond, Basketball Court, Canine Area, Concession Stand, Drinking Fountain, Parking, Picnic Shelters, Picnic Tables, Playground, Restrooms, Soccer Field, Splash Pad	18
3	**Christensen Park** 36300 Piedmont Drive	Baseball / Softball Diamond, Soccer Field, Playground, Basketball Court, Restroom, Picnic Area	6
4	**Channel Walk** Heald Avenue and Spring Street	Paved Walking Path, Benches , Lighting, Channel Walk	5.8
5	**City Park** 243 S Main Street	Barbeques, Basketball Court, Concession Stand, Drinking Fountain, Parking, Picnic Shelters, Picnic Tables, Playground, Restrooms, Trails	4
6	**Creekside Park** 3200 Lost Road	Barbeques, Concession Stand, Drinking Fountain, Football Field, Parking, Picnic Tables, Playground, Restrooms, Soccer Field, Sports Lights, Tennis Court, Walking Track	7
7	**Lakepoint Park** 420 E Lakeshore Drive	Baseball / Softball Diamond, Concession Stand, Drinking Fountain, Football Field, Parking, Playground, Restrooms, Soccer Field, Sports Lights, Volleyball	12.5
8	**Lincoln Street Park** 14986 Lincoln Avenue	Barbeques, Basketball Court, Drinking Fountain, Picnic Shelters, Picnic Tables, Playground, Walking Track	2.2
9	**Linear Park** 31717 Canyon Estates Drive	Seating Areas, Small Turf Areas, Paved Walking Path	0.5
10	**Machado Park** 15150 Joy Street	Barbeques, Drinking Fountain, Parking Picnic Areas, Picnic Shelters, Picnic Tables, Playground, Restrooms, Tennis Court, Volleyball Court, Walking	5
11	**McVicker Canyon Park** 29355 McVicker Canyon Park Road	Barbeques, Baseball / Softball Diamond	26

Table COSP-6: Park Facilities

Map ID	Park Name	Amenities	Acres
		Canine Area, Concession Stand, Drinking Fountain, Parking, Picnic Areas, Picnic Shelters, Picnic Tables, Playground, Restrooms, Sports Lights, Walking	
12	**Oak Tree Park** 15340 Lincoln Street	Picnic Areas, Picnic Tables, Walking	2
13	**Rosetta Canyon Community Park** 39423 Ardenwood Way	Barbeques, Baseball / Softball Diamond, Dog Area, Concession Stand, Drinking Fountain, Football Field, Grill, Picnic Shelters, Picnic Tables, Playground, Restrooms, Soccer Field, Sports Lights, Tennis Court, Trails	21.6
14	**Serenity Park** 19685 Palomar Road	Basketball Court, Canine Area, Drinking Fountain, Football Field, Picnic Shelters, Picnic Tables, Playground, Restrooms, Skate Park, Soccer Field, Tennis Court, Walking	2.1
15	**Stovepipe Creek Park** 29132 Ranch Road	Barbeques, Canine Areas, Picnic Shelters	6.5
16	**Summerhill Park** 31613 Canyon Estates Drive	Barbeques, Drinking Fountain, Football Fie5ld, Parking, Picnic Tables, Playground, Restrooms, Soccer Field	5
17	**Summerlake Park** 900 W Broadway	Barbeques, Drinking Fountain, Football Field, Parking, Picnic Tables, Playground, Restrooms, Soccer Field, Sports Lights	16
18	**Summerly Community Park** 18505 Malaga Road	Barbeques, Drinking Fountain, Football Field, Parking, Picnic Tables, Playground, Restrooms, Soccer Field, Sports Lights	24
19	**Swick & Matuch Park** 402 Limited Street	Baseball / Softball Diamond, Concession Stand, Drinking Fountain, Parking, Picnic Tables, Playground, Restrooms, Sports Lights	7
20	**Terracina Park** 4677 Terracina Lane	Barbeques, Canine Areas, Picnic Shelters	4.4
21	**Tuscany Hills Park** 30 Summerhill Drive	Baseball / Softball Diamond, Concession Stand, Drinking Fountain, Football Field, Parking, Playground, Restrooms, Soccer Field, Sports Lights	5
22	**Yarborough Park** 419 N Poe Street	Barbeques, Drinking Fountain, Football Field, Parking, Picnic Tables, Playground, Restrooms, Soccer Field, Splash Pad	3



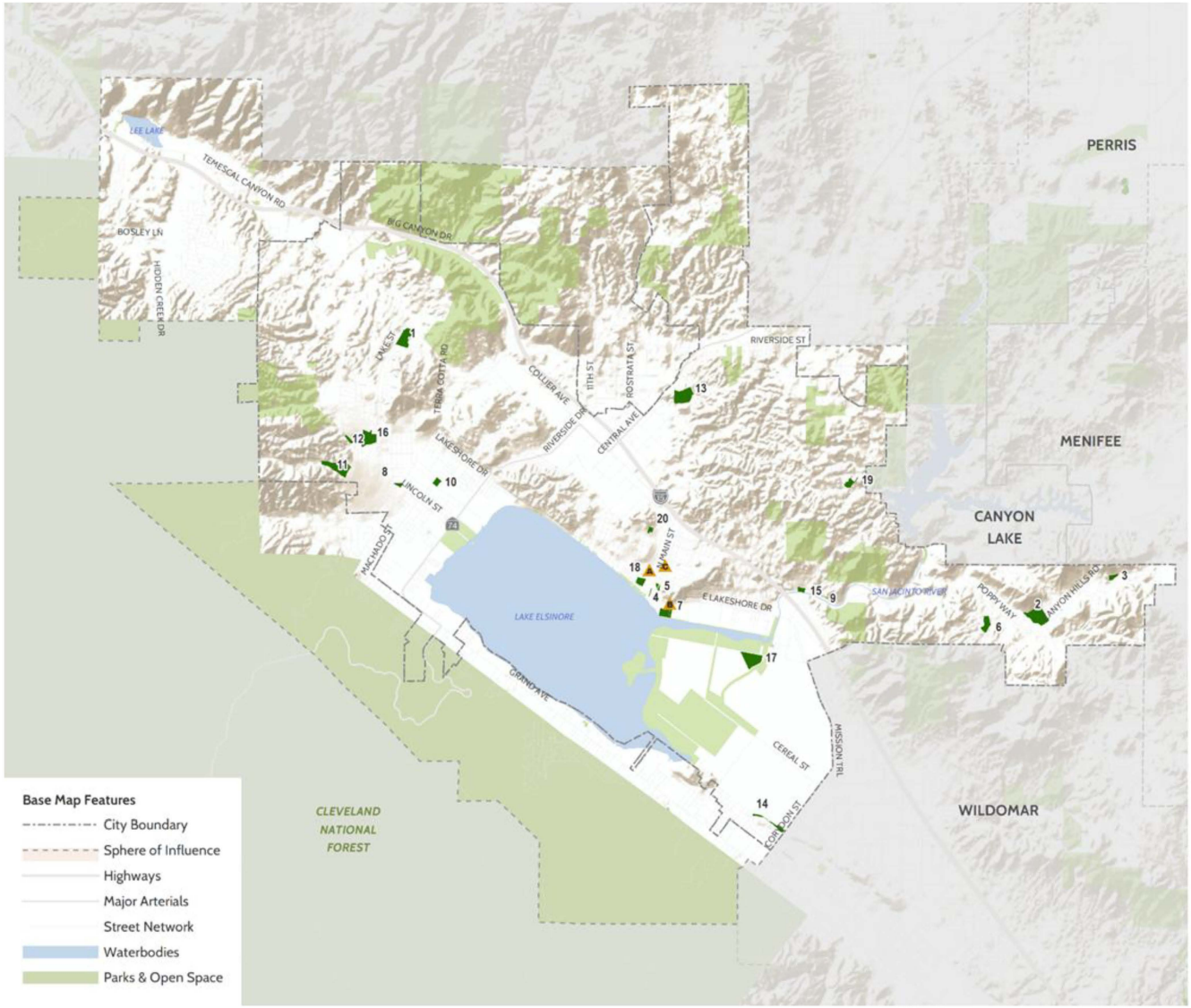
Lake Elsinore Beach
Source: www.komoot.com/guide

Figure COSP-9 also identifies Lake Elsinore's recreational facilities. The City-operated recreational facilities, described in Table COSP-6, and are concentrated in the Downtown area. Lake Elsinore Community Center (310 West Graham Avenue) was the City's first Senior and Community Center and offers programming for all ages and reservable spaces for events. The Senior Activity Center is another facility that is geared toward providing recreation, education, and self-enrichment programs for participants 55 and older. In addition to a variety of recreational programs, the Senior Activity Center also offers services including paralegal services, LIHEAP, health, and other educational programs. The Lake Elsinore Cultural Center accommodates various public meetings and community events. It is also home to the Lake Elsinore Historical Society Museum and Research Library. Outside of the Downtown area, the Dream Extreme Neighborhood Center, 117 South Langstaff Street, offers a variety of recreation classes for all ages, including a Youth Room oriented towards teens, in addition to public rental spaces/rooms.

Additional public recreational facilities are oriented in/around Lake Elsinore. They include:

- Fishing beaches – Davis Street, Elm Grove, Lowell Street, and Whiskers
- Public boat launch (Launch Point Recreation Destination and RV Park, 32040 Riverside Drive)
- Elm Grove Beach (500 Lakeshore Drive) – barbeques, picnic tables, volleyball
- Riverwalk (West Heald Avenue/North Riley Street) – 7.8 acre site includes a 2.75 mile walk along Temescal Wash from the Lake's shoreline to Riverside Drive

Figure COSP – 9
Parks, Open Space, and Recreation Facilities



Parks Goals and Policies

GOAL COSP-13: PROVIDE SUFFICIENT PARKS AND OPEN SPACE WITHIN THE CITY THAT ENHANCES THE RECREATIONAL AND VISUAL EXPERIENCES OF ALL CITY RESIDENTS AND VISITORS

Policy COSP-53: Provide a system of park, recreation facilities, and green spaces that allows any resident to access those facilities via an easy 10-minute walk or bike ride.

Policy COSP-54: Use creative or non-traditional methods to create additional parks, recreation, and green spaces.



Splash Pad, 2025

Policy COSP-55: Provide diverse recreation opportunities for Lake Elsinore residents.

Policy COSP-56: Identify land available for community gardens and urban agriculture.

Policy COSP-57: Provide pedestrian, bicycle, and transit connections to new and existing parks and recreation facilities to enhance use and access.

Policy COSP-58: Preserve the City's visual character, particularly the surrounding hillsides that topographically define the lake region.

Policy COSP-59: Enhance street corridors, parkways, and public property between buildings to serve as green space and functional recreation space (e.g., community gardens, parklets, play spaces, public seating).

Implementing Programs for COSP Goal 13

Zoning Code/Map Update

PRO-COSP-87: Develop guidelines for commercial and mixed-use development projects to incorporate accessible plazas, paseos, and other public spaces into project design.

PRO-COSP-88: Amend the Zoning Ordinance to allow for front yard urban gardens.

PRO-COSP-89: Consider developing objective design standards for hillside development.

Building, Municipal, and Other Code Updates

PRO-COSP-90: Consider modifying the existing grading ordinance to include contour grading or other methods and concepts that protect and enhance steep slopes, and include enforcement procedures and appropriate access.

Review Process

PRO-COSP-91: Encourage rooftop gardens; encourage the conversion of surface paving in parking lots with a surplus parking into pedestrian paseos and plazas in Uptown and Downtown.

New Plans, Programs, and Strategies

PRO-COSP-92: Acquire empty Downtown lots that become available to develop pocket parks.

PRO-COSP-93: Prioritize the creation of linear parks along corridors.

PRO-COSP-94: Identify new park land or green space through the repurposing of excess street right-of-way.

PRO-COSP-95: Consider amending street standards to encourage/require shaded sidewalks.

PRO-COSP-96: Establish a citywide multi-use trail system building upon connections to the Murrieta Creek Trail.

PRO-COSP-97: Connect parks, schools, and other designated activity centers through a trail system.

PRO-COSP-98: Create a trail to connect Riverwalk Trail and the Levee Lake Trail to create connection between Downtown, the Lake, and the Ballpark District.

PRO-COSP-99: Design distinctive parks and recreation facilities that provide places for social interaction, neighborhood/community identity, beauty, and livability.

PRO-COSP-100: Incorporate unique cultural, historic, and environmental features such as artwork, historic buildings, heritage trees, etc. in park and community facilities design.

Special Studies and Projects

PRO-COSP-101: Increase opportunities for water activities such as public access to the Lake, splash pads at parks, and a possible future public pool.

PRO-COSP-102: Offer additional amenities that support recreational activities at the Lake, such as providing human powered watercraft (ex. kayak) and fishing areas.

PRO-COSP-103: Incorporate flexible design into the improvement of parks spaces and community facilities.

PRO-COSP-104: Identify missing and safe sidewalk connections around senior centers to increase access.

PRO-COSP-105: Identify points of public access to public lands through the Community Service Plan and connect those public access points with trails, walkways, and bikeways.

PRO-COSP-106: Dedicate open space to community gardens and expand the existing Rosetta Canyon Sports Park Community Garden.

Ongoing Processing and Procedures

PRO-COSP-107: Implement the Community Services Master Plan.

PRO-COSP-108: Maintain and update the Community Services Plan, which describes general locations for regional recreation facilities.

PRO-COSP-109: Implement a recreational needs assessment survey on the adequacy and level of use of existing facilities and need for new facilities on a periodic basis.

PRO-COSP-110: Allow for a variety of facilities and spaces to continue supporting Lake Elsinore's extreme sports.

PRO-COSP-111: Improve tree canopy coverage and increase shade structures to reduce urban heat and support recreational use in the summer.

PRO-COSP-112: Implement the Active LE Mobility Plan, 2019.

PRO-COSP-113: Strengthen sidewalks connectivity throughout the City to promote safe access to parks and open spaces.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-COSP-114: Encourage public agencies that own vacant land within the City to enhance their property with new recreation facilities.

PRO-COSP-115: Collaborate with developers, landowners, and business owners to integrate pocket parks in or near commercial corridors such as North Elsinore.

PRO-COSP-116: Develop a community engagement program that provides information about the community gardens' benefits to users' physical health and mental wellbeing.



Public Safety, Noise, and Air Quality



In This Section

Introduction

Emergency Preparedness and Safety Services

- Emergency Preparedness and Safety Goals and Policies

Hazardous Materials/Waste and Air/ Water Pollution

- Hazardous Materials/Waste and Air/Water Pollution Goals and Policies

Natural Hazards

- Seismic Hazards Goals and Policies
- Wildfire Hazards Goals and Policies
- Flooding and Dam Inundations Goals and Policies
- Climate Adaptation Goal and Policies

Noise

- Noise Goals and Policies

Public Safety, Noise and Air Quality Element

Introduction

Public safety and community welfare are fundamental to long-term community stability. When people describe why they choose to live where they do, they often cite safety as a key factor. In cities with high levels of public safety services, residents and the business community can focus on productive activities: commerce, recreation, volunteerism, and education, among others. The purpose of the Public Safety, Noise, and Air Quality Element is to identify and minimize risks associated with natural and human-generated hazards through land use decisions and allocation of City budgetary resources. A dual purpose is to shape the physical environment and public services in ways that allow community members to thrive and reach their greatest potential.

By taking preventative measures to reduce the negative effects of potential hazards, the City strives to diminish threats posed to residents, businesses, public facilities, infrastructure, and the local economy associated with flooding, earthquakes, wildfires, climate change and its effects, excessive noise levels, and the presence of hazardous materials.

Big Ideas

- Plan for and incentivize the development of a hospital with emergency medical services within Lake Elsinore city limits.
- Prioritize ongoing interagency coordination, led by Lake Elsinore Emergency Services department, to ensure all regional agencies are engaged in disaster preparedness and resilience planning efforts.
- Develop roadway, structure, and landscaping standards to improve fire resistance, emergency response, and emergency evacuations in the Very High Fire Hazard Severity Zones (VHFHSZ)
- Create a heat response plan to predict and plan for high heat events, improved emergency response, and increasing cooling center capacity.
- Improve the urban tree canopy to promote climate resilience, air quality, and local aesthetics.
- Plan for and implement greening and greenways adjacent to or as part of infrastructure drainage improvements.

Baseline Considerations

Recognizing the presence and extent of the following local and regional hazards allows the City to shape policies and programs accordingly.

Emergency Preparedness and Safety Services

- While approximately 34 percent of residents live within one mile of a health clinic or urgent care facility, the closest hospital, Southwest Healthcare Inland Valley, is located six miles south of Lake Elsinore in the City of Wildomar. In the event of a natural disaster that blocks I-15 access, the community would be entirely without access to a hospital. Limited access to a hospital in the event of a serious health emergency presents a great risk to the residents, business community, and visitors of Lake Elsinore.
- The current police service level of 0.61 officers per 1,000 residents is below the City's adopted target of 0.85 officers per 1,000 residents.
- Four fire stations and an associated 14 personnel are located within Lake Elsinore. An additional eight stations are located beyond City limits; these stations provide fire protection services on an as-needed basis.

Natural Hazards

- Lake Elsinore is located within the Elsinore fault zone, one of the largest active fault zones in Southern California. Earthquakes, landslides, and liquefaction represent significant natural hazards. In addition, a portion of the Planning Area is located within the 25-35 percent or steeper slope areas and has a substantial risk of seismically induced slope failure.
- High temperature, steep terrain, vegetative shrub and chaparral overgrowth, and high wind potential are key factors contributing to most of Lake Elsinore being designated a "Very High Fire Hazard Severity Zone."
- Lake Elsinore lies on an active fault line in a seismically active region. Earthquakes and the effects of seismically induced landslides and liquefaction threaten human safety, public infrastructure, and older buildings.
- Winter storm flooding is the most frequently occurring natural hazard since 2000.
- Large portions of the city are located within the FEMA mapped 100-year special flood hazard zones. In addition, a Railroad Canyon Dam failure would pose extreme high downstream flood hazards to large areas of the city.

Climate Adaptation

- Lake Elsinore's annual rainfall is projected to decrease 13.2 inches by mid-century and 13.0 inches by the end of the century if greenhouse gases (GHG) emissions continue to rise rapidly.
- Extreme heat is an ongoing issue for Lake Elsinore. Severe heat waves and temperature inversions are likely to occur due to Lake Elsinore's topography.
- In 2024, the City operated two cooling shelters - one at the Lake Elsinore Library and a second at Lakeview Chapel. According to the Emergency Services Manager, the Senior Center is also available as a cooling center, however, only seniors can use the cooling shelter during the Senior Center's operation hours.

Noise

- Traffic noise from cars, trucks, and other motor vehicles traveling along the local roadway network is the most pervasive noise source in Lake Elsinore. While the move toward electric cars and trucks will reduce engine noise, the sound of vehicle tires on roadways will continue to be a presence.
- Populations in Lake Elsinore particularly sensitive to noise are known as sensitive receptors: the elderly, young children, and people with chronic health conditions. For these populations, the presence of continuous and/or loud noises can disrupt daily activities and lead to long-term adverse health effects.

Air Quality, Pollution Exposure, and Hazardous Materials

- Pollution sources and hazardous waste facilities are generally clustered around the Main Street and along I-15, which is typical of land use planning practices.
- The City provides a measure of separation between industrial uses and sensitive uses such as schools and residences. As the City continues to develop, it will be critical to employ land use planning practices that mitigate negative environmental impacts on current and future residents' health.
- The City should continue to coordinate with local industrial businesses to mitigate environmental impacts and ensure continued compliance with state and federal environmental regulations.
- The City's Local Hazard Mitigation Plan (adopted 2017) needs to address the heightened risk of natural hazards such as flooding and wildfires associated with climate change.

Emergency Preparedness and Safety Services

Emergency Preparedness

Emergency preparation helps to reduce the potential for property damage and loss of life in the event of a disaster. Lake Elsinore is susceptible to multiple types of disasters and emergencies that can have devastating effects. Local officials play a crucial role in educating residents and businesses about prevention—the most important tool in emergency preparedness—effective response.

Generally, response efforts and emergency management plans are created to address many types of hazards. These plans allow community members to work with city, county, state, and federal partners and to become familiar with their roles in disaster mitigation, preparedness, response, and recovery before a disaster occurs. While Lake Elsinore has plans in place, the level of service for emergency response and preparedness in the community is lacking. The City must prioritize not only coordination of all of plans but also take charge in the plans' preparation and implementation in order to ensure the safety and security of community members and vital assets.

Evacuation Routes

As part of the General Plan process and consistent with Assembly Bills 747 and 1409 (AB747 and AB1409, respectively) an emergency access roadway assessment and evacuation time estimate for two possible Lake Elsinore evacuation scenarios were completed.

The two selected scenarios vary as to the type of hazard, location, and access routes. These scenarios are:

- Scenario 1 – Fire Event: This scenario evaluates a nighttime event requiring the evacuation of the residents and employees within a quarter mile of a wildfire event located northwest of the lake. This scenario assumes Ortega Highway towards Orange County will be closed and not available for evacuation purposes. It is assumed that people in the evacuation area will be noticed at least 2 hours before the fire as advised by the California Department of Forestry and Fire Protection (CAL FIRE) and will evacuate outside the fire event zone.
- Scenario 2 – Seismic Event near High Liquefaction Susceptibility Areas: This scenario evaluates an event caused by seismic activity in the City's retail space surrounding the I-15/Central Avenue Interchange. This scenario assumes I-15 will be functional but gridlocked and inaccessible as an evacuation route. The seismic event is assumed to take place during the lunch peak hour from 12 PM to 1 PM on a typical weekday, when retail activity and adjacent street traffic are highest.

The assessment results in a series of recommendations to enhance the safety and efficiency of emergency evacuations through a multi-faceted approach targeting demand, supply-side infrastructure, and information dissemination. This includes reducing traffic congestion, ensuring effective communication, and optimizing evacuation routes. The assessment recommendations are part of the basis on which this Element's and the Mobility and Infrastructure Element's policy and programs are developed. The Lake Elsinore Evacuation Analysis, 2024 is incorporated by reference.

Natural Hazard Mitigation Plan

The City recently updated its Natural Hazards Mitigation Plan (NHMP) in 2023. The NHMP was originally prepared in response to the Disaster Mitigation Act of 2000, as required by the Federal Emergency Management Agency (called a Local Hazard Mitigation Plan in the federal law). This law requires local governments to prepare a plan that identifies potential hazards, losses, mitigation needs, goals, and strategies. The City's NHMP supplements the City's comprehensive Emergency Operations Plan (EOP).

Planning ahead helps residents, businesses, and government agencies effectively respond when disaster occurs and maintains the City's eligibility for federal funding. The mitigation planning's long-term benefits include:

- Understanding of local hazards;
- Prioritizing limited resources by addressing adverse and widespread impacts;
- Saving financial resources using planning and mitigation partnerships;

- Reducing long-term impacts and damage to human health and structures, and lowering repair costs; and
- Attaining a more sustainable, disaster-resistant city.

Vulnerability Risk Assessment

The NHMP includes a vulnerability risk assessment that identifies risks associated with each hazard and the corresponding impacts to the community. This process involves four steps: identify hazards, analyze potential impact, evaluate adaptive capacity, and assess vulnerability of future development. Table PSNAQ - 1 identifies the highly and severely vulnerable populations and assets, categorized by the type of natural hazard. Table PSNAQ-2 shows those populations and assets that have a low adaptive capacity.

While Lake Elsinore and the broader region have policies, plans, and programs to increase climate resilience and address vulnerable populations' risk, additional measures are needed to build upon these strategies to manage present and potential future climate impacts. Many existing and planned strategies applicable to the most highly and severely vulnerable populations are implemented at the regional scale, especially within the Western Riverside Council of Governments' Vulnerability Assessment and Adaptation Strategies.

Table PSNAQ-1: Highly and Severely Vulnerable Populations

	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Populations						
Low-Income Household	-	V4	V5	V5	V4	V4
Cost-Burdened Households	-	V5	V5	V5	V5	V5
Severely Overcrowded Households	-					
Renters	-		V4	V4	V4	
Mobile Homes	-				V4	V4
Persons Without Access to Transportation or Telecommunications	-		V5	V5	V5	V5
Linguistically Isolated Communities	-					V4
Low-Resourced Racial or Ethnic Minorities	-		V4	V4	V4	V4

Table PSNAQ-1: Highly and Severely Vulnerable Populations

	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Outdoor Workers	V5	V4	V4	V4	V4	V4
Healthcare Workers, First Responders, and Protective Service Occupations	V5	V4	V4	V4	V4	V4
Homeless Population	V5	V4	V5	V4	V4	V4
Children (under 14 years of age)	-	V5				V5
Persons with Disabilities	-	V4	V4	V4		V5
Persons with Chronic Health Problems	-	V5				V5
Seniors (65+)	-	V4				V5
Persons Living Alone	-					

Table PSNAQ-2: Highly and Severely Vulnerable Assets

	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Infrastructure						
Airports	-	-		-		
Transit Routes	-	-		-		
Major Roads and Highways	-	-	V4	V4	V4	V4
Freight	-	-	V4	V4	V4	V4
Electrical Substations	-	V4			V4	V4
Electrical Transmission and Distribution Lines	_	V4			V4	V4
Water and Wastewater Infrastructure			V4		V4	
Flood Control Infrastructure	V4	-	V4		V4	

Table PSNAQ-2: Highly and Severely Vulnerable Assets

	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Key Services						
Emergency Services	-	V4	V4	V4	V4	V4
Communication Services	-			V5		V5
Buildings						
Areas of Concentrated Residential Development	-		V5	V5		V4
Government Buildings and Sites	-					
Key Employment or Commercial Centers	_					
Schools	-					
Natural and Managed Resources						
Wildlands and Open Spaces	V4			V4		

Source: Climate Resilience Vulnerability Assessment, MIG, 2024.

Emergency Operations Plan

The City maintains an Emergency Operations Plan (EOP). The EOP is reviewed annually and approved by the federal government every five years. The EOP establishes an emergency organization, assigns tasks, specifies policies and general procedures, and provides for emergency staff planning effort coordination using both the State's Standardized Emergency Management System and the National Incident Management.

Police Services

Local law enforcement services, provided by Riverside County Sheriff's Department, are located at 333 Limited Avenue. Lake Elsinore Sheriff's Station serves an area of 241 square miles, including the City of Lake Elsinore, 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 City of Lake Elsinore has set a minimum standard of 0.85 officers per 1,000 residents. The City's contract with

Riverside County through June 2025 provides 45 police officers for the community.[1] At the City's current population of approximately 73,000, the ideal number of police officers would be 62, therefore Lake Elsinore's minimum standard is not currently met.[2]

Fire Prevention, Emergency Medical, and Response Services

The Riverside County Fire Department (RCFD) and the State of California Department of Forestry and Fire Protection (CAL FIRE) provide Lake Elsinore with fire prevention, suppression, and emergency medical services. The RCFD operates 93 fire stations in 15 battalions, providing fire suppression, emergency medical, rescue, and fire prevention services. Equipment used by the Department can respond to both urban and wildland emergency conditions. Battalion 2 in the Southwest Division of RCFD services the City of Lake Elsinore



The City of Lake Elsinore Fire Plan[3][4] contains four fire response categories (Urban, Suburban, Rural, and Outlying), which are used to determine the response times/travel distances for primary and secondary fire stations. The response categories are based on the Master Fire Plan's estimated community build-out. The Fire Department assumes in any given region that one to six fire engines will respond depending on fire call type.

[1] Item No. 05 - Amendment No. 3 - Agreement with County of Riverside Sheriff's Department for Lake Elsinore, City Council Meeting Packet, September 10, 2024.
[2] U.S. Census Bureau, 2023 American Community Survey 1-Year Estimates
[3] Communications with Division Chief Lonny Olson, Riverside County Fire Department, November 2023.
[4] Refer to the Cooperative Agreement to Provide Fire Protection, Fire Prevention, Rescue, and Medical Emergency Services Exhibit A through Exhibit D for additional information.

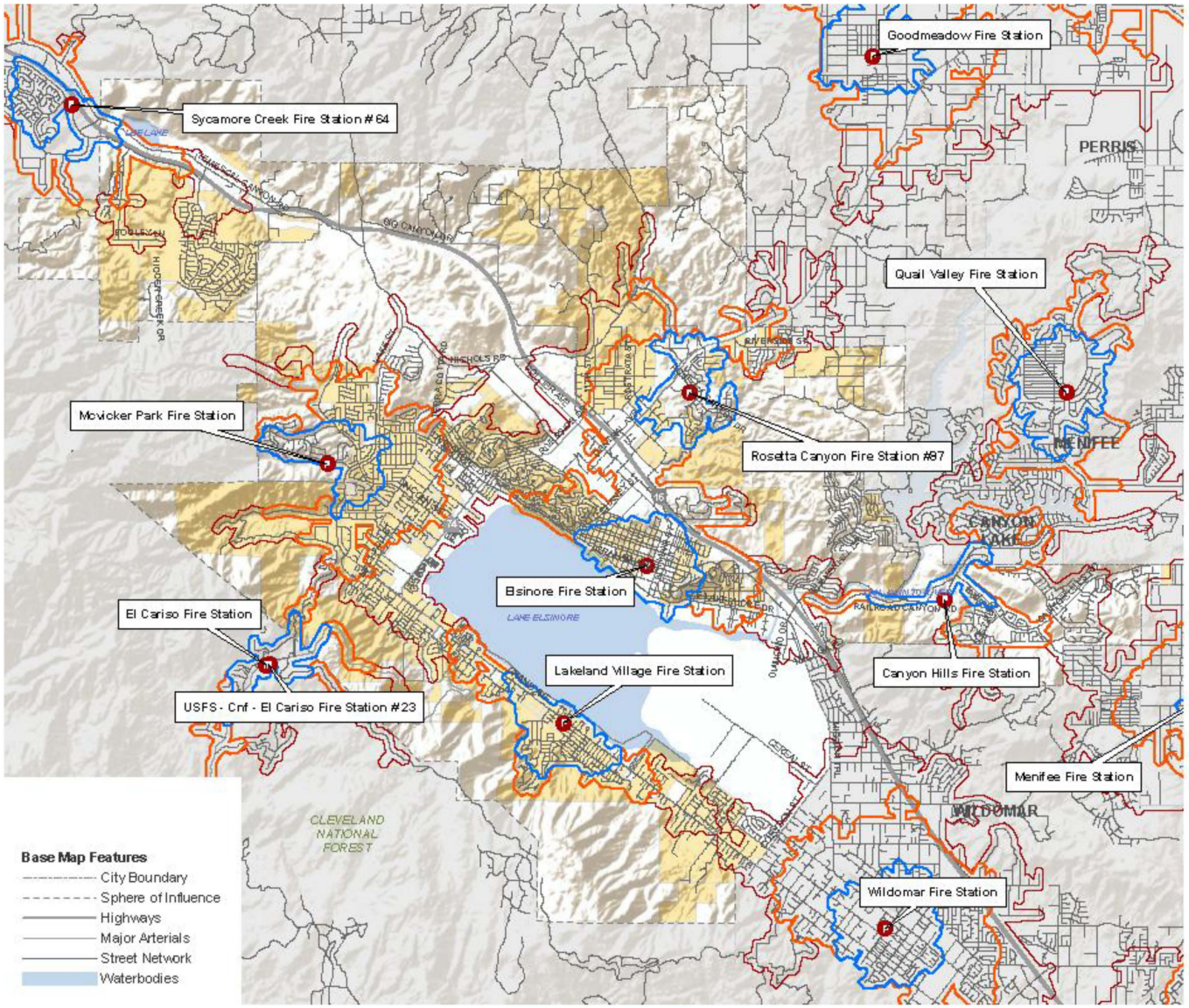


Figure PSNAQ – 1
Fire Station Access

Fire Stations

Fire Station

Estimated Fire Station Driving Distance

1-Minute Drive Time (4,840 feet)

2-Minute Drive Time (9,680 feet)

3-Minute Drive Time (14,520 feet)

Residentially-Designated Land

Drive time assumes a constant 55-mile per drive speed. Does not take into account impediments that may slow down a vehicle, such as other vehicles, traffic congestion, and crossing at intersections.

Prepared by MIG, February 2025.
Source: MIG, 2025.

0 ¼ ½ 1 1½ 2 Miles

Emergency Preparedness and Safety Services Goals and Policies

GOAL PSNAQ-1 : A CITY WITH STRONG DISASTER RESPONSE SYSTEMS, EQUIPPED TO HANDLE EXTREME HEAT WAVES, FLOODS, AND OTHER CLIMATE-RELATED EMERGENCIES, WHILE PRIORITIZING VULNERABLE POPULATIONS. (See wildfire hazard goals and policies for additional fire related goals and policies.)

Policy PSNAQ-1: Provide public education to promote community awareness and preparedness for self-action in the event of a major disaster or emergency.

Policy PSNAQ-2: Promote improved inter-jurisdictional consultation and communication regarding disaster preparedness and emergency plans for Lake Elsinore and Riverside County.

Policy PSNAQ-3: Ensure operational readiness of the Emergency Operations Center (EOC) by conducting annual training for staff and maintaining, testing, and updating equipment to meet current standards.

Policy PSNAQ-4: Train and educate public volunteers in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.

Policy PSNAQ-5: Integrate land use, public safety, and emergency services planning to promote long-term community resilience.

Policy PSNAQ-6: Provide clear, accessible, and efficient evacuation routes to enhance public safety during emergencies.

Policy PSNAQ-7: Promote the development of a safe urban environment for all residents.

Policy PSNAQ-8: Coordinate with residents, businesses, school districts, and community and neighborhood organizations to develop and expand partnerships to prevent crime, build public trust, and proactively address public safety issues.

GOAL PSNAQ-2: SUPERIOR LAW ENFORCEMENT AND PUBLIC SAFETY SERVICES

Policy PSNAQ-9: Provide the highest possible quality of fire, police, and health protection for all Lake Elsinore residents.

Policy PSNAQ-10: Ensure adequate safety lighting is provided at all City facilities and places the public uses frequently.

Policy PSNAQ-11: Require elements of crime prevention through building design (CPTED) to be integrated into new construction and building modernization projects.

Policy PSNAQ-12: Encourage multi-family building owners to provide active or onsite building management to promote and encourage adherence to the roles and regulations that govern the occupancy of multi-unit buildings.

Policy PSNAQ-13: Enhance vehicular, pedestrian, and bicyclist traffic flow and safety, especially near sensitive sites such as schools to fulfill Safe Routes to School Plan and other mobility and safety plans.

Policy PSNAQ-14: Consult with Riverside County Sheriff Department to ensure Police Department equipment and facilities are maintained at levels that meet modern standards of safety, dependability, and efficiency.

Policy PSNAQ-15: Consult with Riverside County Sheriff Department to ensure all Police officers receive comprehensive cultural competency training to better serve the needs of Lake Elsinore's diverse population.

Policy PSNAQ-16: Ensure Police and Fire Departments determine and are able to meet community needs for services.

GOAL PSNAQ-3: REDUCED RISK OF FIRE AND MINIMIZED CONSEQUENCES FROM FIRE EVENTS SERVICES

Policy PSNAQ-17: Prevent fires by conducting routine inspections, incorporating fire safety features in new development, and educating the public to take proactive action to minimize fire risks.

Policy PSNAQ-18: Ensure the City has adequate Fire Department resources (fire stations, personnel, and equipment) to meet response time standards, keep pace with growth, and provide a high level of service to the community.

Policy PSNAQ-19: Enforce fire standards and regulations while reviewing building plans and conducting building inspections.

Policy PSNAQ-20: Promote improved inter-jurisdictional consultation and communication regarding: disaster or emergency plans, and seismic safety upgrades of public facilities and infrastructure such as dams, reservoirs, and highway structures.

Policy PSNAQ-21: Partner with neighboring cities, regional agencies, local school districts, businesses, and community organizations to conduct emergency and disaster preparedness exercises that test operational and emergency response plans.

Policy PSNAQ-22: Ensure operational readiness of the Emergency Operations Center (EOC) by conducting annual training for staff and maintaining, testing, and updating equipment to meet current standards.

Policy PSNAQ-23: Train and educate public volunteers in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.

GOAL PSNAQ-4: A CITY WITH WELL-ORGANIZED, EASY TO EXECUTE EVACUATION PROTOCOLS THAT PRIORITIZE THE SAFETY AND WELLBEING OF ALL COMMUNITY MEMBERS DURING DISASTER EVENTS

Policy PSNAQ-24: Reduce the number of vehicles on the road during an emergency evacuation.

Policy PSNAQ-25: Distribute traffic more evenly across routes.

Policy PSNAQ-26: Prepare evacuation centers to meet anticipated demand.

Policy PSNAQ-27: Address the specific needs of individuals with limited access and/or functional needs.

Policy PSNAQ-28: Implement and enforce parking restrictions along critical evacuation routes.

Policy PSNAQ-29: Maintain roadways designated as emergency evacuation routes.

Policy PSNAQ-30: Review and optimize traffic signal timing to maximize capacity during evacuations.

Policy PSNAQ-31: Improve evacuation route wayfinding and implement clear wayfinding and signage to direct traffic.

Implementing Programs for Goals PSNAQ 1- PSNAQ-4

Zoning Code/Map Update

PRO-PSNAQ-1: Ensure adequate land is provisioned for emergency service, public safety, and medical facilities.

Review Process

PRO-PSNAQ-2: Require developers to provide evacuation routes consistent with the City's established emergency preparedness and evacuation plans when submitting subdivision development applications.

PRO-PSNAQ-3: Involve public safety officials in the review of development plans.

PRO-PSNAQ-4: Require new development projects to provide:

- Two access routes; and
- Adequate water supplies to meet the fire-suppression needs of the project without compromising existing fire suppression services to existing uses.

PRO-PSNAQ-5: Require civic and other public places are adequately lighted. Public places include but not limited to parks, recreational facilities, City Hall, sidewalks/streets, plazas, paseos, and alleys.

New Plans, Programs, and Strategies

PRO-PSNAQ-6: Offer offsite parking facilities for secondary vehicles on high-risk days, allowing residents to pre-evacuate extra cars.

PRO-PSNAQ-7: Limit use of public parks and facilities in high fire severity zones, such as trailheads, on "red flag days" to reduce potential exposure and evacuation demand for hikers and others.

PRO-PSNAQ-8: Provide dynamic rerouting guidance through GPS systems that adapt to real-time conditions to avoid overcrowding on primary roads.

PRO-PSNAQ-9: Regularly assess community facilities designated as evacuation centers to ensure they meet standards for safety and accessibility.

PRO-PSNAQ-10: Equip evacuation centers with solar photovoltaic systems and battery storage to ensure power resilience during emergencies.

PRO-PSNAQ-11: Designate safety zones or shelter-in-place locations as potential places of refuge when evacuation routes become blocked.

Special Studies and Projects

PRO-PSNAQ-12: Create a central online platform with easy-to-understand guidelines, checklists, videos, and tools for residents to prepare for different emergencies.

PRO-PSNAQ-13: Lead the application process for federal and state funding opportunities to support regional preparedness initiatives (e.g., FEMA grants) and work with regional partners to pool resources for joint training, equipment purchases, and exercise costs.

PRO-PSNAQ-14: Maintain an updated library of all regional jurisdictions' emergency plans within the City's EOC.

PRO-PSNAQ-15: Designate land and consider incentivizing the future construction of a community hospital facility.

PRO-PSNAQ-16: Establish protocols for emergency signal timing at freeway on-ramps/off-ramps in collaboration with Caltrans.

PRO-PSNAQ-17: Prioritize traffic signal upgrades in vulnerable areas, integrating improvements with the Traffic Management Center.

PRO-PSNAQ-18: Investigate the implementation of Ambulatory Surgery Center (ASC) systems that can adjust to high volumes during evacuations, with a backup static evacuation coordination plan.

Ongoing Processing and Procedures

PRO-PSNAQ-19: Track progress on the implementation of the regional emergency preparedness plans and update the City's EOP regularly based on lessons learned from exercises and real-world incidents.

PRO-PSNAQ-20: Continue to dedicate resources to Community Emergency Response Training (CERT). Offer CERT programming at the neighborhood level to help residents build disaster response skills. Regular evacuation training and reminders for residents to maintain at least 3 to 10 days of emergency supplies would enhance community resilience and readiness for effective evacuations.



PRO-PSNAQ-21: Work with the Riverside County Sherriff and CAL Fire to determine and meet community needs for services.

PRO-PSNAQ-22: Enhance vehicular, pedestrian, and bicyclist traffic flow and safety, especially near sensitive sites such as schools to fulfill Safe Routes to School Plan and other mobility and safety plans.

PRO-PSNAQ-23: Coordinate with local transit agencies to utilize high-capacity public transit vehicles during evacuations, reducing reliance on single-occupancy vehicles.

PRO-PSNAQ-24: Prohibit parking and remove parked vehicles along evacuation routes during red flag or other emergencies.

PRO-PSNAQ-25: Ensure ongoing serviceability of primary and secondary evacuation routes, including pavement quality and maintenance of dirt roads.

PRO-PSNAQ-26: Use intelligent transportation systems (ITS) to monitor traffic conditions and adjust response.

PRO-PSNAQ-27: Maintain Police Department programs that support residents and businesses in community efforts to prevent crime and improve neighborhood safety.

PRO-PSNAQ-28: Maintain code enforcement programs that require private and public property owners to minimize fire risks by maintaining buildings and properties to prevent blighted conditions, removing excessive or overgrown vegetation (e.g., trees,

shrubs, weeds), and removing litter, rubbish, and illegally dumped items from properties.

PRO-PSNAQ-29: Ensure operational readiness of the Emergency Operations Center (EOC) by conducting annual training for staff and maintaining, testing, and updating equipment to meet current standards.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-PSNAQ-30: Lead inter-jurisdictional emergency planning processes using best practices identified by the State of California.

PRO-PSNAQ-31: Lead the planning, design, and coordination of large-scale, regional disaster preparedness exercises that involve all area jurisdictions, to test operational plans, response protocols, and resource-sharing mechanisms. Ensure exercises are inclusive of different sectors (e.g., schools, hospitals, businesses, and local governments) and address identified regional risks.

PRO-PSNAQ-32: Work with police, transit agencies, and school districts to provide additional transportation options where ambulance availability may be limited.

PRO-PSNAQ-33: Communicate effectively with residents regarding restrictions and ensure enforcement by Code Enforcement and Police.

PRO-PSNAQ-34: Collaborate with Caltrans and neighboring jurisdictions to address congestion on I-15 and SR-74, exploring strategies like road closures, priority lanes, and restricting through traffic.

PRO-PSNAQ-35: Coordinate with the school district to provide services that help at-risk youth avoid making poor choices or facing adverse life conditions, with services including on-site counseling, crisis intervention services, emergency hotlines, case management services, job and internship opportunities, and recreation programs.

PRO-PSNAQ-36: Partner with neighboring cities, regional agencies, local school districts, local businesses, and community organizations to conduct emergency and disaster preparedness exercises that test operational and emergency response plans.

PRO-PSNAQ-37: Develop citywide public service announcements (PSAs) through various channels (TV, radio, social media, and community bulletins) to teach emergency preparedness best practices and emphasize the importance of self-sufficiency.

PRO-PSNAQ-38: Conduct outreach to ensure individuals have evacuation plans and develop efficient response systems during emergencies.

PRO-PSNAQ-39: Publicize pedestrian and bicycle pathways as designated alternative evacuation routes.

PRO-PSNAQ-40: Coordinate with residents, businesses, school districts, and community and neighborhood organizations to develop and expand partnerships to prevent crime, build public trust, and proactively address public safety issues.

PRO-PSNAQ-41: Train and educate public volunteers in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.

Hazardous Materials/Waste and Air/Water Pollution

Hazardous materials are regulated by the U.S. Environmental Protection Agency (EPA). The EPA defines hazardous materials as chemicals that can cause harm to people, plants, or animals when released into the environment. Hazardous materials are used in many everyday activities and common service facilities such as painting a house or dry cleaning. The Resource Conservation and Recovery Act (RCRA) regulates the management of municipal and industrial waste to ensure the safe handling and disposal of hazardous materials. Facilities transporting, generating, or treating hazardous waste must report their activities to the California and U.S. Environmental Protection agencies and comply with waste management standards. These facilities are tracked through the RCRA's national program management and inventory system for hazardous waste handlers and generators known as RCRAInfo.

Hazardous Waste

The EPA categorizes hazardous waste generators as either Small Quantity Generators (SQG) or Large Quantity Generators (LQG). VSQGs produce no more than 220 pounds of waste per month; SQGs produce 220 pounds to 2,200 pounds of hazardous waste per month; LQGs produce more than 2,200 pounds of waste per month. Additionally, there are two categories for handlers of hazardous waste as either a transporter (waste transportation) or transfer facility (temporary storage facility). The EPA also identifies other hazardous waste activities for anything that falls outside the realm of a generator, transporter, or transfer facility. The number and location of hazardous waste handlers and generators are summarized in Table PSNAQ-3 and illustrated on Figure PSNAQ-2.

The City and Sphere of Influence (SOI) have few generators and transporters, which mostly include industrial uses. These are largely located in the City's industrial and commercial hubs. Only one location in the Planning Area has been identified by the EPA as an LQG. This LQG is attributed to the California Department of Transportation (Caltrans). According to the EPA, a generator of waste does not have to be the entity that produces the waste but could be the entity that removes the waste. While it is unclear from the RCRAInfo database what Caltrans activities are contributing to hazardous waste, it could be possible that Caltrans removed or handled hazardous waste at one of their construction sites. Most hazardous waste generators are attributed to miscellaneous hazardous waste activities, such as automotive repair, maintenance yards, and the generation of common waste products like batteries, lamps, or pesticides.

Table PSNAQ-3: Hazardous Waste Handlers and Generators

Hazardous Waste	City	Sphere of Influence
Large Quantity Generator (LQG)	1	--
Small Quantity Generator (SQG)	22	7
Very Small Quantity Generators (VSQG)	4	--
Transporter	5	5
Other Hazardous Waste Activities	117	28
Total	**149**	**40**

Source: Resource Conservation and Recovery Act Information (RCRAInfo), U.S. Environmental Protection Agency, 2023

Pollution Sites

The Clean Air Act and Clean Water Act are two key pieces of federal legislation that regulate air and water pollution. The EPA is the implementing agency for several programs under the Clean Air Act and Clean Water Act to mitigate the impacts of air and water pollutants on the environment and human health. According to the RCRAInfo database, six sites producing hazardous air and water pollutants are located within the City's boundaries.

Hazardous Air Pollutants

Hazardous air pollutants are known to cause cancer and other serious health impacts. Common examples include asbestos, lead compounds, and perchloroethylene, which is emitted from some dry-cleaning facilities. Five facilities within the City produce air pollutants. These include the Skylark Field, Elsinore Valley Cemetery, and three other manufacturing/industrial businesses, as summarized in Table PSNAQ-4. The emissions from the Elsinore Valley Cemetery are likely caused by cremation, which is known to produce significant amounts of carbon dioxide.

Hazardous Water Pollutants

Water pollution occurs when harmful substances (e.g. sewage, chemicals, etc.) contaminate waterbodies. Water pollution can either originate from point sources or nonpoint sources. Point source means contamination originated from a single source, such as an oil refinery. Nonpoint sources originate from diffuse sources, such as stormwater runoff.

The National Pollutant Discharge Elimination System (NPDES) is a permit system for discharging point source pollutants into waterbodies. One unpermitted facility in the City has been identified by this program, which is a storm drain located near the Lake on South Poe Street. It could be possible that the storm drain is carrying runoff from industrial uses located to the north.

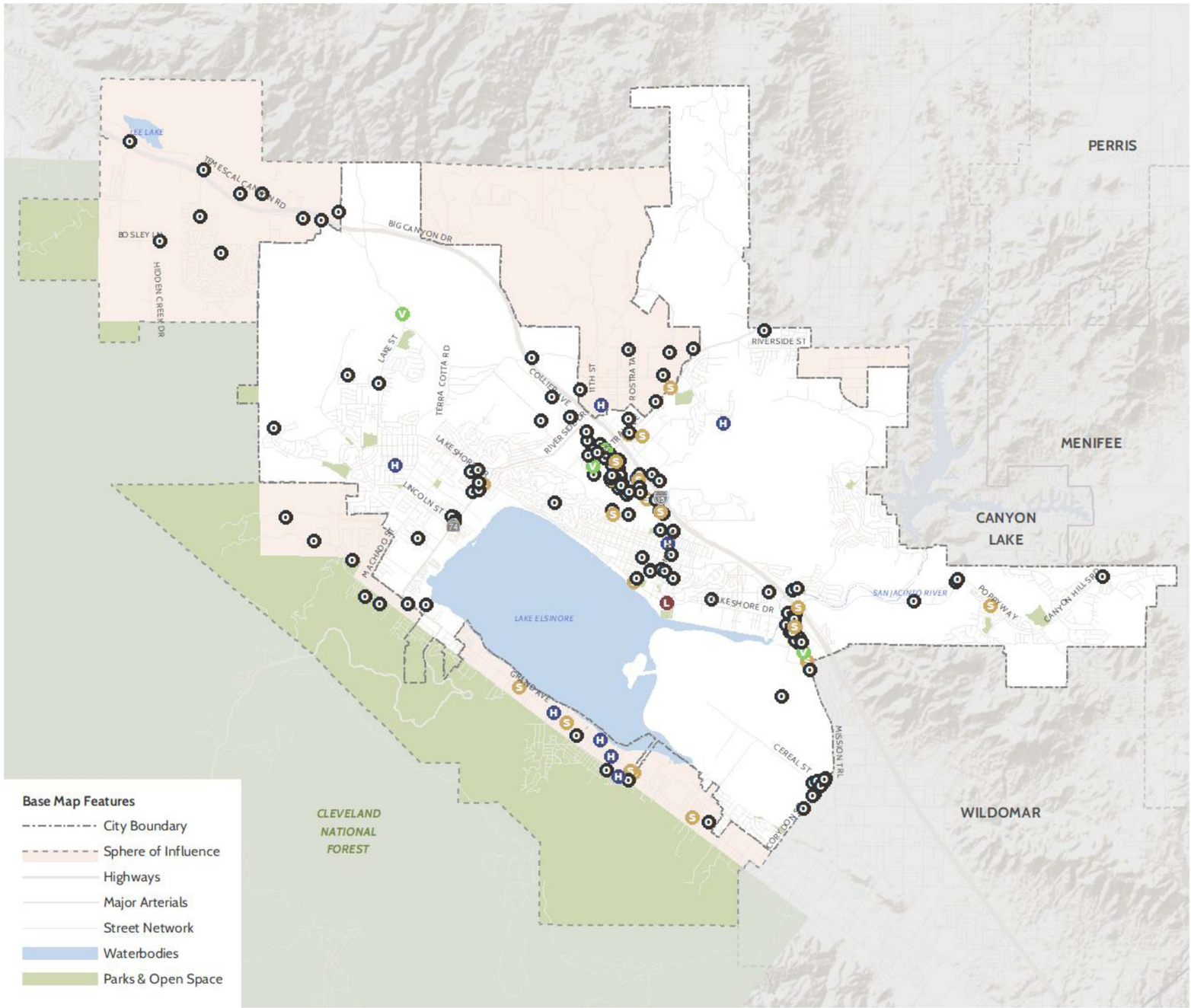


Figure PSNAQ – 2
Hazardous Waste Generators

Hazardous Waste

- Large Quantity Generator (LQG)
- Small Quantity Generator (SQG)
- Very Small Quantity Generator (VSQG)
- Hazardous Waste Transporter
- Other Hazardous Waste Activities

LQG: A business that generates more than 2,200 lbs per month of hazardous waste

SQG: A business that generates more than 220 lbs but less than 2,200 lbs of hazardous waste per month

VSQG: A business that generates no more than 220 lbs of hazardous waste per month

Prepared by MIG, October 2023.
Source: Resource Conservation and Recovery Act Information (RCRAInfo), U.S. Environmental Protection Agency, 2023

Miles
0 ¼ ½ 1 1½ 2

Table PSNAQ-4: Pollutant Discharge by Type

Air Pollutant Discharge	City	Sphere of Influence
Air Minor	1	--
Hazardous Air Pollutant Major	3	--
Pesticide Producer	1	--
Water Pollutant Discharge		
ICIS-NPDES Unpermitted	1	--

Source: Resource Conservation and Recovery Act Information (RCRAInfo), U.S. Environmental Protection Agency, 2023

Hazardous Materials/Waste and Air/Water Pollution Goals and Policies

GOAL PSNAQ-5: A HIGH LEVEL OF COMFORT THAT RESIDENTS, BUSINESSES, AND HABITATS HAVE MINIMAL EXPOSURE TO HAZARDOUS MATERIALS AND THEIR DELETERIOUS EFFECTS

Policy PSNAQ-32: Reduce the potential for hazardous materials and waste exposure to community members, visitors, and employees.

Policy PSNAQ-33: Minimize risks to human health from hazardous materials exposures and releases; remediate hazards.

Policy PSNAQ-34: Ensure commercial and industrial uses that use, store, and/or transport hazardous materials are appropriately buffered and minimize risks to sensitive uses.

Policy PSNAQ-35: Promote proper collection, handling, recycling, reuse, treatment, and long-term disposal of hazardous waste from households, businesses, and government operations.

Policy PSNAQ-36: Protect natural resources, including groundwater, from hazardous materials and waste materials contamination.

GOAL PSNAQ-6: A CITY THAT CONTINUES TO GROW AND DEVELOP WHILE MAINTAINING CLEAN AIR AND REDUCING PARTICULATE MATTER IN THE AIR THAT IS EMITTED INTO THE ATMOSPHERE FROM STATIONARY POINT SOURCES (BUILDINGS, BUSINESS OPERATIONS, UNPAVED AREAS, PARKING LOTS, AND CONSTRUCTION SITES)

Policy PSNAQ-37: Work with regional and state governments to develop effective mitigation measures to improve air quality.

Policy PSNAQ-38: Reduce construction generated air pollution throughout the City.

GOAL PSNAQ-7: REDUCE GREENHOUSE GAS EMISSIONS THROUGH IMPROVED WASTE HANDLING MANAGEMENT AND WASTE GENERATION REDUCTIONS

Policy PSNAQ-39: Improve emissions control at waste handling facilities, in the event such facilities are constructed within the City's jurisdiction.

Policy PSNAQ-40: Encourage the diversions of solid waste from landfill operations.

Policy PSNAQ-41: Enhance regional coordination on waste management.

Implementing Programs for Goals PSNAQ-5 through PSNAQ-7

Review Process

PRO-PSNAQ-42: Critically review commercial and industrial uses that involve the use, storage, and transport of hazardous materials to determine the need for buffer zones or setbacks to minimize risks to homes, schools, community centers, hospitals, and other sensitive uses.

PRO-PSNAQ-43: Restrict future siting of businesses—including hazardous waste repositories, incinerators, or other hazardous waste disposal facilities—that use, store, process, or dispose of large quantities of hazardous materials or wastes in areas subject to seismic fault rupture or significant ground shaking.

PRO-PSNAQ-44: Require vegetation stabilization for disturbed land including phased construction projects.

PRO-PSNAQ-45: Require that fire and emergency personnel can easily access routes needed for response to spill incidents.

Special Studies and Projects

PRO-PSNAQ-46: Inventory brownfield sites and identify necessary measures to remediate.

PRO-PSNAQ-47: Seek funding and technical assistance to facilitate brownfield redevelopment, including federal tax incentives for brownfield sites, Department of Toxic Substances Control (DTSC) Revolving Loan Fund Program, Cleanup Loans and Environmental Assistance to Neighborhoods Loan Program, Brownfields Tax Incentives, and the U.S. Environmental Protection Agency brownfields grant and loan programs.

PRO-PSNAQ-48: Where applicable, ensure regional and local routes for transportation of hazardous materials and waste are adequately marked and unsafe conditions are adequately addressed, where feasible.

Ongoing Processing and Procedures

PRO-PSNAQ-49: Implement and update, as necessary, a Hazards Mitigation Plan in response to emerging information about natural hazards associated with earthquakes, flooding, wildfire, and droughts.

PRO-PSNAQ-50: Continue to require that hazardous materials used in business and industry be used, handled, transported, and stored in accordance with federal, state, and local regulations.

PRO-PSNAQ-51: Ensure adequate capacity and safeguards on transportation routes used to transport hazardous materials to prevent or minimize impacts from accidental release.

PRO-PSNAQ-52: Require construction equipment to be properly maintained according to manufacturers' specifications.

PRO-PSNAQ-53: Restrict the idling of construction equipment to no longer than 10 minutes.

PRO-PSNAQ-54: Require equipment operators to use only diesel equipment or diesel vehicles with engines built in 1996 or later.

PRO-PSNAQ-55: Require control measures for windborne emissions such as watering active construction areas, covering open stockpiles or vehicles hauling loose materials, and paving or applying non-toxic soil stabilizers on unpaved access roads and temporary parking areas.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-PSNAQ-56: Continue to coordinate with the Santa Ana Regional Water Quality Control Board on remediation, cleanup, and risk evaluation prior to changes in site use in areas where hazardous materials and petroleum products have impacted soil or groundwater.

PRO-PSNAQ-57: Consult with state, federal, and Riverside County agencies to develop and promote best practices related to the use, storage, transportation, and disposal of hazardous materials.

PRO-PSNAQ-58: Work with landowners and support funding identification and cleanup of identified brownfield sites.

- Support the SCAQMD in its development of improved ambient air quality monitoring capabilities and establishment of standards, thresholds, and rules to address, and where necessary mitigate, the air quality impacts of new development.
- Work with Riverside County and regional agencies to evaluate the feasibility of implementing a special fund and a system of charges (e.g., pollution charges, user fees, congestion pricing, and toll roads) requiring, where possible, individuals who undertake polluting activities to bear the economic cost of their actions.

PRO-PSNAQ-59: Partner with the local waste handler to develop a public education campaign to promote recycling.

PRO-PSNAQ-60: Promote programs that educate the public about regional air and water quality issues, opportunities, and solutions.

Natural Hazards

Natural hazards refer to natural phenomena that, because of their location, severity, and frequency, have the potential to adversely affect humans and structures. Earthquakes and intensive storm events are examples of natural hazards. Although humans can do little or nothing to change the incidence or intensity of most natural phenomena, we play an important role in ensuring that natural events do not evolve into disasters due to our inattention or malfeasance.

Climate change affects global temperature and precipitation patterns. These effects, in turn, influence the intensity and, in some cases, the frequency of extreme environmental events such as wildfires, heat waves, floods, droughts, and storms.

Emergency preparation and response strategy for both first responders and the community can prevent or mitigate adverse consequences.

Seismic Hazards

Seismic hazards refer to the physical phenomenon associated with and precipitated by earthquakes, including ground shaking, landslides, and liquefaction, among others. The intensity of these unfavorable consequences resulting from seismic shifts vary depending upon the epicenter location, locally occurring geologic conditions, and the density and type of development in the impacted area. A significant seismic event could cause casualties, property damage, disruption in communications, utility, supply, and distribution systems, and cascading natural disasters such as landslides, liquefaction, and flooding.

Southern California is an area well known for its seismicity. The region sits across two tectonic plates: the North American and the Pacific. Movement along this boundary has resulted in many earthquakes from the region's numerous faults. Due to the numerous active faults within Lake Elsinore and the broader region, the Planning Area is likely to experience moderate to significant seismic activity in the foreseeable future. Figure PSNAQ-3 shows the regional faults' locations.

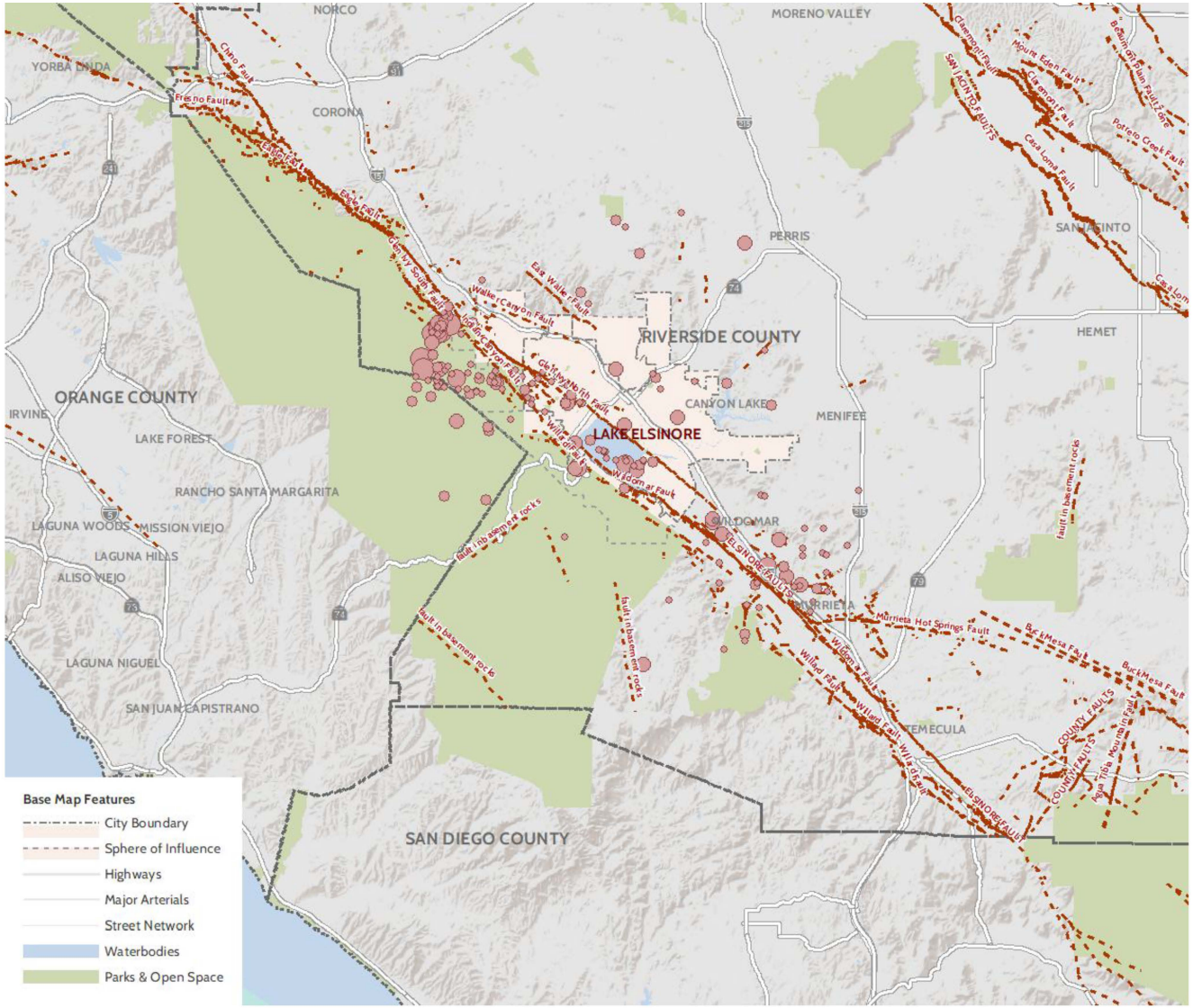
The San Andreas fault and the San Jacinto fault, both further than 10 miles from the city, have the capability of producing a large earthquake that could affect Lake Elsinore. The San Andreas fault could produce a magnitude - 8.0 earthquake, while the San Jacinto fault could produce a magnitude - 7.5 earthquake.

Earthquakes (ground shaking)

Earthquakes in California occur with some frequency. The most significant earthquake affecting Lake Elsinore was the May 15, 1910, Elsinore Earthquake (magnitude 6) that hit just northwest of the city. Significant damage was not recorded beyond toppled chimneys and resident alarm. The 1910 earthquake is the largest historically recorded earthquake in the Elsinore Fault Zone.

Building damage caused by seismic activity is an ever-present threat in Lake Elsinore. More than one third of the City's building stock is over 30 years old. Older structures could be vulnerable to more considerable damage in the event of a significant seismic event. A major earthquake occurring in or near Lake Elsinore could cause deaths and injuries, extensive property damage, fires, hazardous material

Figure PSNAQ – 3
Regional Faults and Historic Earthquakes



spills, and other dangers. Aftershocks and the secondary effects of fire, hazardous material/chemical accidents, and possible failure of dams and waterways could aggravate the situation.

Landslides and Liquefaction

Landslides and liquefaction represent two seismically induced hazards. Earthquake induced landslides are secondary earthquake hazards that occur from ground shaking. While the State of California has not yet issued seismically induced landslide maps for the Lake Elsinore area, landslides are likely to occur in hillside areas. A substantial portion of the Planning Area is located on slopes of 25-35 percent or steeper, much of which is at substantial risk of seismically induced slope failure.

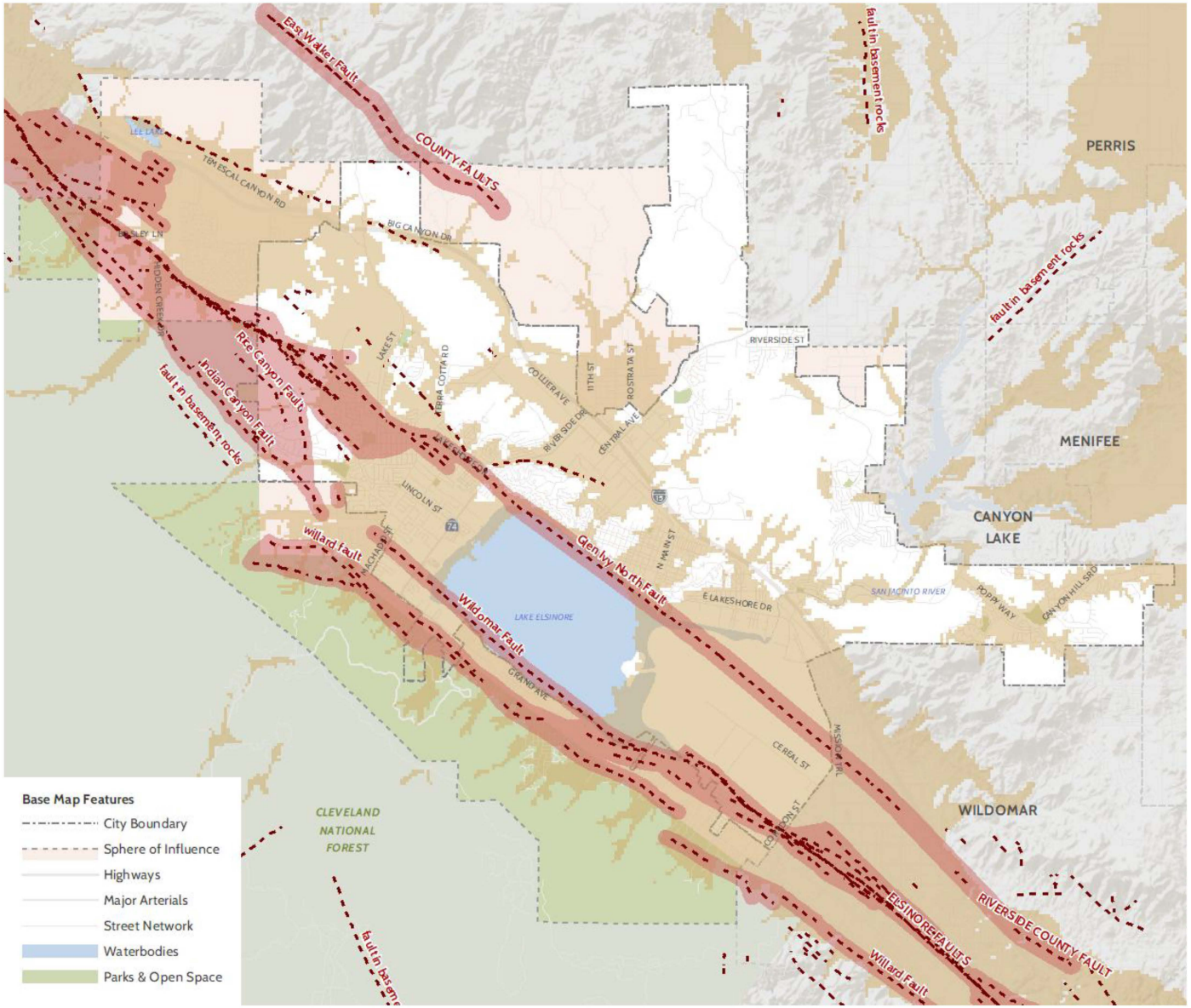
Soil liquefaction is a seismically induced form of ground failure, which has been a major cause of earthquake damage in Southern California. Liquefaction occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state, destabilizing the ability of the soil to support structures. In Lake Elsinore, very high liquefaction hazards are present along Grand Avenue directly south of Lake Elsinore and along I-15, as depicted in Figure PSNAQ-4 and Figure PSNAQ-5. High liquefaction potential is also expected along the area's principal tributary drainages and in the valley floor corridor formerly occupied by a river drainage basin.

Minimizing Risk

High-level approaches minimizing risk and helping the community prepare for earthquakes are:

- **Prepare.** Preparation, at all levels of government and by residents, businesses, schools, and institutions, is vital. Earthquake preparedness can include obtaining medical supplies and food for several days, knowing how to respond during an earthquake, and creating a family or business evacuation plan and/or safety plan. Medical and safety service staff are required to consistently conduct training in response to large disaster, with the City responsible for coordinating with other agencies and medical facilities.
- **Protect.** New construction projects are required to meet building codes to ensure buildings are earthquake resistant. Thus, "protect" initiatives focus on addressing older buildings and critical infrastructure. Seismic retrofitting of older existing buildings is critical, not just for the remaining unreinforced masonry buildings but also homes on raised foundations that have not been strengthened nor bolted to foundations. Due to the cost, many homeowners do not carry earthquake insurance (approximately 10 percent, statewide, have earthquake insurance), and the costs of addressing earthquake damage likely will be incredibly high following a major event. "Protect" extends to critical infrastructure to ensure that roads, utility lines, communications networks can continue to function post-earthquake.
- **Recover.** After an earthquake, returning the community to normal functioning operations and services will be critical to mitigate potential economic and social stresses. In the short term, communications and multi-agency coordination is critical to respond to aid and evaluation of damage to infrastructure. Recovery should then focus on the repair and rebuilding of public facilities and services, businesses, and housing. The Governor's Office of Emergency Services provides detailed information for governments in post-recovery responses and approaches.

Figure PSNAQ – 4
Local Seismic Hazards



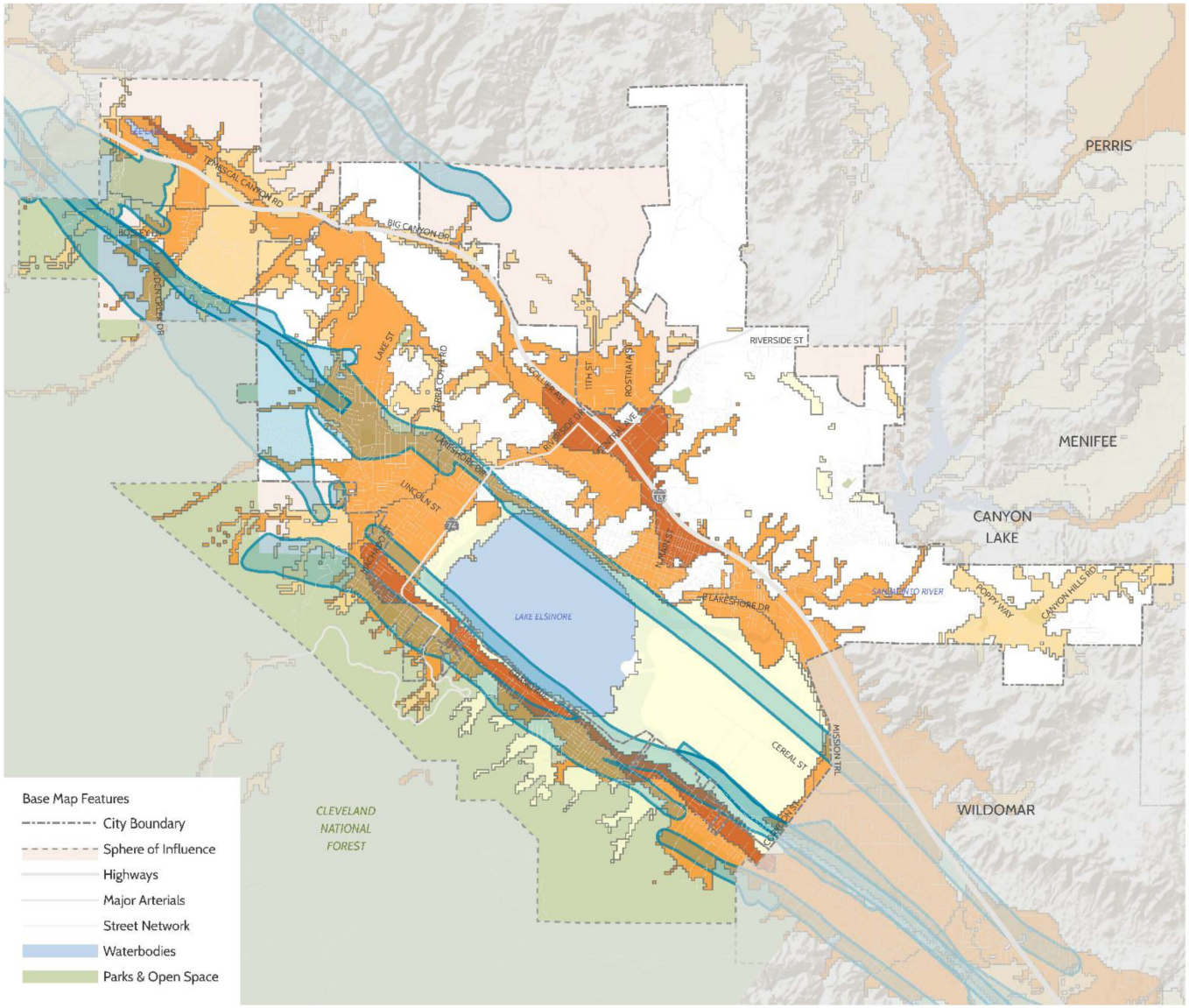


Figure PSNAQ – 5
Liquefaction Susceptibility Zones

Natural Hazards Goals and Policies

GOAL PSNAQ-8: A COMMUNITY WELL PREPARED TO RESPOND TO A MAJOR SEISMIC EVENT AND TO 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

Policy PSNAQ-42: Educate the community on actions to take before, during, and after a major earthquake.

Policy PSNAQ-43: Encourage residents and businesses to undertake seismic retrofitting of existing structures.

Policy PSNAQ-44: Encourage the pursuit of federal and state programs that assist in the seismic upgrading of buildings to meet current City and State seismic safety requirements.

Policy PSNAQ-45: Ensure that all new development abides by current City and State seismic and geotechnical requirements.

Policy PSNAQ-46: Identify a plan of action and consult with different responsible agencies to respond to and recover from a major earthquake.

Policy PSNAQ-47: Strive to ensure that all utility and infrastructure systems have continued functionality during and after a major earthquake.

Policy PSNAQ-48: Ensure that critical facilities such as police and fire stations, hospitals and clinics, schools and utility substations are sited away from identified hazard areas.

Implementing Programs for Goal PSNAQ-8

Zoning Code/Map Update

PRO-PSNAQ-61: Audit and amend development regulations to ensure critical facilities are not located in an area identified in the General Plan as a hazard area.

Review Process

PRO-PSNAQ-62: Require projects in areas susceptible to liquefaction, landslides, and other geologic hazards demonstrate that appropriate engineering and planning mitigations have been implemented.

New Plans, Programs, and Strategies

PRO-PSNAQ-63: Develop a streamlined permitting process for seismic retrofitting projects to reduce administrative barriers.

PRO-PSNAQ-64: Establish a program to help residents and businesses identify, apply for, and manage seismic upgrading grants and funding opportunities.

PRO-PSNAQ-65: Provide regular training and information sessions for developers, building inspectors, contractors, and city officials to stay current on seismic safety regulations.

PRO-PSNAQ-66: Incentivize green building practices and encourage developers to go beyond basic seismic compliance by providing additional incentives for sustainable and resilient construction practices, such as LEED certification.

Ongoing Processing and Procedures

PRO-PSNAQ-67: Regularly conduct joint disaster response exercises, including full-scale earthquake drills, to practice coordination and resource-sharing among responsible agencies.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-PSNAQ-68: Coordinate training for Community Emergency Response Team (CERT) volunteers and publicize training sessions to the City's residents and business owners.

PRO-PSNAQ-69: Maintain emergency preparedness information and handouts at key community gathering spaces and distribute at community events.

PRO-PSNAQ-70: Use the City's website and other media resources to inform and educate residents and business owners on emergency preparedness and recovery matters.

Wildfire Hazards

While the Elsinore Mountains of the Santa Ana Mountain Range and surrounding hills frame Lake Elsinore's picturesque backdrop, they also facilitate wildfire hazard risks. Wildfires are an ever-present concern in the adjacent mountain ranges and steep terrain—especially considering much of the areas to the southwest, west, and northwest of the Sphere of Influence (SOI) are fueled by vegetative shrub and chaparral overgrowth. Risk is further elevated by high temperatures, occasional Santa Ana winds, and periodic high velocity winds through the valley and steep canyons that form a natural wind funnel. In the past decade, two notable fires have occurred within the Planning Area, and seven others have been documented in the area since 1984. Most recently, in September 2024, the Airport Fire burned over 23,000 acres in Riverside and Orange counties. This fire resulted in the destruction of 160 structures, 34 damaged



Source: Lake Elsinore Fire Department

structures, and 22 confirmed injuries to fire personnel and civilians.[5] In August 2018, the Holy Fire burned nearly 59,000 acres in the Cleveland National Forest, impacting approximately 160 buildings in Lake Elsinore. Figure PSNAQ-6 illustrates the fire perimeters of wildfires that have occurred within the Planning Area and surrounding communities.

The majority of the Planning Area is designated "Very High Fire Hazard Severity Zones" (VHFHSZs) by Riverside County, California Department of Forestry and Fire Protection (CAL FIRE, and the California Board of Forestry as depicted in Figure PSNAQ-7. Development applicants within the zone are required to develop Fire Protection Plans. Lake Elsinore contracts fire services with the Riverside County Fire Department and CAL FIRE; Lake Elsinore provides a full range of fire protection services including fire prevention, suppression, and emergency medical response. The Riverside County Fire Department provides firefighting services to Lake Elsinore's portion of the Local Responsibility Area (LRA) while CAL FIRE is the primary emergency response agency responsible for lands within State Responsibility Areas (SRA).

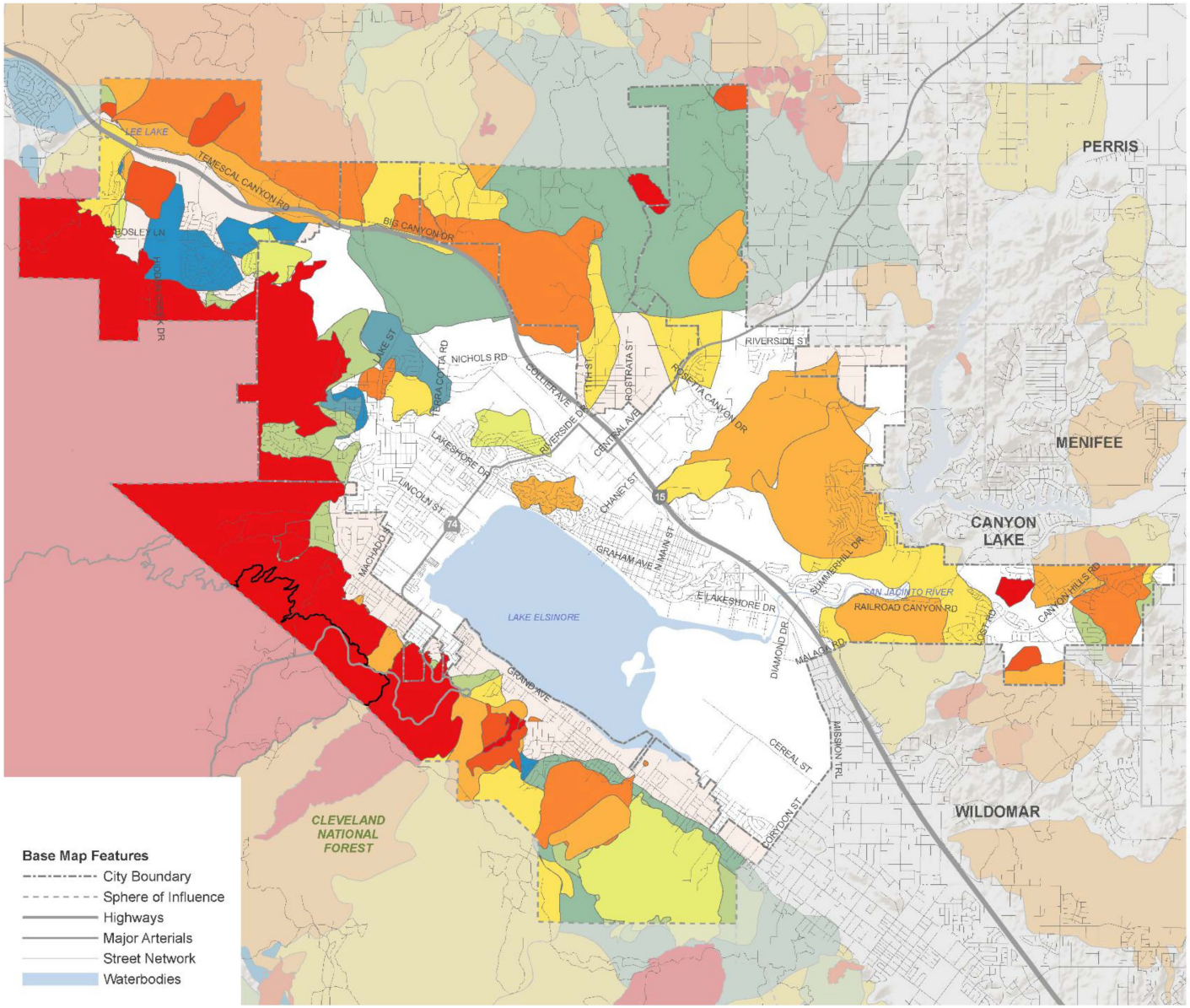
Minimizing Risk

The City's key strategies for minimizing the toll of seasonal wildfires are:

- **Prevent.** Neighborhoods in Lake Elsinore exist along the urban/wildfire interface. As these interface conditions continue, educating the public about fire's natural role and measures residents and business can take to best protect properties will be critical to minimizing potential property damage and loss of life. Year-round education and enforcement campaigns, with extra effort expended prior to the fire season, are necessary. Prevention can include fuel modification and defensible space strategies, restricting construction of new structures in wildfire zones, building wildfire resistance structures, and modifying existing structures.
- **Protect.** The goal in any firefighting operation is to provide adequate supplies and fire suppression services to protect buildings, infrastructure, and human life in immediate danger from wildfires. Coordination among multiple firefighting agencies and mutual aid agreements are needed to fight major wildfires in the Cleveland National Forest and Santa Ana Mountains. Ensuring adequate water supplies and pressure is critical. Additionally, warning systems and clear delineation of evacuation routes can protect lives.
- **Recover.** Following a major fire, the community may face the need to repair or replace damaged infrastructure. Addressing repair/replacement of burned structures needs to include a thorough assessment of how to minimize recurrences. The natural environment around Lake Elsinore may also be severely impacted following a major fire. Coordination with the Riverside County Multiple Species Habitat Conservation Plan will support restoration of habitat areas and trails and provide for rapid replanting (with appropriate species) to guard against mudslides.

[5] CAL FIRE Incident Report, Airport Fire, 2024. https://www.fire.ca.gov/incidents/2024/9/9/airport-fire

Figure PSNAQ - 6
Historic Fire Perimeters



Prepared by MIG, November 2024.
Source: California Department of Forestry and Fire Protection, 2024

0 ¼ ½ 1 1½ 2 Miles

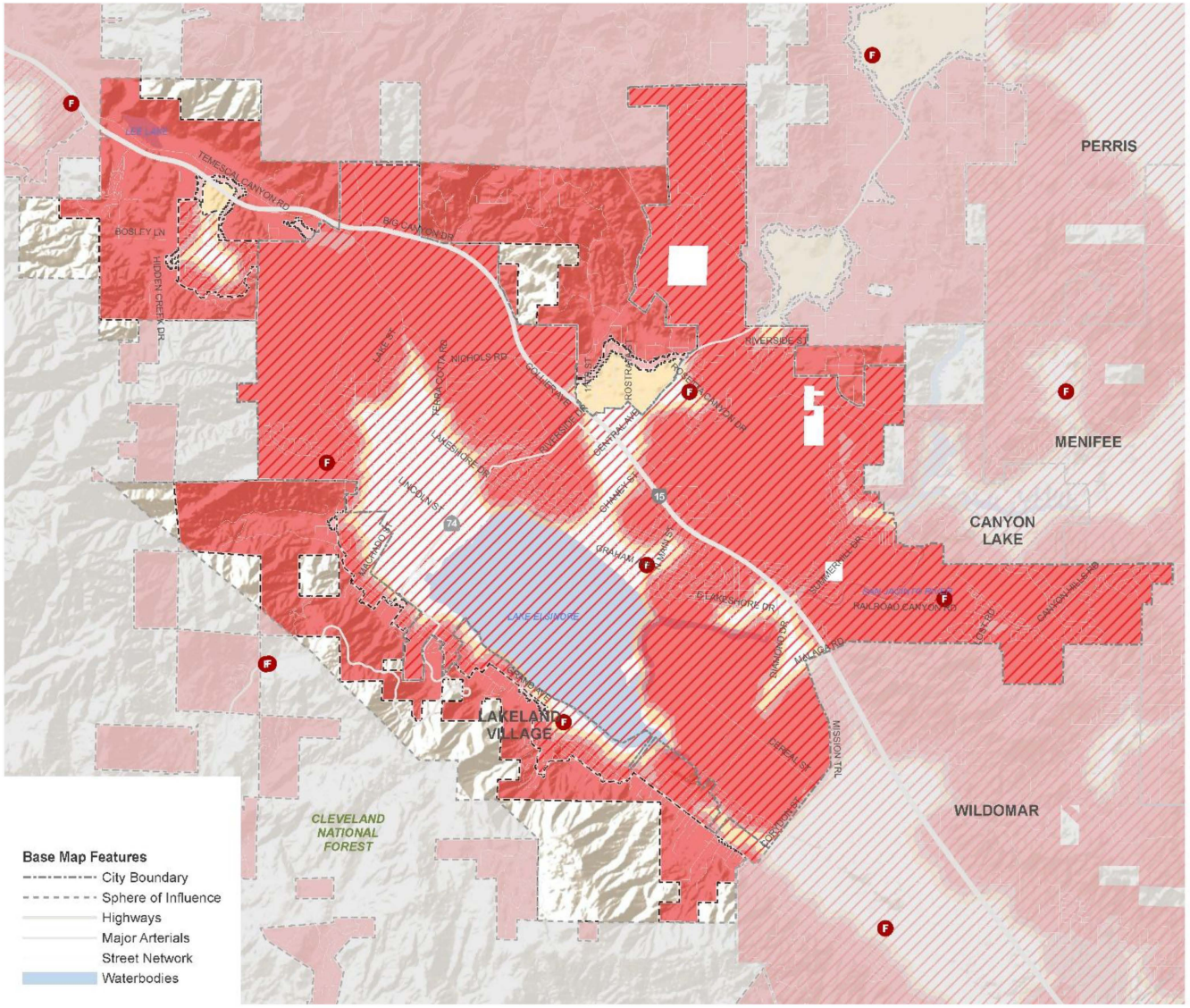


Figure PSNAQ - 7
Wildfire Hazards

Wildfire Hazards Goals and Policies

GOAL PSNAQ-9: A COMMUNITY THAT USES AN INTEGRATED APPROACH TO PROACTIVELY PREVENT WILDFIRES AND PROTECT LIFE, PROPERTY, INFRASTRUCTURE, AND HABITATS FROM WILDFIRE IMPACTS

Policy PSNAQ-49: Minimize new residential development within the Very High Fire Hazard Severity Zones (VHFHSZs).

Policy PSNAQ-50: Ensure on-site fire protection measures are considered during project review in wildfire hazard areas.

Policy PSNAQ-51: Minimize fire risk for new development in VHFHSZs.

Policy PSNAQ-52: Prioritize adequate ingress and egress routes for existing and new development in VHFHSZs.

Policy PSNAQ-53: Require new development and, as feasible, existing development to provide long-term maintenance of defensible space clearances around structures, subdivisions, and fuel breaks within VHFHSZs.

Policy PSNAQ-54: Identify vulnerable and at-risk populations who would require additional assistance in preparation for evacuation from wildfire.

Policy PSNAQ-55: Prioritize continuity of emergency services.

Policy PSNAQ-56: Promote fire hazard risk reduction through redevelopment.

Policy PSNAQ-57: Use natural and built environment to provide natural fire break.

Policy PSNAQ-58: Ensure long-term integrity of water supply and fire suppression systems through ongoing maintenance and evaluation.

Implementing Programs for Goal PSNAQ-9

Zoning Code/Map Update

PRO-PSNAQ-71: Update the zoning code to encourage new residential development occurs in areas outside VHFHSZs.

Building, Municipal, and other Code Updates

PRO-PSNAQ-72: Update building and development codes to ensure standards for fire protection for new development in SRAs or VHFHSZs meet or exceed the statewide minimums in the SRA Fire Safe Regulations.

PRO-PSNAQ-73: Update road/street standards to require new residential development within VHFHSZs to address resident evacuation, including identifying the location and direction of evacuation routes and at least two points of ingress and egress, as part of the development review process.

Review Process

PRO-PSNAQ-74: Require special on-site fire protection measures, such as the installation of fire hydrants providing adequate fire flow and fire sprinkler or suppression systems, to be specified during project review for areas where wildfire hazards potential exists, specifically hilly areas with slopes of 10 percent or greater, access problems, lack of water or sufficient pressure, and/or excessively dry brush.

PRO-PSNAQ-75: Ensure properties in high-risk areas are equipped with an adequate water supply for firefighting, including water storage and pressure requirements.

PRO-PSNAQ-76: Require landscape design in new residential developments. Require the use of fire-resistant landscaping techniques in new development, especially in areas with dry brush and heavy vegetation.

PRO-PSNAQ-77: Require new developments adhere to California Government Code sections 51175 to 51189 related to VHFHSZs, all requirements in the California Building Code and California Fire Code, and the Board of Forestry and Fire Protection Fire Safe Regulations.

PRO-PSNAQ-78: Require and enforce the installation of fire protection water system standards for all new construction projects within VHFHSZs, including the installation of fire hydrants providing adequate fire flow, fire sprinkler, or suppression systems. Add the standards zoning and/or building code and required as part of the development application process.

PRO-PSNAQ-79: Require new development within VHFHSZs to include a fire protection plan that addresses landscape/fuel modification installation, incorporates open areas to complement defensible spaces, identifies possible refuge areas, and maps multiple ingress and egress routes. Add the standards to the zoning and/or building code and address as part of the development application process.

PRO-PSNAQ-80: Require new development within and adjoining VHFHSZs to prepare a roadside fuel reduction plan to prevent fires along public roads caused by vehicles.

PRO-PSNAQ-81: Require all structures redeveloped or rebuilt in the VHFSZs after a large fire to comply with building and fire codes in effect at the time of the re-development.

New Plans, Programs, and Strategies

PRO-PSNAQ-82: Survey existing public and private streets every five years to determine those that lack two means of ingress and egress and inadequate evacuation routes. Identify and implement measures to mitigate single access issue.

PRO-PSNAQ-83: Identify areas with higher concentrations of at-risk populations (e.g., elderly, disabled, low-income) and create targeted evacuation plans for these groups.

PRO-PSNAQ-84: Locate essential public facilities such as hospitals, waste water treatment, shelters, and emergency operations centers, out of high-risk, wildfire-prone areas unless additional mitigation measures above the minimum fire protection standards are put in place and annually maintained.

PRO-PSNAQ-85: Conduct a study to establish a re-development policy for all structures in VHFSZs after large fires.

PRO-PSNAQ-86: Identify measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection.

Special Studies and Projects

PRO-PSNAQ-87: Working with RCFD, regularly survey existing residential structures for compliance with fire safety and defensible space requirements. Consult with property owners of non-conforming sites or structures to bring those properties into compliance with the most current building and fire safety standards.

Ongoing Processing and Procedures

PRO-PSNAQ-88: Maintain all public roads in accordance with State regulations.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-PSNAQ-89: Collaborate with senior services, community centers, and local schools to coordinate evacuation and emergency response plans.

PRO-PSNAQ-90: Continue to work with the Riverside County Fire Department to:

- Ensure that fire services are maintained at adequate levels. While working with the Riverside County Fire Department, monitor the City of Lake Elsinore's fire protection rating and work with the Riverside County Fire Department to correct deficiencies and to ensure ongoing training is conducted;
- Conduct twice annual inspections of fire hydrant and water supply sources; Require the owner of the equipment (private property, public agency, etc.) to immediately correct issues as necessary; and
- Identify anticipated locations of water supplies and work with appropriate agencies to maintain necessary water levels on an annual basis.

PRO-PSNAQ-91: Collaborate with the regional fire agencies on strategies available to maintain diverse plant composition (e.g., less combustible native plants), undertake appropriate thinning of vegetation, and maintain fuel breaks without permanently damaging native habitat. As appropriate, refer to and implement appropriate strategies of the Riverside County Fire Department Strategic Fire Plan.

PRO-PSNAQ-92: Provide evacuation notices and fire safety information accessible to people with communication barriers (e.g., using braille, multiple languages, and text-to-speech systems).

Flooding and Dam Inundation Hazards

A common misconception is that a 100-year flood is a flood that occurs once every 100 years. However, the phrase really means a flood that has a one percent chance of occurring in any given year.

The 500-year flood zone is a designated area that has a 1 in 500 (0.2%) chance of being met or exceeded in any given year. A 500-year flood would likely be more catastrophic than a 100-year flood.

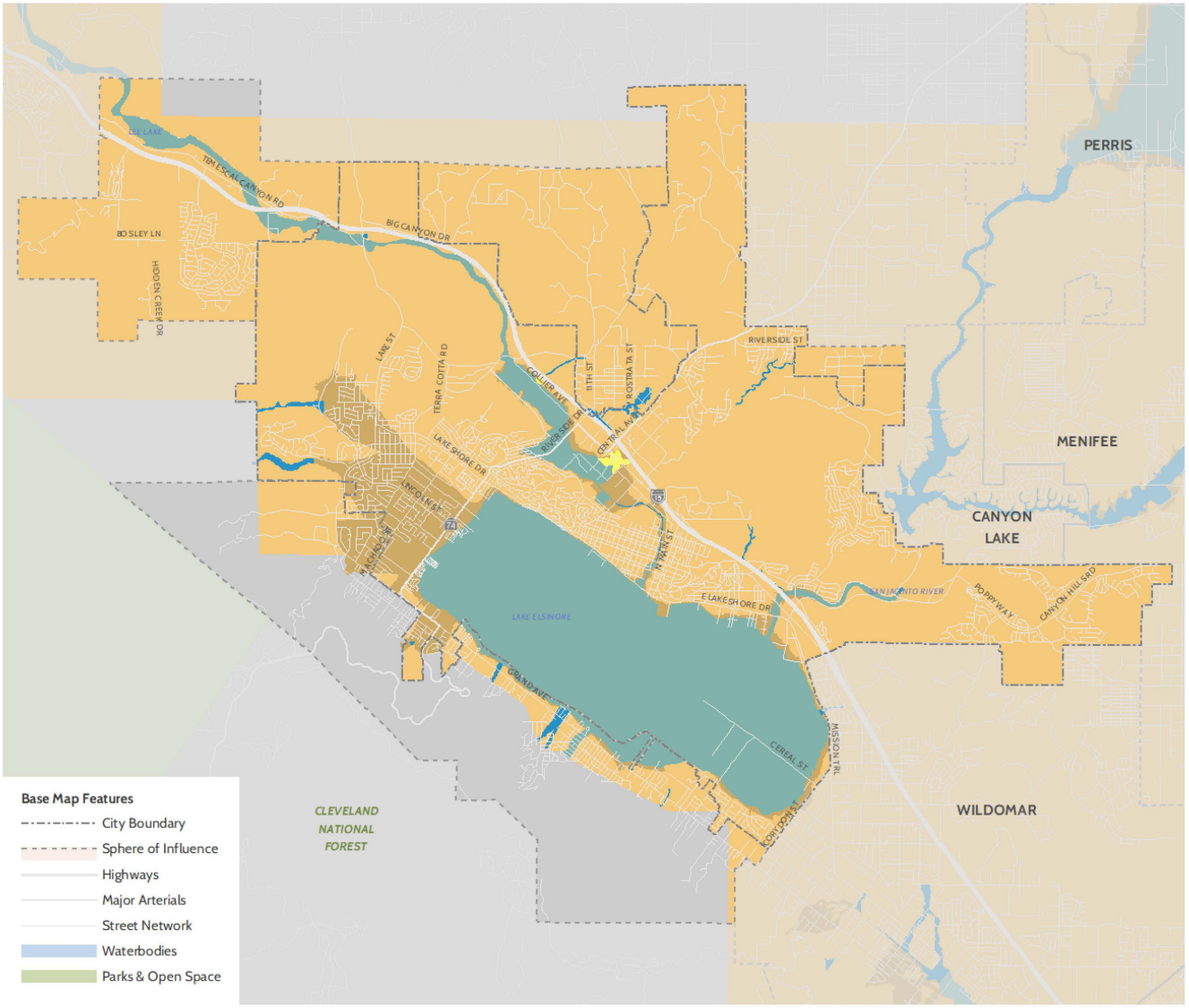
Flooding is identified in the Lake Elsinore Local Hazard Mitigation plan (LHMP) as a high-priority hazard. Flooding is highly likely and has the potential to be catastrophic for the City. Large portions the City are located within the Federal Emergency Management Agency (FEMA) mapped 100-year special flood hazard zone (Figure PSNAQ-8). In the past decade, the city has experienced flood damage from numerous winter storms that have overwhelmed the City's storm drainage system and created localized flood problems.[6]

Historically, Lake Elsinore has not experienced catastrophic dam failures, but the city has faced minor flooding events linked to dam overflows or excessive water flow during heavy rains. Additionally, the San Jacinto River, which is connected to the lake, can carry large amounts of water that may overwhelm flood control systems during significant storms. As the City of Lake Elsinore and the surrounding region continue to develop, the risks associated with dam inundation hazards will persist, and in some cases, could increase. These risks are heightened by climate change, population growth, aging infrastructure, and urban development in flood-prone areas.

A Railroad Canyon Dam failure, also known as Canyon Lake Dam, would pose extreme high downstream hazards to large portions of the city (Figure PSNAQ-9). The Railroad Canyon Dam is owned and operated by the Elsinore Valley Municipal Water District (EVMWD). In 1996, EVMWD spent $9.1 million to upgrade and widen the dam to withstand a 1,000-year flood event. EVMWD inspects the dam monthly and the Division of Safety of Dams inspects it yearly to ensure the dam's proper maintenance and is able to protect against an earthquake or flood. The Railroad Canyon Dam was rated "Satisfactory" by the 2022 condition assessment utilizing the National Dam Safety Review Board rating system.[7]

[6] Lake Elsinore Local Hazard Mitigation Plan, 2023.
[7] California Department of Water Resources Division of Safety of Dams Jurisdictional Dams Inventory, 2022.

Figure PSNAQ – 8
Flood Hazards



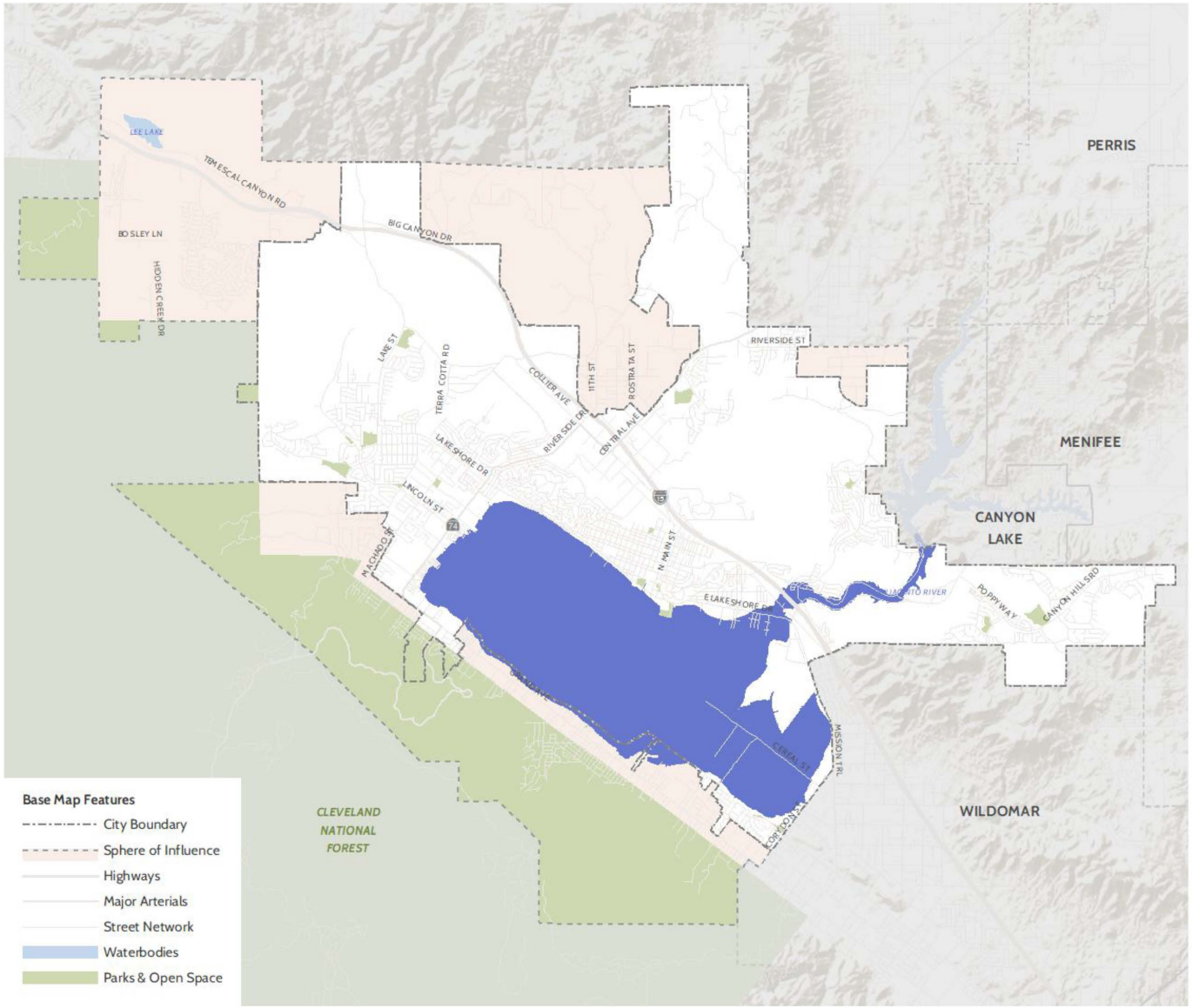


Figure PSNAQ – 9
Dam & Reservoir Inundation Hazards

Several potential flood sources in Lake Elsinore 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 Walsh
- Wash G
- Wash I
- Murrieta Creek
- Wasson Canyon Creek

Flooding and Dam Inundation Hazards Goal and Policies

GOAL PSNAQ-10: A COMMUNITY THAT PROACTIVELY MANAGES FLOOD HAZARDS TO MINIMIZE THE RISK OF IMPACT TO LIFE AND PROPERTY

Policy PSNAQ-59: Maximize essential public facilities' resilience to flood risks and hazards in 100- and 500-year floodplains.

Policy PSNAQ-60: Evaluate the need to expand the capacity of flood control facilities to minimize flood hazards resulting from extreme weather events.

Policy PSNAQ-61: Ensure new construction conforms to all applicable provisions of the National Flood Insurance Program to protect buildings and property from flooding.

Policy PSNAQ-62: Ensure natural flood control infrastructure and techniques capture storm water, recharge aquifers, and prevent flooding near established drainage systems and channels.

Policy PSNAQ-63: Encourage site drainage features that reduce impermeable surface area, increase surface water infiltration, and minimize surface water runoff during storm events.

Implementing Programs for Goal PSNAQ-10

Zoning Code/Map Update

PRO-PSNAQ-93: Update the Lake Elsinore Zoning Code to:

- Establish site design standards that require new developments within the floodplain fringe to preserve and enhance existing native riparian habitat;
- Reduce the risk of flooding by creating floodway setbacks for greenways, trails, and recreation areas and by prohibiting development within the floodways; and
- Require site drainage features that reduce impermeable surface area, increase surface water infiltration, and minimize surface water runoff during storm events onsite.

Review Process

PRO-PSNAQ-94: Evaluate development proposals against all FEMA regulations and use FEMA mapping during the environmental review process to ensure that flooding hazards are addressed and minimized, including placement of restrictions on development within designated floodplain areas.

Special Studies and Projects

PRO-PSNAQ-95: Conduct a vulnerability analysis to assess the structural integrity and flood resilience of essential public facilities like healthcare facilities, wastewater treatment plants, schools, power plants. Consider factors like building elevation, proximity to floodplains, stormwater drainage capacity, and flood mitigation systems. After completion of the assessment, take measures to mitigate threats to physical structures and improve building resilience.

Ongoing Processing and Procedures

PRO-PSNAQ-96: Improve existing or install new stormwater drainage systems (e.g., permeable pavements, retention basins) around public facilities to better manage runoff into storm drains and sewers during heavy rainfalls and reduce the risk of flooding.

PRO-PSNAQ-97: Use 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.

Climate Adaptation

Climate change is a long-term shift in global or regional climate patterns. Climate adaptation is responding to climate change. This General Plan addresses climate-related issues by strengthening local resiliency and adaptive capabilities.

The greenhouse gas (GHG) emissions we generate are the leading cause of the Earth's rapidly changing climate. GHG play an important role in keeping the planet warm enough to inhabit. But the level of these gases in our atmosphere has soared since the beginning of the 21st century. The burning of fossil fuels such as coal, oil, and gas for electricity, heat, and transportation is the primary source of human-generated emissions. Curbing dangerous climate change requires very deep cuts in emissions, as well as the use of alternatives to fossil fuels worldwide.

California law requires the City of Lake Elsinore to take action to reduce local GHG emissions toward State reduction goals. The GHG reduction laws mandate all Californians to work together to effect change on a larger scale. State legislation under AB320 (2006) sets out goals to reduce emissions by at least 40 percent below 1990 levels by 2030, with this target date subject to change based on measured progress. Compliance with State laws is only part of the picture. Responding to the potential impacts of

climate change is critical to assuring the City remains prepared to address more high heat days, longer heat waves, possible droughts, and changing flooding conditions.

Climate Impacts

As part of the General Plan Update process and to meet state requirements, the City completed the Climate Resiliency Vulnerability Assessment (Vulnerability Assessment) to assess climate change vulnerability, increase resiliency in Lake Elsinore, and enable the community to prepare for, respond to, withstand, and recover from disruptions created or worsened by climate change. To assess communitywide resilience to climate change, the Vulnerability Assessment explored the impacts of climate change hazards on selected populations and assets that may be disproportionately harmed by climate hazards.

Overall, the Vulnerability Assessment highlighted the following issues to address regarding climate adaptation:

- Wet seasons will become wetter and dry seasons will become drier.
- Extreme heat events will become more frequent.
- Wildfires will continue to be a threat.
- People with limited financial resources, disabilities, and the elderly are highly vulnerable to climate change.
- Key infrastructure networks are the most vulnerable to climate change.

Drought and Heat Waves

Projected annual rainfall in Lake Elsinore is projected to decrease to 13.2 inches by mid-century and 13.0 inches by the end of the century, if GHG emissions continue to rise rapidly.[8] This could lead to negative impacts to the potable water supply and inhibit the natural recharge of Lake Elsinore. Drought can also lead to increased wildfire risk due to dry vegetation.



Extreme heat has been identified as one of the high priority hazards for Lake Elsinore to prepare. Severe heat waves and temperature inversions are likely to occur in the City due to the topography of the

[8] Cal-Adapt. Maps of Projected Change. https://cal-adapt.org/tools/maps-of-projected-change/

area. The most vulnerable populations in the community would be the unhoused population, infants and children under 5, seniors, and individuals with disabilities.

The critical infrastructure within the City is at risk from extreme heat due to potential power outages that may be caused by a heat wave. While the City encourages future facilities to have emergency plans or backup power to address power failure during times of extreme heat, the City's capacity to help its residents in the event of power failure is severely lacking. In 2024, the City operated two cooling shelters, one at the Lake Elsinore Library and a second at Lakeview Chapel. According to the Emergency Services Manager, the Senior Center is also available as a cooling center for seniors in the community when the Senior Center is open.

Adaptive Capacity

The City and regional agencies have developed policies, plans, and programs to moderate the potential damage caused by climate change and natural hazards. Multiple planning documents include some policies or programs to address the climate change-related impacts that are expected to impact the City, however policies and adaptation measures regarding several key hazards are missing. Local-level, specific policies regarding drought, climate-induced landslides, GHG reduction, and water mitigation are missing from several of these plans.[9]

Climate Adaptation Goal and Policies

GOAL PSNAQ-11: AN ADAPTIVE CITY THAT IS RESPONSIVE AND RESILIENT TO THE IMPACTS OF CLIMATE CHANGE AND EXTREME HEAT AND MINIMIZES RISK OF CLIMATE IMPACTS ON CRITICAL INFRASTRUCTURE AND THE WELL-BEING AND SAFETY OF ALL RESIDENTS

Policy PSNAQ-64: Develop a heat response plan to set up systems to predict and communicate with the public about heat events, coordinate response, and designate cooling centers.

Policy PSNAQ-65: Develop and implement climate-resilience focused building and infrastructure standards.

Policy PSNAQ-66: Promote the development of climate-resilient public transportation systems, biking lanes, and walkable areas to reduce carbon emissions and enhance mobility during extreme weather events.

Policy PSNAQ-67: Promote water conservation and management.

Policy PSNAQ-68: Support the preservation and restoration of natural landscapes to reduce the heat island effect, improve air quality, and improve community health.

[9] Climate Resiliency Vulnerability Assessment. MIG, 2024.

Policy PSNAQ-69: Strengthen the community's ability to respond to the risks and negative effects of power outages, including public safety power shutoffs (PSPS) and other climate-related threats.

Implementing Programs for Goal PSNAQ-11

Building, Municipal, and other Code Updates

PRO-PSNAQ-98: Update the Local Hazard Mitigation Plan to include mitigation strategies for severe weather and extreme temperatures.

PRO-PSNAQ-99: Audit and update existing building codes and construction standards to ensure they require climate-resilient infrastructure, such as flood-resistant buildings, energy-efficient designs, and heat-reflective materials.

PRO-PSNAQ-100: Require the passive solar design of projects to address the possible effects of extreme heat events, such as requiring shade trees and shade shelter areas, shaded playgrounds, bus shelters, and placement of structures that account for proper sun exposure to reduce the heat within structures.

Review Process

PRO-PSNAQ-101: Encourage the use of pavement materials designed to reflect solar energy, speed up evaporation, and otherwise stay cooler than traditional pavements.

PRO-PSNAQ-102: Encourage redundant power sources such as generators or renewable energy sources to help ensure power is available for increased power needs in heat events and to minimize blackouts.

PRO-PSNAQ-103: Support water-saving measures such as tiered water pricing, efficient irrigation systems, and rainwater harvesting to address drought risks and ensure sustainable water supply.

New Plans, Programs, and Strategies

PRO-PSNAQ-104: Designate additional cooling and warming centers that are easily accessible to the public. Potential locations include the public library, schools, churches, and hotels.

PRO-PSNAQ-105: Develop partnerships with local businesses, nonprofit organizations, and the school district to provide additional public cooling/warming centers.

PRO-PSNAQ-106: Seek incentives for developers to expand shaded areas, such as tree planting programs, and encourage the installation of cool roofs or reflective pavements to reduce heat in public spaces.

PRO-PSNAQ-107: Assist property owners in identifying grants or tax incentives for retrofitting existing buildings to meet updated climate resilience standards.

PRO-PSNAQ-108: Audit city property for adherence to updated climate resilience standards and seek grant funding to make updates to facilities or prioritize these improvements in the CIP.

PRO-PSNAQ-109: Encourage investment in low-carbon public transportation systems, including electric buses and bike-sharing programs.

PRO-PSNAQ-110: Increase the City's urban tree canopy and expand urban greening throughout the City to reduce the heat Island effect.

PRO-PSNAQ-111: Conduct a communitywide tree canopy assessment to quantify how much of the City's land area is covered by trees, including streets with street tree canopy cover; identify the location of those trees; and identify opportunities to plant trees.

PRO-PSNAQ-112: Refine guidelines on specific tree species and management procedures that integrate carbon sequestration, ecosystems services, and biodiversity.

PRO-PSNAQ-113: Require tree planting and other landscaping in all new development and redevelopment that supports other community benefits, such as shade for walking and biking, and include greening elements as a primary project scoring criteria for bicycle improvements.

PRO-PSNAQ-114: Seek resources to create and regularly update an urban forestry to increase the urban tree canopy, open spaces, and green roofs to reduce the heat island effect, giving priority to areas of the City with vulnerable populations.

PRO-PSNAQ-115: Explore incentives for shading features, such as large eaves and cantilevers on south- and west facing walls to reduce air conditioning requirements and heat island effects that contribute to the entire community's reduced quality of life, but especially those living in high-density, low-income neighborhoods.

PRO-PSNAQ-116: Preserve mature trees during infrastructure modifications using solutions to retain them, such as curb extensions, basin expansion, and sidewalk re-routing.

Ongoing Processing and Procedures

PRO-PSNAQ-117: Ensure long-term planning efforts include improvements to multi-modal transportation networks that include biking lanes and pedestrian-friendly streets.

Ongoing Collaboration, Consultation, and Community Engagement

PRO-PSNAQ-118: Collaborate with SCE and nonprofit organizations to ensure that those who depend on electricity supply for medical devices and refrigerated medication have backup energy supplies during outages, including extreme heat and wind events.

PRO-PSNAQ-119: Educate the community about the dangers of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures and other severe weather occur.

PRO-PSNAQ-120: Establish programs to help communities assess and reduce their risk exposure (e.g., home retrofitting, flood risk assessments).

Noise

The noise section examines the local noise environment and establishes standards to encourage noise-compatible land use patterns. Noise concerns focus on stationary sources like manufacturing and construction as well as roadway noise.

Noise Setting and Background

Noise is defined as unwanted sound. While noise is an inherent part of urban living, people who live in suburban environments expect moderate noise conditions, such as limited vehicle and aircraft noise and business activity. Many factors impact how people perceive and react to noise, such as the time of day, the noise source, and their expectations for the noise environment. In Lake Elsinore, the most significant and constant noise source is roadway/freeway traffic noise. Other reported noise sources include off-road vehicle traffic, industrial and manufacturing facilities, Skylark Airport, schools, construction and other heavy equipment activities, loud music, and recreational activities associated with the Lake, the motocross park, and Diamond Stadium. The goals and policies in this section are designed to locate new development in areas with compatible noise levels and minimize intrusive noise from existing and new development. At a more localized level, activities such as landscape maintenance and construction activities can interfere with enjoyment of outdoor neighborhood life. Controlling roadway noise can be difficult since state and federal laws control motor vehicle noise. However, the location of noise-sensitive land uses relative to significant noise sources can help address roadway noise concerns. For more localized impacts, City ordinances can help. The existing background or "ambient" noise level in the community is the product of the cumulative effects of a variety of noise sources that accumulate over time. Exposure to excessive noise has often been cited as a health hazard. Figure PSNAQ-10 illustrates Lake Elsinore's 2023 noise environment.

Topography and Climate

Noise amplitude and attenuation characteristics are key factors in the establishment of noise conditions and vary considerably according to natural climate and topographical features. Meteorological factors affecting noise characteristics within the Lake Elsinore Planning Area include temperature changes, Santa Ana winds, and the amount and duration of rainfall. Topographical features in the Planning Area include the steep Santa Ana Mountains and Elsinore Mountains to the south and west; the large centrally located, low-lying Lake Elsinore and surrounding local valley; and the rolling hills throughout much of the area. Man-made features within the Planning Area, such as buildings and structures, agricultural fields, and roadways, also affect noise amplitude and attenuation.

Vehicular Traffic

Two highly utilized transportation corridors, I-15 and SR 74, traverse the City making roadway traffic one of the more prevalent sources of noise within the area. Traffic noise varies in how it affects land uses depending upon the type of roadway, distance of the land use from that roadway, topographical setting, and other physical land features such as landscaping, walls, buildings, and other structures. Some variables that affect the amount of noise emitted from a road are speed of traffic, flow of traffic, and type of traffic (e.g., tractor trailers versus cars).

Industry

Industrial and manufacturing facilities are stationary noise producers that may affect sensitive land uses. Industrial land uses have the potential to exert a relatively high level of noise impact within their immediate operating environments. The scope and degree of noise impacts generated by industrial uses is dependent upon various critical factors, including the type of industrial activity, hours of operation, and the site's location relative to other land uses. Noise-related complaints are often aimed at facilities such as Elsinore Ready-Mix, a concrete manufacturer located in Country Club Heights. Other noise complaints usually come from neighbors who live next to land that is underdeveloped.

Airports

Skylark Airport is a privately owned airport that occupies approximately 150 acres of land located at the southern City limits on Corydon Road. This airport provides glider and skydiving opportunities for the community and surrounding region. The runway surface at Skylark Airport consists of gravel and sand, which generally does not permit optimal conditions for frequent and convenient airport operations.

Schools

Schools can be a source of nuisance noise for neighboring residential uses. Noise-generating activities include children at play, bells, and public address systems. High schools may include stadiums used for day and evening athletic events, and the use of public address/loudspeaker systems can also generate substantial noise levels during the day and/or evening.

Other Noise Sources

Other sources of noise include recreational boating and personal watercraft on Lake Elsinore, the Motocross Park, Diamond Stadium, and construction activities.

Vibration

As with noise, vibration can be described by both its amplitude and frequency. Amplitude may be characterized by displacement, velocity, and/or acceleration. Typically, particle velocity (measured in inches or millimeters per second) and/or acceleration (measured in gravities) are used to describe vibration. Vibration can be felt outdoors, but the perceived intensity of vibration impacts are much greater indoors due to the shaking of the structure. The most common sources of vibration in the Lake Elsinore Planning Area are transit vehicles, construction equipment, and large vehicles. Several land uses

are especially sensitive to vibration and therefore have a lower vibration threshold. These uses include but are not limited to concert halls, hospitals, libraries, vibration-sensitive research operations, residential areas, schools, and offices.

Measurement and Perception

Sound intensity is measured and expressed in decibels (dB), with an adjustment referred to as the A-weighted measure to correct for the relative frequency response of the human ear. Of the various scales available for measuring noise, the A-weighted sound pressure level (dBA) is the scale of measurement that is most effective in measuring noise at a community level. The A-scale approximates the frequency response of the average ear when listening to most ordinary everyday sounds.

The limit to using decibels as the basic measurement of sound is that decibels represent a rough connection between the physical intensity of sound and its perceived loudness to the human ear. For example, a 10-decibel increase in sound level is perceived by the human ear as only doubling of the loudness of the sound. Ambient sounds in the urban environment generally range from 30 dBA (very quiet) to 100 dBA (very loud).

The time of day can also play a significant role in how people perceive noise. Noise typically is more bothersome at night than during the daytime because the ambient noise level is generally lower at night.

The duration of a sound also affects how someone perceives noise, or how much of a nuisance it may be to them. A certain level of noise may be acceptable depending on the duration experienced by someone. For example, a truck passing by may be more tolerable than the noise made by a long train. Measures of noise exposure have been developed to consider not just the A-level variation of noise but also the duration of the disturbance. That is where the Community Equivalent Noise Level, or CNEL, comes into play.

Community Noise Equivalent Level (CNEL)

The CNEL measurement weights the average noise levels for the evening hours (7:00 p.m. to 10:00 p.m.) by increasing them by 5 dB and weights the average noise levels for the nighttime hours (10:00 p.m. to 7:00 a.m.) by increasing them by 10 dB. The daytime noise levels are combined with these weighted levels and are averaged to obtain a CNEL value.

Effects of Noise on People

In general, noise may affect the average individual through hearing loss, obstruction with oral communication, and by interfering with sleep. The ability to understand speech is increasingly difficult when sound exceeds 60 dBA. Sound levels exceeding 40 to 45 dBA can impact sleeping habits within a residence.

Prolonged sound exceeding 85 dBA may result in temporary or even permanent hearing loss. State and federal safety and health regulations protect workers at levels of exposure that exceed 90 dBA for an eight-hour workday.

Noise/Land Use Compatibility Standards

In California and Lake Elsinore specifically, a CNEL of 65 dBA is used as a standard for maximum outdoor noise levels in residential areas.

Particularly sensitive land uses—also called sensitive receptors—include residences, schools, libraries, religious buildings, hospitals, and nursing homes. In addition, parks, golf courses, and other outdoor activity areas can be sensitive to noise disturbances. Commercial and industrial uses, conventional hotels and motels, playgrounds and neighborhood ballparks, and other outdoor spectator sport arenas are less sensitive to noise. Least sensitive to noise are heavy commercial and industrial uses, transportation, communication, and utility land uses.

Land use decisions and the development review process are ways to minimize noise impacts on sensitive land uses. Noise compatibility may be achieved by not locating conflicting land uses adjacent to one another and by incorporating buffers and noise control techniques in the overall site design process. This can be achieved by integrating increased setbacks, dense landscaping, building transitions, walls, and building construction techniques. Table PSNAQ-5 illustrates the ranges of allowable exterior noise levels for various land uses in Lake Elsinore and range of allow interior noise levels for multifamily residential. See City of Lake Elsinore Chapter 17.176 Noise Control for additional information.

Table PSNAQ-5: Noise and Land Use Compatibility

Receiving Land Use Category	Time Period	Noise Level (dBA)
Exterior Noise Limits (Not to be exceeded more than 30 minutes in any hour)		
Single Family Residential	10:00 p.m. to 7:00 a.m.	40
	7:00 am to 10:00 p.m.	50
Multiple Dwelling Residential	10:00 p.m. to 7:00 a.m.	45
	7:00 am to 10:00 p.m.	50
Limited Commercial and Office	10:00 p.m. to 7:00 a.m.	55
	7:00 am to 10:00 p.m.	60
General Commercial	10:00 p.m. to 7:00 a.m.	60
	7:00 am to 10:00 p.m.	65
Light Industrial	Anytime	70
Heavy Industrial	Anytime	75
Interior Noise Standards (Not to be exceeded for more than 5 minutes in any hour; or noise standard plus 5 dBA for a cumulative period of more than 1 minute in any hour; or noise standard plus 10 dBA or the maximum measure ambient for any period of time		
Multifamily Residential	10:00 p.m. to 7:00 a.m.	35
	7:00 am to 10:00 p.m.	45

Baseline and Future Noise Environments

As noted above, I-15 and SR-74 represent the dominant community noise sources, along with the arterial roadways.

Since the primary contributor to noise is traffic, noise contours for baseline (2025) and projected future conditions were developed based on the traffic volumes included in the General Plan traffic study and used the Traffic Noise Model lookup tables developed by the Federal Highway Administration.

Managing the Noise Environment

Lake Elsinore will address noise issues by making wise land use decisions. Site development plans and proposed land uses will consider how roadway and localize noise impacts properties. Reviewing each project at the time it is proposed will help assure impacts can be minimized. Project design mitigation, simple and sophisticated technical fixes, and acoustical barriers will be applied to each project to address noise.

In areas near the I-15 and arterial roadways, site planning and design standards provide direct and integrated noise impact mitigation. Applied mitigation measures include the use of buffer zones consisting of earthen berms, walls, and landscaping between sensitive land uses and roadways and other noise sources. In addition, site planning and building orientation can provide shielding of outdoor living spaces, and orient operable window away from roadways. Effective acoustical materials can also be incorporated into building windows and walls, which adequately reduce outdoor noise.

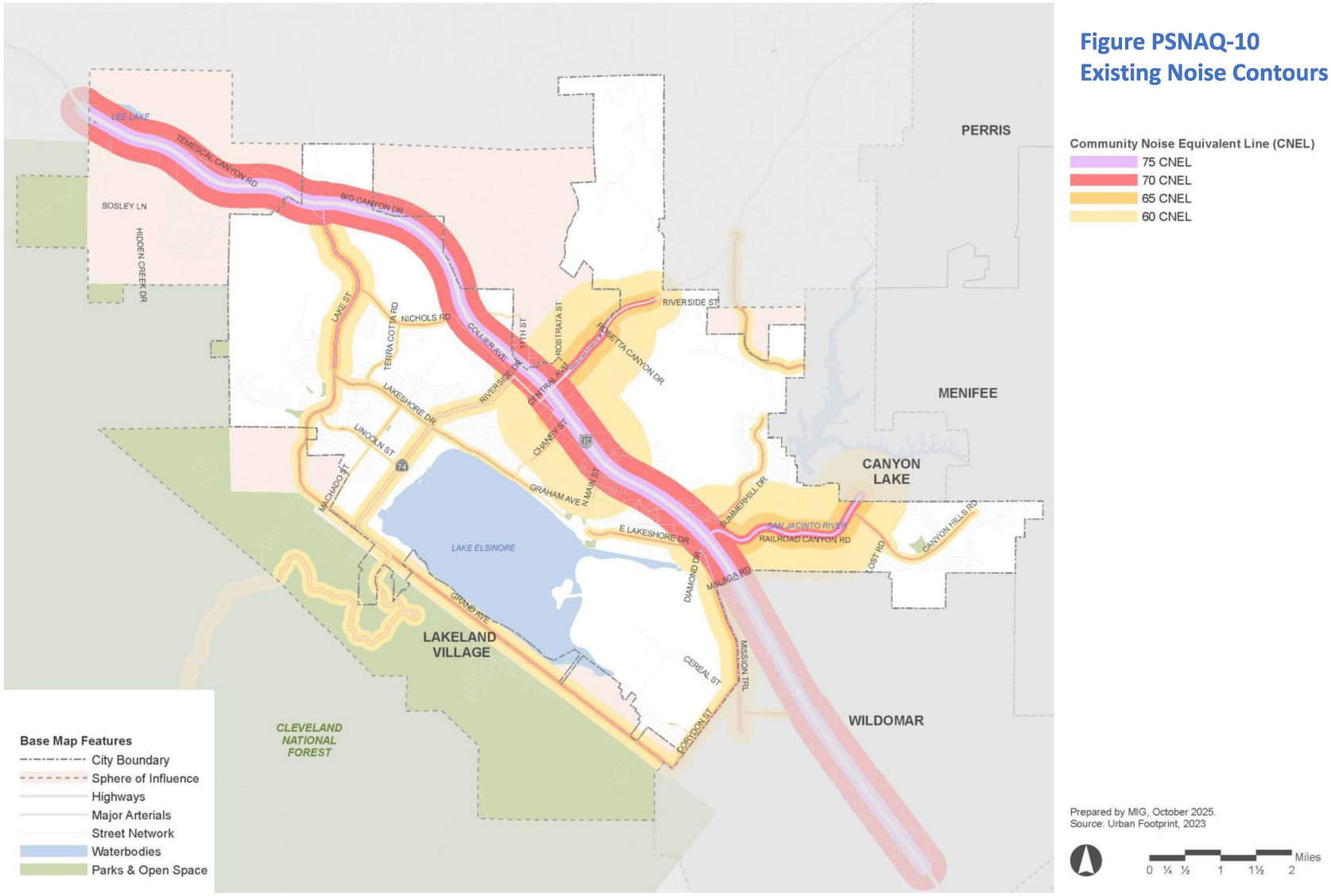


Figure PSNAQ-10
Existing Noise Contours

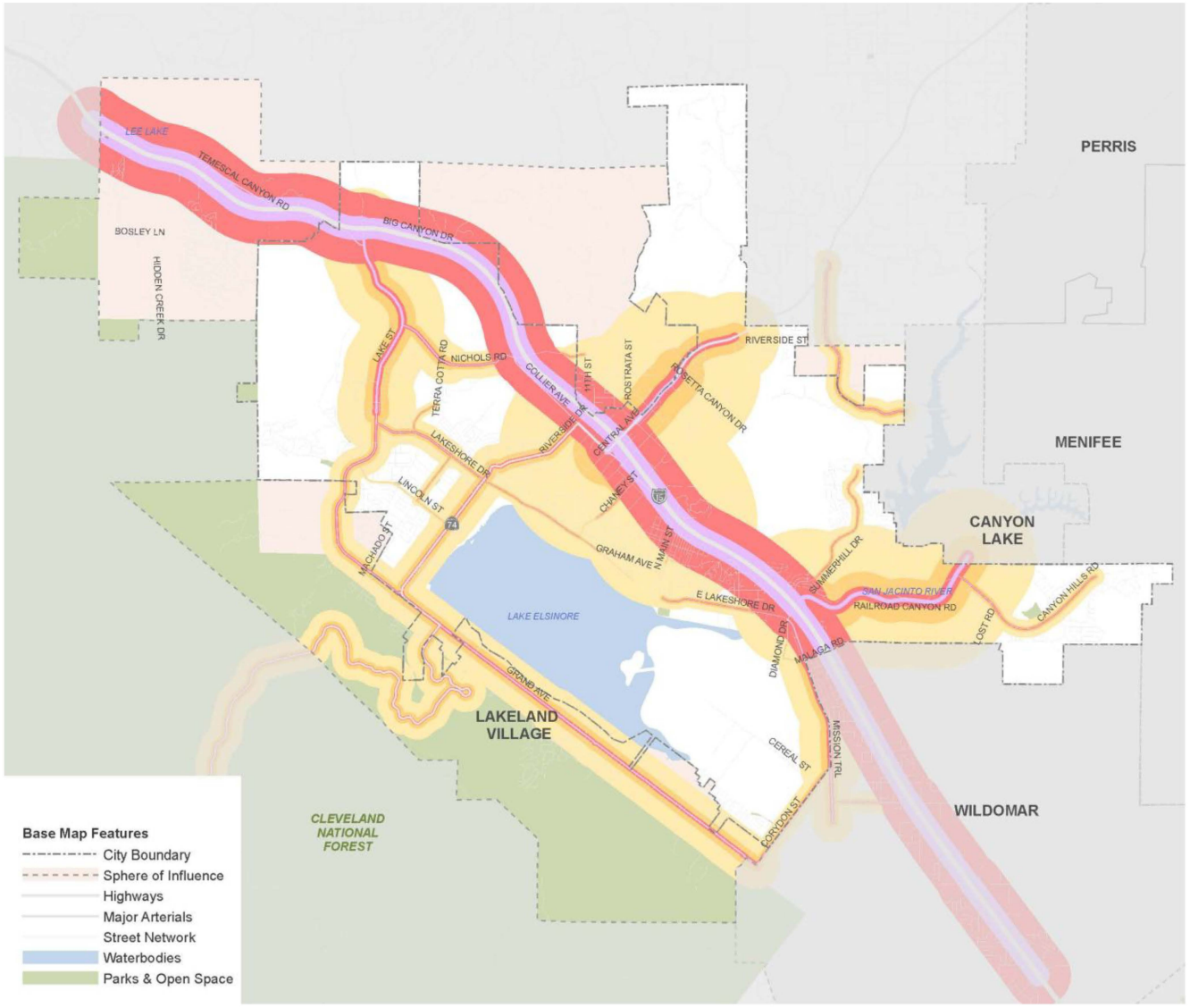


Figure PSNAQ-11
Future Noise Contours

Noise Goal and Policies

GOAL PSNAQ-12: COMMUNITYWIDE NOISE LEVELS THAT ALLOW RESIDENTS TO ENJOY QUIET NEIGHBORHOODS AND OUTDOOR ACTIVITIES

Policy PSNAQ-70: Maintain and enforce the City's Noise Ordinance to protect the health and comfort of people living, working, going to school, and recreating in Lake Elsinore.

Policy PSNAQ-71: Minimize new residential or other noise-sensitive land use development in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce outdoor activity area noise levels to a "normally acceptable" community noise equivalent level (CNEL).

Policy PSNAQ-72: Separate and buffer major roadways and significant noise-generating stationary sources from noise-sensitive land uses such as residences, care facilities, schools, and hospitals.

Policy PSNAQ-73: Control, at their sources, any sounds that exceed accepted community noise levels.

Policy PSNAQ-74: Proactively plan for noise for new community-serving land uses in appropriate areas such as music, theater, sports, and other entertainment activities.

Implementing Programs for Goal PSNAQ-12

Building, Municipal, and other Code Updates

PRO-PSNAQ-121: Update the Noise Ordinance to:

- Require industrial uses and trucking-related uses to incorporate buffers that maintain acceptable noise levels for surrounding uses and areas;
- Add conditions that would allow for temporary increases in noise in certain locations, such as downtown, mixed-use areas, construction zones, and areas near rail lines, to facilitate and encourage entertainment uses;
- Include design measures such as buffers and barriers or other abatement procedures;
- Regulate the use of sound-amplifying equipment to prevent impacts on sensitive receptors; and
- Identify noise mitigation measures and other strategies to support the establishment, growth, and/or continuation of music, sports, and entertainment venues.

PRO-PSNAQ-122: Consider updating the Municipal Code to encourage new development to provide buffers other than sound walls and allow sound walls when other techniques would

not prevent projected noise levels from exceeding adopted land use compatibility standards.

Review Process

PRO-PSNAQ-123: Consider noise impacts as part of the development review process, particularly the location of parking, recreational activities, crowd noises, ingress/egress/loading, and refuse collection areas relative to surrounding residential development and other noise-sensitive land uses.

PRO-PSNAQ-124: Require industrial uses and trucking-related uses to incorporate buffers that maintain acceptable noise levels for surrounding uses and areas.

PRO-PSNAQ-125: Require acoustical studies prepared by qualified acoustical consultants in accordance with Municipal Code standards.

PRO-PSNAQ-126: Require development projects to:

- reduce noise exceeding normally acceptable levels unless the activities are specifically exempted by the City Council, on the basis of community health, safety, and welfare, such as emergency medical vehicles, helicopters, and sirens; and
- implement measures to reduce noise and vibration impacts primarily through site planning, and avoid engineering solutions for noise and vibration mitigation, such as sound walls, if possible.

Ongoing Processing and Procedures

PRO-PSNAQ-127: Use the Federal Transit Administration's construction noise and vibration thresholds as applicable to assess impacts to surrounding land uses and identify measures during the project approval process to ensure the threshold is met prior to project approval.

PRO-PSNAQ-128: Consider ways to reduce roadway noise to normally acceptable levels in areas where noise standards may otherwise be exceeded (e.g., where homes front regional/arterial streets and in areas of mixed-use development).

Ongoing Collaboration and Consultation

PRO-PSNAQ-129: Work with:

- Private parties to reduce or eliminate noise exceeding allowed levels from industrial and commercial sources that impact nearby residential areas; and
- Caltrans to evaluate and develop traffic noise mitigation programs along SR-74 and I-15.



Implementation

In This Section

Introduction

Implementation Tables IM-1 through IM-7

Introduction

This Implementation Plan will guide the City Council; Commissions and Committees; and staff in their efforts to put the General Plan goals and policies into action. The purpose of the Implementation Plan is to translate the overall direction set forth in the General Plan Update from general terms to specific actions, in a clear and traceable manner.

The City Council, by relating each program in the Implementation Plan to the policies of the General Plan, recognizes the importance of linking long-range planning considerations, budgeting, and day-to-day activities. Each implementation program is a procedure, plan, or study that requires City action, either alone or in collaboration with non-City organizations and/or State and federal agencies. Some of the implementation programs are processes or procedures that the City currently administers on a day-to-day basis, while others identify new programs, procedures, or projects.

The Implementation Programs are individually listed within Table IM-1 through IM-6 with detailed information, including the recommended time frame of completion and the responsible City departments. Completion of the identified programs will be subject to funding constraints. Programs may be implemented prior to the timeframes, as appropriate and desired.

This Implementation Plan should be updated annually with the budget process and whenever the Lake Elsinore General Plan is amended or updated to ensure continued consistency and usefulness. Updates to the Implementation Plan to reflect progress do not necessarily constitute amendments to the General Plan.

Table IM-1: Implementation Programs: Zoning Code and Map Updates

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-LUCC-1: Review and revise the Zoning Code and Subdivision Ordinance.	◆				
Responsible Department(s) — Planning and Engineering					
PRO-LUCC-2: Create a Community Benefits Program.	◆				
Responsible Department(s) — Planning					
PRO-MI-1: Update the Zoning Code to allow for alternative energy infrastructure and urban greening structures.	◆				
Responsible Department(s) — Planning					
PRO-HCTCR-1: Consider the potential impacts of lot subdivisions, urban lot splits, and development applications on historical and cultural sites. Develop objective design standards and development standards, as appropriate.	◆				
Responsible Department(s) — Planning					
PRO-HCTCR-2: Update the zoning code to encourage compatible new development of and near buildings, structures, sites, districts, and landscapes with historic designations to maintain the historic building pattern and neighborhood character, and to ensure limited physical and visual impact to existing historic resources and within older neighborhoods.	◆				
Responsible Department(s) — Planning					
PRO-HCTCR-3: In consultation with culturally affiliated Tribal governments, develop procedures governing the Tribal Cultural Resources Land Use Overlay ("TCR Overlay"), which shall: • Address land known to contain Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, including sacred lands listed or identified on the Native American Heritage Commission (NAHC) Sacred Lands File (SLF), and Páayaxchi; • Address lands that have a reasonable potential to contain Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources based on tribal traditional knowledge, ethnographic information, oral history, historical information, including historical maps and waterways, archaeological data, including site records and studies/reports, biological	◆				

Table IM-1: Implementation Programs: Zoning Code and Map Updates

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
information, including cultural plants, topographic and land features, or other substantial evidence; • Specify applicability to all land use development processes for projects located within the TCR Overlay, including establishing referral triggers; • Provide review procedures for projects/properties located within the TCR Overlay boundary; • Provide for early tribal engagement and consultation to support the early identification of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources; • Establish additional consultation, evaluation and mitigation criteria for projects within the TCR Overlay boundary, including but not limited to, long-term management and voluntary co-management with consulting Culturally Affiliated Tribal governments; • Implement an avoidance evaluation and consideration process that examines avoidance measures, to the extent feasible, when requested by a consulting Tribe, in order to preserve-in-place or minimize significant adverse impacts to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources; • Include confidentiality requirements for the protection of sensitive resources and information identified within the TCR Overlay; and • Establish enforcement mechanisms to ensure compliance with all City requirements. The TCR Overlay shall be implemented within two to three (2-3) years following adoption of the 2026 General Plan Update. The TCR Overlay may be periodically reviewed and updated in consultation with the Culturally Affiliated Tribal governments, as needed. This program implements Policy HCTCR 2-12.					
Responsible Department(s) | Planning					
PRO-EJ-1: Update the Zoning Code/Map to: • Require health risk assessments (HRA) for nonresidential projects of 100,000 square feet or more to identify and address any potential negative health implications of the project • Require an HRA for new industrial or warehousing development projects that (1) have the potential to generate 100 or more diesel truck trips per	◆				

Table IM-1: Implementation Programs: Zoning Code and Map Updates

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and (2) are within 1,000 feet of a sensitive land use or DAC. The operational HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and SCAQMD, as appropriate. If the operational HRA shows that the incremental cancer risk exceeds 10 in a million, the noncancer hazard index of 1.0, or the thresholds as determined by SCAQMD, require the project applicant to identify and demonstrate measures that can reduce potential cancer and noncancer risks to acceptable levels • Require residential and/or other sensitive land use applicants (e.g., hospitals, nursing homes, day care centers) to implement the best practices identified by the SCAQMD • Require new development provide on-site and off-site bioswales • Designate acceptable and unacceptable areas for industrial uses and freight trucking and/or diesel truck idling to limit impacts on DACs already overburdened by air pollution • Streamline permitting for farmers markets, cottage food sales, and mobile food trucks selling healthy food in all Lake Elsinore areas, including non-residential • Establish a "health and medical center" district • Consider adopting development standards to allow small-scale produce markets or corner grocery stores in residential districts, enabling the small-scale vendors to sell fresh produce and healthy foods in the DAC.					
Responsible Department(s) | Planning					
PRO-COSP-1: Update the Zoning Code/Map to: • Encourage preservation of continuous open space that promotes movement of wildlife, such that wildlife corridors are maintained and/or reestablished; • Require new development to maintain an adequate setback from waterways to recognize the 100-year flood elevation at a minimum; • Require new development to be electric vehicle charging ready, at a minimum; • Facilitate the installation of electric vehicle charging infrastructure; and	◆				

Table IM-1: Implementation Programs: Zoning Code and Map Updates

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
• Require new development to install electric vehicle charging infrastructure beyond the minimum State requirements.					
Responsible Department(s) — Planning					
PRO-COSP-70: Require new commercial development to provide public access to the Lake at destination spots such as Downtown.	◆				
Responsible Department(s) — Planning					
PRO-COSP-71: Require new development to provide open space preservation areas and connections as identified in the natural resources section.	◆				
Responsible Department(s) — Planning					
PRO-COSP-72: Consider requiring public access easements along the shoreline and to the shoreline from public rights-of-way.	◆				
Responsible Department(s) — Planning and Engineering					
PRO-COSP-87: Develop guidelines for commercial and mixed-use development projects to incorporate accessible plazas, paseos, and other public spaces into project design.	◆				
Responsible Department(s) — Planning					
PRO-COSP-89: Amend the Zoning Ordinance to allow for front yard urban gardens.	◆				
Responsible Department(s) — Planning					
PRO-COSP-89: Consider developing objective design standards for hillside development.	◆				
Responsible Department(s) — Planning					
PRO-PSNAQ-1: Ensure adequate land is provisioned for emergency service, public safety, and medical facilities.	◆				
Responsible Department(s) — Planning					

Table IM-1: Implementation Programs: Zoning Code and Map Updates

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-61: Audit and amend development regulations to ensure critical facilities are not located in an area identified in the General Plan as a hazard area.	◆				
Responsible Department(s)	Planning				
PRO-PSNAQ-71: Update the zoning code to encourage new residential development occurs in areas outside VHFHSZs.	◆				
Responsible Department(s)	Planning				
PRO-PSNAQ-93: Update the Lake Elsinore Zoning Code to: • Establish site design standards that require new developments within the floodplain fringe to preserve and enhance existing native riparian habitat; • Reduce the risk of flooding by creating floodway setbacks for greenways, trails, and recreation areas and by prohibiting development within the floodways; and • Require site drainage features that reduce impermeable surface area, increase surface water infiltration, and minimize surface water runoff during storm events onsite.	◆				
Responsible Department(s)	Planning and Engineering				

Table IM-2: Implementation Programs: Building, Municipal, and Other Code Updates

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-LUCC-3: Update the building code in accordance with best practices to address structure degradation due to climate change.			◆			
Responsible Department(s)	Building & Safety					
PRO-HCTCR-4: Establish development standards and/or guidelines to encourage the preservation of materials, such as historic windows, doors, siding, and trim, for potential reuse, as feasible when historic buildings are improved, expanded, or renovated.			◆			
Responsible Department(s)	Planning and Building & Safety					
PRO-EJ-2: Continue to designate acceptable and unacceptable areas for industrial uses and freight trucking and/or diesel truck idling to limit impacts on DACs already overburdened by air pollution.		◆				
Responsible Department(s)	Planning					
PRO-COSP-2: Update local codes to: • Encourage the use of locally propagated native plants and climate-appropriate landscaping to reduce overall water demand and soil erosion; • Control invasive and non-native vegetation in natural open spaces; • Periodically update the City's surface mining reclamation ordinance to ensure the City's ordinances reflect the most current SMARA requirements; • Incentivize building owners to upgrade residential appliances, including water and space heaters, to increase energy efficiency and reduce GHG emissions; • Increase the use of low-carbon construction materials; and • Require all new electric vehicle (EV) chargers installed by the City to have bi-directional charging capabilities. Encourage private property owners to select EV chargers with bi-directional charging capabilities when installing EV chargers on their properties.			◆			
Responsible Department(s)	Planning					

Table IM-2: Implementation Programs: Building, Municipal, and Other Code Updates

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-3: Evaluate and adopt changes to the building code or other municipal codes and policies to decarbonize the building stock while also maximizing energy efficiency.		◆				
Responsible Department(s)	Building & Safety					
PRO-COSP-4: Require new infrastructure (bridges, culverts, fences) to incorporate wildlife-friendly features, and limit artificial lighting in and shining on open space and natural corridors.		◆				
Responsible Department(s)	Engineering					
PRO-COSP-5: Require new development adjacent to open space, storm drainage infrastructure (including washes and channels) to include ecological corridors and buffers.		◆				
Responsible Department(s)	Planning and Engineering					
PRO-COSP-90: Consider modifying the existing grading ordinance to include contour grading or other methods and concepts that protect and enhance steep slopes, and include enforcement procedures and appropriate access.			◆			
Responsible Department(s)	Engineering					
PRO-PSNAQ-72: Update building and development codes to ensure standards for fire protection for new development in SRAs or VHFHSZs meet or exceed the statewide minimums in the SRA Fire Safe Regulations.		◆				
Responsible Department(s)	Building & Safety					
PRO-PSNAQ-73: Update road/street standards to require new residential development within VHFHSZs to address resident evacuation, including identifying the location and direction of evacuation routes and at least two points of ingress and egress, as part of the development review process.		◆				
Responsible Department(s)	Engineering and Fire					

Table IM-2: Implementation Programs: Building, Municipal, and Other Code Updates

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-98: Update the Local Hazard Mitigation Plan to include mitigation strategies for severe weather and extreme temperatures.		◆			
Responsible Department(s) — Emergency Services					
PRO-PSNAQ-99: Audit and update existing building codes and construction standards to ensure they require climate-resilient infrastructure, such as flood-resistant buildings, energy-efficient designs, and heat-reflective materials.		◆			
Responsible Department(s) — Building & Safety					
PRO-PSNAQ-100: Require the passive solar design of projects to address the possible effects of extreme heat events, such as requiring shade trees and shade shelter areas, shaded playgrounds, bus shelters, and placement of structures that account for proper sun exposure to reduce the heat within structures.	◆				
Responsible Department(s) — Planning					
PRO-PSNAQ-121: Update the Noise Ordinance to: • Require industrial uses and trucking-related uses to incorporate buffers that maintain acceptable noise levels for surrounding uses and areas; • Add conditions that would allow for temporary increases in noise in certain locations, such as downtown, mixed-use areas, construction zones, and areas near rail lines, to facilitate and encourage entertainment uses; • Include design measures such as buffers and barriers or other abatement procedures; • Regulate the use of sound-amplifying equipment to prevent impacts on sensitive receptors; and • Identify noise mitigation measures and other strategies to support the establishment, growth, and/or continuation of music, sports, and entertainment venues.		◆			
Responsible Department(s) — Planning					

Table IM-2: Implementation Programs: Building, Municipal, and Other Code Updates

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-122: Consider updating the Municipal Code to encourage new development to provide buffers other than sound walls and allow sound walls when other techniques would not prevent projected noise levels from exceeding adopted land use compatibility standards.		◆			
Responsible Department(s)	Planning and Engineering				

Table IM-3: Implementation Programs: Review Process

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-LUCC-4: Examine the current plan review, permitting, and design review processes to ensure development in areas designated for mixed use and nonresidential use are consistent with the character outlined in this General Plan.	◆				
Responsible Department(s) — Planning					
PRO-LUCC-5: Work with project applicants, developers, landowners, financial institutions, and others to provide unique opportunities for urban recreation, such as multi-story structures with rooftop theaters, fields, green roofs, gardens, etc.					◆
Responsible Department(s) — Planning					
PRO-LUCC-6: Continue to conduct development applications review, which includes Planning, Engineering, Public Works, Police, and Fire reviews.					◆
Responsible Department(s) — Planning					
PRO-LUCC-7: Require development projects subject to discretionary approval to assess potential construction noise impacts and noise associated with on-going operations on nearby sensitive uses and to minimize impacts on those uses.					◆
Responsible Department(s) — Planning					
PRO-LUCC-8: Prioritize parkland or similar property dedication over impact fees within the park dedication ordinance, Parks Master Plan, or other parks planning programs. Perform nexus studies regularly to update the criteria and fees. Include provisions that prevent a net loss of park space in the city.					◆
Responsible Department(s) — Planning and Recreation					
PRO-LUCC-9: Incentivize the creation of public plazas and public urban spaces near larger residential and mixed-use developments and in underutilized parking areas within existing commercial centers. Use the community benefit structure for mixed-use and commercial areas along to create public plazas, paseos, and other urban recreation amenities, which can provide opportunities for social gathering and passive recreation in a built-out urban area. These open spaces can include hardscaped and landscaped areas, seating, and landmarks. Public plazas can be programed with "pop up" recreation programs and regularly scheduled events such as farmers' markets and festivals.					◆

Table IM-3: Implementation Programs: Review Process

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Planning					
PRO-LUCC-10: Support the transformation or enhancement of creeks, streams, flood corridors into greenways that foster trails, groundwater recharge and stormwater management, and wildlife connections throughout the community.						◆
Responsible Department(s)	Planning and Engineering					
PRO-LUCC-11: Support urban agriculture and community gardens.						◆
Responsible Department(s)	Planning					
PRO-MI-2: Through the development review process, require: • Water supply, wastewater, and storm drainage capacity and infrastructure to be in place prior to new development occupancy; • Development projects to provide water efficient landscaping; • New development to underground utilities; • LID and other storm drainage best practices; • Telecommunications, electrical, and other infrastructure facilities to be designed in a manner that reflects the neighborhood's character; • Trail connections and development as part of development project approvals; • New developments to reduce VMT, including incentives for carpooling, transit use, active transportation, parking credits, etc, and target major land use developments, especially those with 100 or more employees; • Future industrial developments to provide adequate truck parking to limit spillover on City streets; • Future developments to evaluate emergency vehicle access through CEQA evacuation impact assessments for projects within high-fire severity zones or for projects that could affect existing emergency access to developments in high-fire severity zones; and • Land use and infrastructure projects to perform transportation impact studies consistent with CEQA and requirements of SB 743; consider implementation of TDM measures in place of infrastructure improvements to offset LOS deficiencies, managed by the Planning and Public Works Departments.						◆
Responsible Department(s)	Planning and Engineering					

Table IM-3: Implementation Programs: Review Process

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-MI-3: Promote modes other than single occupants by requiring TDM plans for projects with greater than 50 employees.					◆
Responsible Department(s) — Planning and Engineering					
PRO-MI-4: Implement measures to mimic or improve the pre-development water balance through infiltration, evapotranspiration, and capture and reuse of stormwater.					◆
Responsible Department(s) — Planning and Engineering					
PRO-HCTCR-5: Require projects proposed in areas identified as "High" or "Undetermined" for paleontological resources to hire certified paleontologist to perform a literature search and/or survey and apply the relevant treatment for the site as recommended by the Society of Vertebrate Paleontology.					◆
Responsible Department(s) — Planning					
PRO-HCTCR-6: Require project applicants to conduct and submit, as part of the application process, detailed results from records searches of the California Historical Resources Information System (CHRIS), the Native American Heritage Commission (NAHC) Sacred Lands File (SLF), the State Historic Preservation Officer (SHPO), and other applicable registers to determine whether the project area contains recorded Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources.					◆
Responsible Department(s) — Planning					
PRO-HCTCR-7: Work with project applicants and consulting Tribes to incorporate feasible preservation strategies into project planning and design to protect Tribal Cultural Resources, Historic Properties, and Unique Archaeological Resources. Such strategies may include, without limitation, project redesign, site planning adjustments, clustering, reduced or controlled grading, modified setbacks, designation of passive open space areas, restrictive covenants or conservation easements, flexible development standards, density transfers, incentives, variances, and other land use planning tools or mechanisms intended to avoid or reduce impacts to Tribal Cultural Resources, Historic Properties, and Unique Archaeological Resources, consistent with CEQA applicable land-use laws.					◆
Responsible Department(s) — Planning					

Table IM-3: Implementation Programs: Review Process

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-HCTCR-8: Consider the impacts of climate change, erosion, flooding, wildfire, and other environmental conditions on Tribal Cultural Resources, Historic Properties, and Unique Archaeological Resources, and implement appropriate preservation and preventative measures, such as dust barriers and erosion control measures.					◆
Responsible Department(s)	Planning				
PRO-HCTCR-9: Provide Tribes with all relevant and available City-held documentation for the proposed project area prior to tribal consultation, including, without limitation, reports, maps, prior development and site plans, environmental documents, grading information, subsurface testing results, and any relevant prior project approvals including mitigation measures and conditions of approval.					◆
Responsible Department(s)	Planning				
PRO-HCTCR-10: Continue to require project areas found to contain significant archaeological resources (as defined in California Public Resources Code Section 21083.2) be examined by a registered professional archaeologist, and as required, State and/or federal agencies, and consulting Tribes, consistent with all applicable tribal consultation requirements.					◆
Responsible Department(s)	Planning				
PRO-HCTCR-11: Engage in meaningful consultation with interested individuals, historic resources groups, and culturally affiliated Tribes to determine if identified significant cultural resources, Tribal Cultural Resources (TCRs) or Historic Property Traditional Cultural Places (TCPs) are eligible for inclusion in the National Register of Historic Places, the California Register of Historic Places or local historic registries.					◆
Responsible Department(s)	Planning				
PRO-HCTCR-12: The City shall notify and provide consulting Tribes the opportunity to participate in archaeological work including, but not limited to, surveys, testing programs including Phase I, Phase II, Phase III and Cultural Resources Management Plan (CRMP) activities, subject to confidentiality protections, professional standards, safety requirements and project-specific conditions. Consulting Tribes shall also be invited to participate in the preparation and review of all documents concerning archaeological work and investigations. All reports,					◆

Table IM-3: Implementation Programs: Review Process

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
program documents, testing plans, filed methodologies, treatment plans and on-site protocols shall be prepared by registered professional archaeologists in coordination with consulting Tribes. The City shall develop procedures for inclusion in the Guidelines (Policy HCTCR-21; Program HCTCR-14) establishing how tribal input will be incorporated into archaeological work plans, field methodologies, reporting and treatment measures. Phase I and Phase II investigations shall be conducted and documented as separate processes. The City will retain final authority to determine report adequacy and required project mitigation and conditions.						
Responsible Department(s)	Planning					
PRO-EJ-3: Prepare streamlined permitting process for full-service grocery stores in DACs.		◆				
Responsible Department(s)	Planning					
PRO-EJ-4: Require applicants for residential remodel and rehabilitation projects to remediate environmental health hazards, such as lead-based paint, mold, mildew, and asbestos, as a condition of approval.						◆
Responsible Department(s)	Building & Safety and Code Enforcement					
PRO-COSP-6: Impose conditions, as necessary, on mining operations to minimize or eliminate the potential adverse impact of mining operations on surrounding properties and the environment.						◆
Responsible Department(s)	Planning and Engineering					
PRO-COSP-7: Require the reuse and recycling of existing aggregate construction material for new residential, commercial, and industrial development.						◆
Responsible Department(s)	Planning and Engineering					
PRO-COSP-8: Ensure that natural wetlands are observed, floodway regulations are followed, and measures are taken to address possible conflicts because of mining.						◆
Responsible Department(s)	Planning, Engineering, and Public Works					

Table IM-3: Implementation Programs: Review Process

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-9: Require all new trails, trailheads, conservation signage, interpretive centers, and maintenance facilities established within MSHCP Conservation areas to follow the MSHCP's Guidelines for the Siting and Design of Trails and Facilities.						◆
Responsible Department(s)	Planning					
PRO-COSP-10: Require a qualified biologist to prepare a biological resource assessment (BRA) for proposed development on sites that may support or have the potential to affect special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat prior to, during, and after project construction. The BRA shall be prepared to address conformance with all applicable federal, state, and local regulations and protocols.						◆
Responsible Department(s)	Planning					
PRO-COSP-11: Require that construction or other ground disturbing activities that may affect bird nests or nesting habitat avoid nests of native birds when the nest is in active use by implementing protection measures specified by a qualified ornithologist or biologist to ensure compliance with the California Fish and Game Code and federal Migratory Bird Treaty Act. If demolition, construction, ground disturbing, or tree removal/pruning activities occur during the nesting season (February 1 and August 31), preconstruction surveys shall be conducted by a qualified ornithologist or biologist and approved by the City prior to issuance of building permits. Preconstruction surveys are not required for construction, ground disturbing, or tree removal/pruning activities outside the nesting season.						◆
Responsible Department(s)	Planning					
PRO-COSP-12: Require new development along waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for multiuse trails and recreation purposes and rewilding purposes.						◆
Responsible Department(s)	Planning					
PRO-COSP-13: Guide project applicants toward site planning, solar orientation, cool roofs, and landscaping that decrease summer cooling and winter heating needs.						◆
Responsible Department(s)	Planning					

Table IM-3: Implementation Programs: Review Process

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-14: Through the development review process, encourage: • Planting of native plants to enhance the scenic setting of public and private lands; • Development design and construction to be lower than ridgelines; • Development design to provide public views of local ridgelines and Lake Elsinore; • Dedication of open space land in hillside development proposals to preserve and enhance view opportunities from transportation corridors and surrounding development; and • New development and redevelopment to incorporate views of Lake Elsinore from roadways and other public spaces.					◆
Responsible Department(s)	Planning				
PRO-COSP-15: Require grading plans for any hillside development to include specifications for revegetation and new planting to minimize hillside scarring.					◆
Responsible Department(s)	Planning and Engineering				
PRO-COSP-16: Avoid isolated development in sensitive hillside areas that can create adverse visual impacts.					◆
Responsible Department(s)	Planning				
PRO-COSP-73: Require tree planting for all new development projects with trees that are climate appropriate, add quality and character to a site, and forward the City's climate adaptation goals.					◆
Responsible Department(s)	Planning and Engineering				
PRO-COSP-91: Encourage rooftop gardens; encourage the conversion of surface paving in parking lots with a surplus parking into pedestrian paseos and plazas in Uptown and Downtown.					◆
Responsible Department(s)	Planning and Engineering				

Table IM-3: Implementation Programs: Review Process

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-2: Require developers to provide evacuation routes consistent with the City's established emergency preparedness and evacuation plans when submitting subdivision development applications.						◆
Responsible Department(s)	Planning, Fire, and Engineering					
PRO-PSNAQ-3: Involve public safety officials in the review of development plans.						◆
Responsible Department(s)	Planning, Fire, and Police					
PRO-PSNAQ-4: Require new development projects to provide: • Two access routes; and • Adequate water supplies to meet the fire-suppression needs of the project without compromising existing fire suppression services to existing uses.						◆
Responsible Department(s)	Fire and Engineering					
PRO-PSNAQ-5: Require civic and other public places are adequately lighted. Public places include but not limited to parks, recreational facilities, City Hall, sidewalks/streets, plazas, paseos, and alleys.						◆
Responsible Department(s)	Planning, Engineering and Public Works					
PRO-PSNAQ-42: Critically review commercial and industrial uses that involve the use, storage, and transport of hazardous materials to determine the need for buffer zones or setbacks to minimize risks to homes, schools, community centers, hospitals, and other sensitive uses.						◆
Responsible Department(s)	Planning					
PRO-PSNAQ-43: Restrict future siting of businesses–including hazardous waste repositories, incinerators, or other hazardous waste disposal facilities–that use, store, process, or dispose of large quantities of hazardous materials or wastes in areas subject to seismic fault rupture or significant ground shaking.						◆
Responsible Department(s)	Planning					

Table IM-3: Implementation Programs: Review Process

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-44: Require vegetation stabilization for disturbed land including phased construction projects.						◆
Responsible Department(s)	Planning and Engineering					
PRO-PSNAQ-45: Require that fire and emergency personnel can easily access routes needed for response to spill incidents.						◆
Responsible Department(s)	Fire, Sheriff, and Engineering					
PRO-PSNAQ-62: Require projects in areas susceptible to liquefaction, landslides, and other geologic hazards demonstrate that appropriate engineering and planning mitigations have been implemented.						◆
Responsible Department(s)	Planning and Engineering					
PRO-PSNAQ-74: Require special on-site fire protection measures, such as the installation of fire hydrants providing adequate fire flow and fire sprinkler or suppression systems, to be specified during project review for areas where wildfire hazards potential exists, specifically hilly areas with slopes of 10 percent or greater, access problems, lack of water or sufficient pressure, and/or excessively dry brush.						◆
Responsible Department(s)	Fire and Planning					
PRO-PSNAQ-75: Ensure properties in high-risk areas are equipped with an adequate water supply for firefighting, including water storage and pressure requirements.						◆
Responsible Department(s)	Fire and Planning					
PRO-PSNAQ-76: Require landscape design in new residential developments. Require the use of fire-resistant landscaping techniques in new development, especially in areas with dry brush and heavy vegetation.						◆
Responsible Department(s)	Planning					

Table IM-3: Implementation Programs: Review Process

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-77: Require new developments adhere to California Government Code sections 51175 to 51189 related to VHFHSZs, all requirements in the California Building Code and California Fire Code, and the Board of Forestry and Fire Protection Fire Safe Regulations.						◆
Responsible Department(s)	Fire and Building & Safety					
PRO-PSNAQ-78: Require and enforce the installation of fire protection water system standards for all new construction projects within VHFHSZs, including the installation of fire hydrants providing adequate fire flow, fire sprinkler, or suppression systems. Add the standards zoning and/or building code and required as part of the development application process.						◆
Responsible Department(s)	Fire, Building & Safety, and Planning					
PRO-PSNAQ-79: Require new development within VHFHSZs to include a fire protection plan that addresses landscape/fuel modification installation, incorporates open areas to complement defensible spaces, identifies possible refuge areas, and maps multiple ingress and egress routes. Add the standards to the zoning and/or building code and address as part of the development application process.						◆
Responsible Department(s)	Fire, Building & Safety, and Planning					
PRO-PSNAQ-80: Require new development within and adjoining VHFHSZs to prepare a roadside fuel reduction plan to prevent fires along public roads caused by vehicles.						◆
Responsible Department(s)	Fire					
PRO-PSNAQ-81: Require all structures redeveloped or rebuilt in the VHFSZs after a large fire to comply with building and fire codes in effect at the time of the re-development.						◆
Responsible Department(s)	Fire, Building & Safety, and Planning					

Table IM-3: Implementation Programs: Review Process

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-94: Evaluate development proposals against all FEMA regulations and use FEMA mapping during the environmental review process to ensure that flooding hazards are addressed and minimized, including placement of restrictions on development within designated floodplain areas.					◆
Responsible Department(s) — Planning and Engineering					
PRO-PSNAQ-101: Encourage the use of pavement materials designed to reflect solar energy, speed up evaporation, and otherwise stay cooler than traditional pavements.					◆
Responsible Department(s) — Engineering and Public Works					
PRO-PSNAQ-102: Encourage redundant power sources such as generators or renewable energy sources to help ensure power is available for increased power needs in heat events and to minimize blackouts.					◆
Responsible Department(s) — Planning					
PRO-PSNAQ-103: Support water-saving measures such as tiered water pricing, efficient irrigation systems, and rainwater harvesting to address drought risks and ensure sustainable water supply.					◆
Responsible Department(s) — Planning and Engineering					
PRO-PSNAQ-123: Consider noise impacts as part of the development review process, particularly the location of parking, recreational activities, crowd noises, ingress/egress/loading, and refuse collection areas relative to surrounding residential development and other noise-sensitive land uses.					◆
Responsible Department(s) — Planning					
PRO-PSNAQ-124: Require industrial uses and trucking-related uses to incorporate buffers that maintain acceptable noise levels for surrounding uses and areas.					◆
Responsible Department(s) — Planning					

Table IM-3: Implementation Programs: Review Process

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-125: Require acoustical studies prepared by qualified acoustical consultants in accordance with Municipal Code standards.					◆
Responsible Department(s)	Planning				
PRO-PSNAQ-126: Require development projects to: • reduce noise exceeding normally acceptable levels unless the activities are specifically exempted by the City Council, on the basis of community health, safety, and welfare, such as emergency medical vehicles, helicopters, and sirens; and • implement measures to reduce noise and vibration impacts primarily through site planning, and avoid engineering solutions for noise and vibration mitigation, such as sound walls, if possible.		◆			◆
Responsible Department(s)	Planning				

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-LUCC-12: Adopt, as appropriate, a Lake Elsinore Activation Master Plan (for the lake and recreation areas supporting the lake).			◆			
Responsible Department(s)	Lake and Community Operations					
PRO-LUCC-13: Prepare a facility management plan to provide adequate maintenance, rehabilitation, and modernization of parks and recreation facilities to ensure their long-term utility.				◆		
Responsible Department(s)	Recreation and Public Works					
PRO-LUCC-14: Develop and implement an urban forestry strategy to ensure preservation of existing trees and encourage planning of appropriate tree species throughout Lake Elsinore. Ensure the City has ready access to trained arborists or other experts who can implement Lake Elsinore's urban forestry strategies and programs.			◆			
Responsible Department(s)	Planning and Public Works					
PRO-LUCC-15: Create new urban recreation spaces in conjunction with roadway enhancements, street reconfigurations, and streetscape improvements.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-LUCC-16: Transform underutilized public right-of way and infrastructure into park space.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-LUCC-17: Develop and implement streetscape improvement plans for key streets leading into Uptown, Downtown, and other major arterials. Ensure streetscape standards support walkability while creating sense of places.			◆			
Responsible Department(s)	Engineering					
PRO-LUCC-18: Create new pedestrian and bicycle routes: • Linking Launch Pointe, the Lake's public access points, and Main Street; and						◆

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
• Linking residential areas, commercial centers, and employment centers to create new recreation and commuter options.						
Responsible Department(s)	Engineering					
PRO-MI-5: Develop active transportation projects through Active LE and Safe Systems for All projects to pursue for grant funding.						◆
Responsible Department(s)	Engineering					
PRO-MI-6: Establish mobility hubs near the Outlets at Lake Elsinore, Main Street [Downtown], and Uptown and other key destinations. Work collaboratively with local transportation organizations and Riverside Transit Authority.				◆		
Responsible Department(s)	Planning and Engineering					
PRO-MI-7: Evaluate the feasibility of microtransit in the City to supplement areas of Lake Elsinore that don't warrant fixed route service.			◆			◆
Responsible Department(s)	Engineering					
PRO-MI-8: Improve multimodal connections by providing secure bicycle parking at transit stops and mobility hubs, upgrading transit stop amenities, and providing clear wayfinding to support transfers between modes.						◆
Responsible Department(s)	Engineering					
PRO-MI-9: Strategically locate scooter- or electric bicycle charging and share stations in more densely populated areas including but not limited to Downtown, near high schools, and in tourist and commercial areas in coordination with safety education programs consistent with City electric bicycle regulations.						◆
Responsible Department(s)	Planning and Engineering					
PRO-MI-10: Continue to require development application projects of a certain size to conduct transportation impact studies that evaluate LOS and contribute toward future infrastructure improvements to meet LOS D or better conditions. Typically projects that warrant studies are those that add 50 or more peak hour trips to the circulation network, however, the City Traffic Engineer has the right to request focused studies as needed.						◆

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Engineering and Planning					
PRO-MI-11: Maximize efficiency and safety through innovative intersection and street designs. Evaluate infrastructure improvement options that maximize efficiency over cost, such as requiring projects to update traffic signal coordination, implement traffic signal infrastructure with adaptive signal timing, or integrate autonomous vehicles through Smart technology rather than widening roads, where feasible. In areas of high pedestrian activity, implement traffic calming treatments such as bulb-outs, raised crosswalks, lane narrowing, and roundabouts.						◆
Responsible Department(s)	Engineering					
PRO-MI-12: Establish a VMT program to minimize VMT.				◆		
Responsible Department(s)	Engineering					
PRO-MI-13: Provide separate routing and parking for trucks that minimizes noise/air impacts on sensitive areas and maintains a truck route map as outlined in Assembly Bill 98.			◆			
Responsible Department(s)	Engineering and Planning					
PRO-MI-14: Reduce conflicts with trucks through the separation between truck routes and bicycle or pedestrian facilities when planning new land use and infrastructure projects and through Active LE updates.						◆
Responsible Department(s)	Engineering and Planning					
PRO-MI-15: Manage public parking supply with time limits, incentives, and permits.			◆			
Responsible Department(s)	Engineering					
PRO-MI-16: Develop a citywide ITE Safe Systems for All Approach program aimed at eliminating fatal and serious mobility-related injuries, as outlined in Senate Bill 932 or subsequent legislation. Include an evaluation and recalibration process ensuring the ITE Safe Systems for All Approach is effective. Additionally, implement the Active Transportation Plan (ATP).			◆			
Responsible Department(s)	Engineering					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-MI-17: Create and maintain a High Injury Network program and mapping to improve safety, livability, and the overall quality of neighborhood streetscapes, aligning with broader design goals.		◆			
Responsible Department(s) — Engineering					
PRO-MI-18: Develop a citywide traffic calming program to incorporate strategies into the design, planning, and retrofit of new and existing neighborhoods.		◆			
Responsible Department(s) — Engineering					
PRO-MI-19: In partnership with logistics and goods delivery partners during commercial and industrial project development, consider requiring alternative fueling or charging stations.					◆
Responsible Department(s) — Planning and Engineering					
PRO-MI-20: Develop a citywide charging plan and network for automobiles, bicycles, scooters, and other modes of transportation.			◆		
Responsible Department(s) — Engineering and Planning					
PRO-MI-21: Create a program to ensure public and private charging facilities in the City are known (listed on key charging apps and in web search engines), that facilities are regularly maintained for damage and operation, and latest smart technology is utilized for charging efficiency (real time publishing of when the station is in use, what type of charging capacity is available (CHAdeMO, CCS, GB/T, etc) / Level 1, 2, or 3 service, allow charging reservations, and maximize charge times to prevent a single user monopolizing the charging station).			◆		
Responsible Department(s) — Engineering					
PRO-MI-22: Work with new mobility companies, such as Transportation Network Companies (TNC) or microtransit to fill gaps in first/last mile travel.					◆
Responsible Department(s) — Engineering					
PRO-MI-23: Develop a city policy or program that includes AV-oriented street design and parking facilities.			◆		
Responsible Department(s) — Engineering					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-MI-24: Encourage EVMWD to: • Develop a water supply alternatives plan that mitigates potential impacts of climate change, drought, and natural or human-caused catastrophic events by enhancing water supply resiliency and reliability; • Study the water system for rapid recovery and reliable/sufficient emergency water supply in the event of a disaster, such as decentralizing the water system, reducing water delivery during certain events, and developing a network of water distribution sites; and • Study existing water system and sewer system for backflow risks and work to prevent backflow in during a flooding event.			◆		
Responsible Department(s)	Engineering				
PRO-MI-25: Consider a multi-benefit "one water" approach for new capital projects to include stormwater quality (low-impact development features), flood mitigation, and increased groundwater recharge.			◆		
Responsible Department(s)	Engineering				
PRO-MI-26: Work with the RCFCD to develop and implement a greenway strategy looking to "green" urban waterways including flood control facilities.	◆				
Responsible Department(s)	Planning and Engineering				
PRO-MI-27: Identify and work with partners to address impacts from groundwater threats and solid waste.					◆
Responsible Department(s)	Engineering and Public Works				
PRO-MI-28: Identify solid waste and hazardous waste facilities that do not comply with standards for preventing contamination of air, water, and soil with hazardous waste, and work with owners to upgrade those facilities to meet those standards, prioritizing facilities in DACs.		◆			
Responsible Department(s)	Code Enforcement				
PRO-HCTCR-13: Identify and minimize obstacles for property owners of Historic Property Structures to support historic preservation, such as permit streamlining; proactive guidance for navigating historic preservation review; guidelines for					◆

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
appropriate modifications, expansions, and renovations of historic buildings, structures, and sites with potential historic significance and/or with historic designation.						
Responsible Department(s)	Planning and Building & Safety					

PRO-HCTCR-14: As permitted by the California Environmental Quality Act (CEQA) Guidelines Section 15169, and to implement City's Policy HCTCR-21, develop and maintain, in coordination with Culturally Affiliated Tribal governments, formal Tribal Cultural Resources and Tribal Consultation Guidelines ("Guidelines"), establishing clear, consistent, criteria, procedures and best practices that, at a minimum, address the following:
• Tribal consultation for the efficient evaluation and processing of land use development and subdivision applications;
• Identifies relevant and applicable Federal, State, regional, and local laws, policies, and guidelines that address impacts on Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources;
• Provide Tribes with all relevant and available City-held documentation for the proposed project area prior to tribal consultation, including, without limitation, reports, maps, prior development and site plans, environmental documents, grading information, subsurface testing results, and any relevant prior project approvals including mitigation measures and conditions of approval;
• Detailed tribal consultation steps and requirements, including timelines, communication procedures, confidentiality standards, and documentation practices, including, but not limited to:
  ○ Early tribal engagement during the planning, land use and development application review processes, as appropriate;
  ○ Regulatory framework governing Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources;
  ○ Situations where avoiding or minimizing significant adverse impacts to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources may be requested and considered as a part of the project design;
		◆ The italicized text in this program will be developed within three months of the General Plan's adoption. All other program components will be implemented in the 2026-2028 period.				

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
○ Carry out Tribal Cultural Resources compliance with other requirements of the California Environmental Quality Act (CEQA) and all other applicable and relevant laws; ○ Consideration and evaluation process for resources under the eligibility criteria for inclusion in the National Register of Historic Places, the California Register of Historic Resources, or any other appropriate and relevant registries; ○ Use and application of tribal information as substantial evidence; and ○ Culturally-appropriate management practices and protective measures for open space areas permanently preserved for Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources; • Culturally-appropriate identification, evaluation, treatment, mitigation, protection, and management of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, including feasible avoidance measures and best practices for minimizing significant adverse impacts to such resources/sites; ○ Contributing elements to Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources may include, but shall not be limited to, flora, fauna, waterways, viewsheds, landscapes, geological resources. The Guidelines shall also include an inventory of traditional cultural plants, flora and fauna for consideration in project biological studies; • *Develop and adopt standard protection and treatment measures for Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources. These measures shall be developed and implemented within two to three (2-3) months following adoption of the 2026 General Plan Update, and shall also be incorporated into the final Guidelines;* • Procedures and protocols for the inadvertent/accidental discovery of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, including Native American human remains and burial items; • Confidentiality protections and related processes; and • Other measures, as appropriate. The Guidelines shall be developed separately from the General Plan and this program shall be implemented within two to three (2-3) years following adoption of					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
the 2026 General Plan Update. The Guidelines may be periodically reviewed and updated in consultation with Culturally Affiliated Tribal governments, as needed. For the purposes of drafting the Guidelines, conduct regularly scheduled (occurring no less than quarterly) coordination meetings, beyond those required by State and Federal laws, between Culturally Affiliated Tribal governments and key planning staff from the City of Lake Elsinore. This program implements Policy HCTCR-21.						
Responsible Department(s)	Planning					
PRO-EJ-5: Increase green infrastructure including tree canopy in the DACs: • Conduct a tree canopy assessment in identified DAC communities; and • Create a tree planting program or work with a nonprofit organization to give away trees, provide tree maintenance information/courses, organize tree planting programs.		◆				
Responsible Department(s)	Engineering and Public Works					
PRO-EJ-6: Consider expanding open space, existing wetland areas, and naturally occurring bioswales to improve stormwater runoff filtration, particularly those impacting the DACs.		◆				
Responsible Department(s)	Engineering and Planning					
PRO-EJ-7: Apply for EPA grant funds and partner with local developers to: • Conduct a brownfields site inventory and site assessment for sites impacting identified DACs; and • Cleanup and redevelop brownfield sites impacting identified DACs.						◆
Responsible Department(s)	Planning and Code Enforcement					
PRO-EJ-8: Consider adopting an Urban Agriculture Ordinance that includes strategies to increase access to healthy foods and standards for operation.		◆				
Responsible Department(s)	Planning					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-EJ-9: Consider using City facilities as sites for farmer's markets and community-support agriculture (CSA) food distribution.					◆
Responsible Department(s) — Recreation					
PRO-EJ-10: Create healthy development guidelines or checklists to track and monitor how new developments are incorporating health-promoting features such as opportunities for physical activity, healthy food, drinking water, urban farming, affordable housing, and sustainable design.		◆			
Responsible Department(s) — Recreation					
PRO-EJ-11: Integrate health, equity, and sustainability considerations into City decision making across all sectors and policy areas.					◆
Responsible Department(s) — City Manager					
PRO-EJ-12: Consider offering and/or expanding governance programs that increase participation of DAC residents in local government. Such programs can include IDEAL LE (Inclusion, Diversity, Equity, Accessibility, and Leadership in Lake Elsinore) with a focus on developing an equity strategic plan, and other programs such as implementing bill or fine forgiveness, diversifying local representation on boards/commissions, developing anti-displacement strategies, updating recruiting requirements and workforce practices, amplifying a diversity of voices including students, establishing a "wellness center", etc.		◆			
Responsible Department(s) — City Manager					
PRO-COSP-17: Acquire or enable the acquisition of properties for open space that will provide values that support scientific, educational, scenic, and cultural values while also maintaining wildlife habitat and ecosystem services.					◆
Responsible Department(s) — City Manager and Planning					
PRO-COSP-18: Team with landowners and wildlife agencies to promote the creation of and the re-establishment of wildlife corridors, sustainable land use, and reduce impacts on the environment and wildlife habitats consistent with the MSHCP and applicable State and/or federal environmental laws.					◆
Responsible Department(s) — Planning					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-19: Evaluate barrier fencing or other buffers between MSHCP Conservation Areas and proposed public and private land uses that may be incompatible with the Conservation Areas in order to minimize illegal/unauthorized public access, domestic animal predation, or dumping in the Conservation Areas while not impeding wildlife movement.					◆
Responsible Department(s)	Planning				
PRO-COSP-20: Identify tree types and establish standards for native tree planting and maintenance program that supports wildlife, improves air and water quality, and reduces energy consumption.	◆				
Responsible Department(s)	Planning				
PRO-COSP-21: Restore and enhance the ecological function of channelized waterways, consistent with rewilding best practices, and avoid channelizing additional segments of the waterways system.					◆
Responsible Department(s)	Engineering and Public Works				
PRO-COSP-22: Identify and map groundwater recharge areas and provide groundwater recharge area maps to local agencies to foster planning that protects groundwater supplies.		◆			
Responsible Department(s)	Engineering and Public Works				
PRO-COSP-23: Promote projects that use green infrastructure, such as bioswales, rain gardens, planter boxes, permeable pavements, and green roofs.					◆
Responsible Department(s)	Planning and Engineering				
PRO-COSP-24: Expand installation and operation of electric vehicle charging stations on City properties, including curbside in areas of the community where other options are limited.					◆
Responsible Department(s)	City Manager, Engineering and Public Works				
PRO-COSP-25: Integrate GHG emissions reduction and climate resilience into all municipal projects, policies, and procedures as applicable.					◆
Responsible Department(s)	City Manager				

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-26: Implement Lake Elsinore Fisheries Management Report recommendations.						◆
Responsible Department(s)	Recreation					
PRO-COSP-27: Develop standards and guidelines: • Protect local ridgelines through proper siting, grading, building design, and landscape design; • Lighting and light-shielding standards to minimize light pollution and glare; and • Architecture and landscape design, appropriate themes and design features, signage, outdoor furniture, bus shelters, gateway enhancements, and other distinctive improvements.			◆			
Responsible Department(s)	Planning					
PRO-COSP-28: Prepare and adopt a Street Tree Master Plan that promotes distinct and identifiable street corridors which reflect cohesive design, functionality and safety.			◆			
Responsible Department(s)	Planning, Engineering, and Public Works					
PRO-COSP-29: Develop and work with other public agencies to develop and implement retrofitting programs that minimize existing infrastructure's impact on natural open space and habitat, and rewilded areas.			◆			
Responsible Department(s)	Engineering and Public Works					
PRO-COSP-30: Identify opportunities for hardscape removal to increase urban permeability for groundwater replenishment, filtration, and rewilding.			◆			
Responsible Department(s)	Engineering and Public Works					
PRO-COSP-74: Establish an urban forestry program that provides shaded green spaces citywide and provides incentives for tree planting and preservation on private properties.			◆			
Responsible Department(s)	Planning and Engineering					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-75: Create and adopt a city tree policy and ordinance. Consider incorporating the City's existing tree policy regarding the management and removal of palm trees.			◆			
Responsible Department(s)	Planning and Public Works					
PRO-COSP-76: Increase impermeable surface coverage citywide by replacement with pervious materials, natural vegetation and soils.						◆
Responsible Department(s)	Planning, Engineering, and Public Works					
PRO-COSP-77: Provide and maintain a public boat ramp at low- and high-lake levels.			◆			
Responsible Department(s)	Recreation					
PRO-COSP-78: Promote water-related uses and facilities on vacant or developed lakefront lands where construction and operation impacts are mitigated to the extent feasible.						◆
Responsible Department(s)	Planning and Economic Development					
PRO-COSP-92: Acquire empty Downtown lots that become available to develop pocket parks.						◆
Responsible Department(s)	City Manager and Public Works					
PRO-COSP-93: Prioritize the creation of linear parks along corridors.						◆
Responsible Department(s)	Planning and Engineering					
PRO-COSP-94: Identify new park land or green space through the repurposing of excess street right-of-way.			◆			
Responsible Department(s)	Engineering					
PRO-COSP-95: Consider amending street standards to encourage/require shaded sidewalks.			◆			
Responsible Department(s)	Engineering					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-96: Establish a citywide multi-use trail system building upon connections to the Murrieta Creek Trail.			◆			
Responsible Department(s)	Engineering and Recreation					
PRO-COSP-97: Connect parks, schools, and other designated activity centers through a trail system.						◆
Responsible Department(s)	Planning, Recreation, and Engineering					
PRO-COSP-98: Create a trail to connect Riverwalk Trail and the Levee Lake Trail to create connection between Downtown, the Lake, and the Ballpark District.				◆		
Responsible Department(s)	Planning, Engineering, and Recreation					
PRO-COSP-99: Design distinctive parks and recreation facilities that provide places for social interaction, neighborhood/community identity, beauty, and livability.						◆
Responsible Department(s)	Recreation					
PRO-COSP-100: Incorporate unique cultural, historic, and environmental features such as artwork, historic buildings, heritage trees, etc. in park and community facilities design.						◆
Responsible Department(s)	Recreation					
PRO-PSNAQ-6: Offer offsite parking facilities for secondary vehicles on high-risk days, allowing residents to pre-evacuate extra cars.						◆
Responsible Department(s)	Public Works					
PRO-PSNAQ-7: Limit use of public parks and facilities in high fire severity zones, such as trailheads, on "red flag days" to reduce potential exposure and evacuation demand for hikers and others.						◆
Responsible Department(s)	Recreation					
PRO-PSNAQ-8: Provide dynamic rerouting guidance through GPS systems that adapt to real-time conditions to avoid overcrowding on primary roads.						◆

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Engineering					
PRO-PSNAQ-9: Regularly assess community facilities designated as evacuation centers to ensure they meet standards for safety and accessibility.						◆
Responsible Department(s)	Recreation					
PRO-PSNAQ-10: Equip evacuation centers with solar photovoltaic systems and battery storage to ensure power resilience during emergencies.				◆		
Responsible Department(s)	Public Works and Recreation					
PRO-PSNAQ-11: Designate safety zones or shelter-in-place locations as potential places of refuge when evacuation routes become blocked.		◆				
Responsible Department(s)	Emergency Services, Police, and Fire					
PRO-PSNAQ-63: Develop a streamlined permitting process for seismic retrofitting projects to reduce administrative barriers.			◆			
Responsible Department(s)	Planning and Engineering					
PRO-PSNAQ-64: Establish a program to help residents and businesses identify, apply for, and manage seismic upgrading grants and funding opportunities.			◆			
Responsible Department(s)	City Manager and Economic Development					
PRO-PSNAQ-65: Provide regular training and information sessions for developers, building inspectors, contractors, and city officials to stay current on seismic safety regulations.			◆			
Responsible Department(s)	Engineering and Building & Safety					
PRO-PSNAQ-66: Incentivize green building practices and encourage developers to go beyond basic seismic compliance by providing additional incentives for sustainable and resilient construction practices, such as LEED certification.			◆			
Responsible Department(s)	Building & Safety					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-82: Survey existing public and private streets every five years to determine those that lack two means of ingress and egress and inadequate evacuation routes. Identify and implement measures to mitigate single access issue.			◆			
Responsible Department(s)	Fire, Engineering, and Planning					
PRO-PSNAQ-83: Identify areas with higher concentrations of at-risk populations (e.g., elderly, disabled, low-income) and create targeted evacuation plans for these groups.			◆			
Responsible Department(s)	Emergency Services					
PRO-PSNAQ-84: Locate essential public facilities such as hospitals, waste water treatment, shelters, and emergency operations centers, out of high-risk, wildfire-prone areas unless additional mitigation measures above the minimum fire protection standards are put in place and annually maintained.			◆			
Responsible Department(s)	Planning and Fire					
PRO-PSNAQ-85: Conduct a study to establish a re-development policy for all structures in VHFSZs after large fires.			◆			
Responsible Department(s)	Planning, Building & Safety, and Fire					
PRO-PSNAQ-86: Identify measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection.			◆			
Responsible Department(s)	Planning, Building & Safety, and Fire					
PRO-PSNAQ-104: Designate additional cooling and warming centers that are easily accessible to the public. Potential locations include the public library, schools, churches, and hotels.			◆			
Responsible Department(s)	Emergency Services and Recreation					
PRO-PSNAQ-105: Develop partnerships with local businesses, nonprofit organizations, and the school district to provide additional public cooling/warming centers.			◆			
Responsible Department(s)	Emergency Services and Recreation					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-106: Seek incentives for developers to expand shaded areas, such as tree planting programs, and encourage the installation of cool roofs or reflective pavements to reduce heat in public spaces.			◆			
Responsible Department(s)	Planning and Economic Development					
PRO-PSNAQ-107: Assist property owners in identifying grants or tax incentives for retrofitting existing buildings to meet updated climate resilience standards.			◆			
Responsible Department(s)	Planning and Economic Development					
PRO-PSNAQ-108: Audit city property for adherence to updated climate resilience standards and seek grant funding to make updates to facilities or prioritize these improvements in the CIP.			◆			
Responsible Department(s)	Public Works					
PRO-PSNAQ-109: Encourage investment in low-carbon public transportation systems, including electric buses and bike-sharing programs.			◆			
Responsible Department(s)	Engineering					
PRO-PSNAQ-110: Increase the City's urban tree canopy and expand urban greening throughout the City to reduce the heat Island effect.			◆			
Responsible Department(s)	Planning, Public Works, and Engineering					
PRO-PSNAQ-111: Conduct a communitywide tree canopy assessment to quantify how much of the City's land area is covered by trees, including streets with street tree canopy cover; identify the location of those trees; and identify opportunities to plant trees.			◆			
Responsible Department(s)	Planning and Engineering					
PRO-PSNAQ-112: Refine guidelines on specific tree species and management procedures that integrate carbon sequestration, ecosystems services, and biodiversity.			◆			
Responsible Department(s)	Planning and Public Works					

Table IM-4: Implementation Programs: New Plans, Programs, and Strategies

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-113: Require tree planting and other landscaping in all new development and redevelopment that supports other community benefits, such as shade for walking and biking, and include greening elements as a primary project scoring criteria for bicycle improvements.			◆			
Responsible Department(s)	Planning					
PRO-PSNAQ-114: Seek resources to create and regularly update an urban forestry to increase the urban tree canopy, open spaces, and green roofs to reduce the heat island effect, giving priority to areas of the City with vulnerable populations.			◆			
Responsible Department(s)	Planning and Recreation					
PRO-PSNAQ-115: Explore incentives for shading features, such as large eaves and cantilevers on south- and west facing walls to reduce air conditioning requirements and heat island effects that contribute to the entire community's reduced quality of life, but especially those living in high-density, low-income neighborhoods.			◆			
Responsible Department(s)	Planning					
PRO-PSNAQ-116: Preserve mature trees during infrastructure modifications using solutions to retain them, such as curb extensions, basin expansion, and sidewalk re-routing.						◆
Responsible Department(s)	Engineering and Public Works					

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-LUCC-19: Explore using developer fees, to be assessed when historic resources are impacted, for historic preservation efforts or applied to other sites or projects.		◆				
Responsible Department(s)	Planning and City Manager					
PRO-LUCC-20: Review and update the City's tree preservation ordinance to ensure all appropriate tree species are protected and included in the ordinance.		◆				
Responsible Department(s)	Planning and Public Works					
PRO-LUCC-21: Develop an incentives program encouraging private development and public agencies to provide park and recreation facilities beyond the minimum Quimby requirements.			◆			
Responsible Department(s)	Planning and Recreation					
PRO-LUCC-22: Prioritize and incentivize urban recreation as a community benefit.		◆				
Responsible Department(s)	Planning					
PRO-LUCC-23: Identify incentives (such as expedited processing, rebates, featuring business in Lake Elsinore's publications, etc.) to encourage property and business owners to improve buildings exteriors and storefronts.		◆				
Responsible Department(s)	Planning and Economic Development					
PRO-HCTCR-15: Pursue designation as a Certified Local Government Program by the National Parks Service (NPS) and the California Office of Historic Preservation (OHP) to assist in funding local historic preservation.			◆			
Responsible Department(s)	Planning and Building & Safety					
PRO-HCTCR-16: Complete the update of the 1991 Survey of Historic Structures and Sites. Include historic structures and districts that may have become eligible for historic listing since 1991. Post the updated survey on the City's website to ensure easy access and use by the public.			◆			

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Planning					
PRO-HCTCR-17: Consider preparing Historic Community Plan development standards and guidelines to encourage the preservation of the area's urban, site, architectural, and landscape architectural design character and development pattern.			◆			
Responsible Department(s)	Planning and Building & Safety					
PRO-HCTCR-18: Consider expanding the City's Arts and Culture program to include historical themes in its public art program.			◆			
Responsible Department(s)	Planning and Recreation					
PRO-HCTCR-19: Expand the Arts and Culture program to key destinations and centers including but not limited to Lake Elsinore Levee Walk, Launch Point Recreation Center, and Uptown.			◆			
Responsible Department(s)	Planning and Recreation					
PRO-HCTCR-20: Strongly encourage and incentivize adaptive re-use of structures with potential historic significance over demolition.						◆
Responsible Department(s)	Planning and Building & Safety					
PRO-HCTCR-21: Identify and pursue funding and resources to pursue designating new landmarks and historic preservation districts.						◆
Responsible Department(s)	Planning					
PRO-EJ-13: Ensure that future development in DACs will not result in a net loss of affordable housing or significant preventable displacement of residents.						◆
Responsible Department(s)	Planning					
PRO-EJ-14: Preserve the affordability of federal- and state-subsidized units at risk of conversion to market rate or other affordable housing resources.						◆
Responsible Department(s)	Planning					
PRO-EJ-15: Incentivize property owners to repair and rehabilitate all substandard housing, especially in DACs, and to maintain properties free of code violations.						◆

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Building & Safety and Code Enforcement					
PRO-EJ-16: Assist residents in DACs to retrofit their homes to be more energy efficient, weatherproof, and better protected from air and noise pollution.						◆
Responsible Department(s)	Planning and Building & Safety					
PRO-EJ-17: Explore funding sources to reduce housing production and maintenance costs associated with improved housing conditions in the DACs for efforts such as removing lead exposure and other environmental hazards and improving weatherization.			◆			
Responsible Department(s)	Planning					
PRO-EJ-18: Create a comprehensive community outreach strategy that: • Serves as a framework for all departments to participate in meaningful communication with the public, prioritizing residents in DACs and those with language barriers; • Re-evaluates City communication standards, style guidelines, and translation protocols, including for web and social media releases, and printed documents, to ensure accessibility to all community members, especially DAC residents; • Considers providing translation and interpretation services at public meetings; and • Continues to ensure that all publicly noticed meetings, materials, and other engagement opportunities that use technology are accessible by mobile devices and support access for people with disabilities.						◆
Responsible Department(s)	City Clerk and City Manager					
PRO-EJ-19: Explore best practices and resources to: • Provide language assistance for front desks or counters, meetings, telephone communications, services, events, documents, forms, materials, websites, apps, and other points of contact with community members; • Fund the expansion of digital access and engagement opportunities by working with other public and private partners to support highspeed internet in communities that have low access to internet, particularly in DACs; and			◆			

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
• Fund free internet access in City-owned public facilities, particularly those in DACs.						
Responsible Department(s)	City Manager					
PRO-COSP-31: Inventory wetlands, floodplains, marshlands, and adjacent lands that could potentially support climate adaptation (e.g., through flood management, filtration, or other beneficial ecosystem services) and mitigation (e.g., carbon sequestration).				◆		
Responsible Department(s)	Planning and Engineering					
PRO-COSP-32: Develop and adopt a bird-safe design ordinance in consultation with a qualified biologist and require projects to demonstrate compliance with the ordinance prior to project approval. Apply the ordinance to all new development and redevelopment projects and include the latest bird-safe design guidelines and best management practice strategies, such as those from the National Audubon Society, to provide specific criteria and refined guidelines as part of design review and/or project approval process of new buildings and taller structures to protect birds from injury and mortality from collisions with buildings, towers, and other human-made structures.		◆				
Responsible Department(s)	Planning					
PRO-COSP-33: Seek funding to maintain and restore citywide creeks and waterways, including for recreational opportunities linked to creeks as well as for flood control.						◆
Responsible Department(s)	Engineering and Recreation					
PRO-COSP-34: Use the US Environmental Protection Agency (EPA) Storm Smart Cities guidance to integrate green infrastructure during project review, and updates to the Local Hazard Mitigation Plan.						◆
Responsible Department(s)	Community Development and Engineering					
PRO-COSP-35: Conduct a carbon sequestration feasibility study of City-owned open space, parks, agricultural lands, and conservation lands, and implement the				◆		

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
recommendations as feasible. This study should assess carbon storage potential by land use type and identify strategies to facilitate carbon sequestration.						
Responsible Department(s)	Community Development					
PRO-COSP-36: Implement regenerative land management practices at the city scale to reduce GHG emissions and improve watershed and human health.				◆		
Responsible Department(s)	Planning and Engineering					
PRO-COSP-37: Explore efforts to require charging or clean fuel stations on private property, including hydrogen and sustainably sourced biofuels.				◆		
Responsible Department(s)	Planning					
PRO-COSP-38: Budget for clean fuel and zero emission vehicles in the City's long-range capital expenditure plans to transition the existing fleet of gasoline- and diesel-powered vehicles, and work to make the City's fleet among the cleanest in the region by: • Purchasing zero-emission vehicles whenever possible that meet or exceed requirements under the California Advanced Clean Fleets Regulation. If zero-emission vehicles are not available, purchase plug-in hybrids, or other vehicle types to minimize emissions; and • Using biodiesel and pollution-reducing fuel additives in the City's diesel fuel vehicles.			◆			
Responsible Department(s)	City Manager					
PRO-COSP-39: Develop a capital project list and funding strategy to complete energy-efficiency projects for City owned and operated structures and adjust the list annually to add new projects as needed.						◆
Responsible Department(s)	City Manager and Public Works					
PRO-COSP-40: Identify incentives and other means to encourage new and existing buildings to include battery energy storage systems, especially buildings with solar energy installations and municipal buildings that provide essential community services.				◆		

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Planning and Economic Development					
PRO-COSP-41: Identify incentives to encourage new buildings to exceed State energy efficiency requirements and/or meet or exceed the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Program or equivalent standards.				◆		
Responsible Department(s)	Planning and Economic Development					
PRO-COSP-42: Seek and identify resources to assist low-income homeowners and small business owners with identifying financing options for installation of rooftop solar energy systems, energy storage, and electrification of existing buildings.			◆			
Responsible Department(s)	Building & Safety and Economic Development					
PRO-COSP-43: Consider creating an interdepartmental Climate Action Implementation Committee.			◆			
Responsible Department(s)	City Manager					
PRO-COSP-44: Develop new and retrofit existing City facilities to be zero net energy.				◆		
Responsible Department(s)	City Manager and Public Works					
PRO-COSP-45: Prepare, and adopt as appropriate, a Rewilding Master Plan. Ensure the Rewilding Master Plan process: • Adopts restoration best practice guidelines (e.g., no invasive species, use of native species, adaptive management) for all rewilding efforts; • Identifies priority parcels (public land, underutilized land, city-owned open space) for rewilding projects; • Incorporate rewilding considerations into city acquisition strategy; • Considers rewilding into Lake Elsinore's natural land acquisition; • Collaborates with local Native American tribes in planning and management of open space, including rewilding, cultural burning, and traditional ecological knowledge; • Considers partnering with Native American tribal communities and community-based organizations for open space co-stewardship;			◆			

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
• Engages residents, especially underserved communities, in stewardship, restoration, and rewilding projects, fostering a sense of ownership and ecological literacy; and • Works with schools and community groups to develop programs to support volunteer restoration, resident science, and ecology/rewilding educational outreach.						
Responsible Department(s)	Planning and Engineering					
PRO-COSP-79: Maintain an inventory of known sources of groundwater and soil contamination to monitor lake water quality and better understand impacts of water-related projects on environmental resources.						◆
Responsible Department(s)	Planning, Engineering, and Code Enforcement					
PRO-COSP-80: Consider establishing a community benefits program that incentivizes privately owned, publicly operated open space along shoreline development and incentivizes the creation of connections between existing easements.		◆				
Responsible Department(s)	Recreation and Economic Development					
PRO-COSP-101: Increase opportunities for water activities such as public access to the Lake, splash pads at parks, and a possible future public pool.						◆
Responsible Department(s)	Recreation					
PRO-COSP-102: Offer additional amenities that support recreational activities at the Lake, such as providing human powered watercraft (ex. kayak) and fishing areas.			◆			
Responsible Department(s)	Recreation					
PRO-COSP-103: Incorporate flexible design into the improvement of parks spaces and community facilities.			◆			
Responsible Department(s)	Recreation					
PRO-COSP-104: Identify missing and safe sidewalk connections around senior centers to increase access.		◆				

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Engineering and Public Works					
PRO-COSP-105: Identify points of public access to public lands through the Community Service Plan and connect those public access points with trails, walkways, and bikeways.			◆			
Responsible Department(s)	Recreation and Engineering					
PRO-COSP-106: Dedicate open space to community gardens and expand the existing Rosetta Canyon Sports Park Community Garden.						◆
Responsible Department(s)	Recreation					
PRO-PSNAQ-12: Create a central online platform with easy-to-understand guidelines, checklists, videos, and tools for residents to prepare for different emergencies.		◆				
Responsible Department(s)	Emergency Services					
PRO-PSNAQ-13: Lead the application process for federal and state funding opportunities to support regional preparedness initiatives (e.g., FEMA grants) and work with regional partners to pool resources for joint training, equipment purchases, and exercise costs.			◆			
Responsible Department(s)	Engineering					
PRO-PSNAQ-14: Maintain an updated library of all regional jurisdictions' emergency plans within the City's EOC.						◆
Responsible Department(s)	Emergency Services					
PRO-PSNAQ-15: Designate land and consider incentivizing the future construction of a community hospital facility.				◆		
Responsible Department(s)	City Manager and Planning					
PRO-PSNAQ-16: Establish protocols for emergency signal timing at freeway on-ramps/off-ramps in collaboration with Caltrans.			◆			
Responsible Department(s)	Engineering					

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-17: Prioritize traffic signal upgrades in vulnerable areas, integrating improvements with the Traffic Management Center.			◆			
Responsible Department(s)	Engineering					
PRO-PSNAQ-18: Investigate the implementation of Ambulatory Surgery Center (ASC) systems that can adjust to high volumes during evacuations, with a backup static evacuation coordination plan.						◆
Responsible Department(s)	Emergency Services					
PRO-PSNAQ-46: Inventory brownfield sites and identify necessary measures to remediate.			◆			
Responsible Department(s)	Code Enforcement					
PRO-PSNAQ-47: Seek funding and technical assistance to facilitate brownfield redevelopment, including federal tax incentives for brownfield sites, Department of Toxic Substances Control (DTSC) Revolving Loan Fund Program, Cleanup Loans and Environmental Assistance to Neighborhoods Loan Program, Brownfields Tax Incentives, and the U.S. Environmental Protection Agency brownfields grant and loan programs.						◆
Responsible Department(s)	Planning and Engineering					
PRO-PSNAQ-48: Where applicable, ensure regional and local routes for transportation of hazardous materials and waste are adequately marked and unsafe conditions are adequately addressed, where feasible.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-PSNAQ-87: Working with RCFD, regularly survey existing residential structures for compliance with fire safety and defensible space requirements. Consult with property owners of non-conforming sites or structures to bring those properties into compliance with the most current building and fire safety standards.						◆
Responsible Department(s)	Planning, Building & Safety, Code Enforcement and Fire					

Table IM-5: Implementation Programs: Special Studies and Projects

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-95: Conduct a vulnerability analysis to assess the structural integrity and flood resilience of essential public facilities like healthcare facilities, wastewater treatment plants, schools, power plants. Consider factors like building elevation, proximity to floodplains, stormwater drainage capacity, and flood mitigation systems. After completion of the assessment, take measures to mitigate threats to physical structures and improve building resilience.			◆		
Responsible Department(s)	Building & Safety and Engineering				

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-LUCC-24: Continue to implement the Parks Master Plan and the Dream Extreme 2040 Plan.						◆
Responsible Department(s)	Recreation					
PRO-LUCC-25: Install temporary park features and organize pop-up events as ways to provide temporary park space and recreation. Consider adding temporary features such as seating areas with planters, ping pong tables, fitness zones, and demarcated areas for nature play and outdoor learning. Explore equipment rental programs and offer pop-up/mobile programming with temporary play props, interactive games, and local art installations. Temporary park features and pop-up events may occur on private commercial development, City-owned lots, underutilized parking lots, vacant lots, vacant commercial properties, neighborhood blocks (e.g., block party), within existing parks, and within Disadvantaged Communities. Coordinate with private landowners and local businesses to install temporary park features or organize pop-up events as a way to generate local economic activity.			◆			◆
Responsible Department(s)	Recreation					
PRO-LUCC-26: Conduct and fund code enforcement activities focusing on proactive, information outreach to property owners and tenants.						◆
Responsible Department(s)	City Manager and Code Enforcement					
PRO-MI-29: Every five years, assess the Complete Streets program progress, effectiveness, and gaps yet to be addressed, managed by Public Works.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-MI-30: Maintain a list of strategic locations that may be permitted to operate at LOS E, such as areas that are widened to capacity within the right-of-way or where active modes are prioritized, such as walking or biking in the Downtown.						◆
Responsible Department(s)	Engineering					
PRO-MI-31: Monitor curb space/high demand areas and adjust curb treatments to maximize benefits to the community, such as prioritizing parking, delivery vehicles,		◆				◆

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
managing ride-hailing services, or inductive charging technology to support future electric vehicle parking.					
Responsible Department(s) — Planning and Engineering					
PRO-MI-32: Update Active LE every 10 years.		◆			◆
Responsible Department(s) — Engineering					
PRO-MI-33: Enforce parking requirements as required in the City's Municipal Code, managed by the Planning Department; consider shared and/or reduced parking supply as supported by appropriate parking studies.					◆
Responsible Department(s) — Planning, Code Enforcement, and Engineering					
PRO-MI-34: Track the usage of TNCs and autonomous vehicles as these industries develop. Review parking minimums/maximums and pick-up/drop-off areas to right-size parking in commercial areas. Evaluate the need for autonomous vehicle parking only areas and TNC staging areas. Regularly review parking requirements and adjust to reflect changing needs.					◆
Responsible Department(s) — Planning and Engineering					
PRO-MI-35: Update and maintain (every five years) an emergency operations plan in response to new developments and changing definitions of high-fire severity zones, as managed Planning and Public Works Departments.		◆			◆
Responsible Department(s) — Emergency Services					
PRO-MI-36: Continue to implement and update the City's SB 1838 compliance programs.					◆
Responsible Department(s) — Engineering					
PRO-MI-37: Provide and maintain public drinking fountains and bottle fillers in high traffic and outdoor recreation areas to reduce demand for bottled water.		◆			◆
Responsible Department(s) — Recreation and Public Works					
PRO-MI-38: Evaluate the effectiveness of existing and future/innovative materials and design practices every ten years.					◆

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Engineering					
PRO-MI-39: During standard maintenance and improvements, align the goals of Complete Streets as outlined in the City's Active LE Plan to create roadways that enhance safety and improve accessibility for all users.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-HCTCR-22: Follow the Secretary of the Interior Standards for Preservation, Rehabilitation, Restoration, and Reconstruction for the treatment of historic property structures.						◆
Responsible Department(s)	Planning and Building & Safety					
PRO-HCTCR-23: Provide owners of buildings, structures, and sites with potential historic significance and those with historic designations clear and cost-effective options to measurably enhance energy efficiency while maintaining the historic integrity to the greatest extent possible.						◆
Responsible Department(s)	Building & Safety					
PRO-HCTCR-24: Recognize that tribal traditional knowledge and tribal expertise may independently constitute substantial evidence to support the identification and significance of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources.						◆
Responsible Department(s)	City Manager					
PRO-HCTCR-25: Ensure tribal consultation complies with applicable laws, including, without limitation, SB 18, AB 52, the California Environmental Quality Act (CEQA), the National Historic Preservation Act (NHPA), and other State and federal requirements, for all relevant applications, plans, policies, and projects with the potential to impact Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources.						◆
Responsible Department(s)	Planning					
PRO-HCTCR-26: Document the City's good-faith consideration of tribal input and information, including tribal traditional knowledge.						◆

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	City Manager and Planning					
PRO-HCTCR-27: In compliance with State and federal laws, and in consultation with Culturally Affiliated Tribal governments, the City will establish and implement in the Guidelines (Policy HCTCR-21, Program HCTCR-14), protocols and practices preventing public disclosure of sensitive and confidential Tribal Cultural Resources, Historic Properties, and Unique Archaeological Resources information, such as geographic location, site identification information, sensitive tribal information, and tribal traditional knowledge, for purposes of project review, environmental review under applicable laws, and public hearings, including protocols for confidential appendices and generalized descriptions required in environmental documents.		◆				
Responsible Department(s)	Planning					
PRO-HCTCR-28: Establish and implement, in consultation with Culturally Affiliated Tribal governments, secure data management practices, including Public Records Act notification and disclosure practices and protocols ensuring the confidentiality of Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources and sensitive tribal information.						◆
Responsible Department(s)	City Manager					
PRO-HCTCR-29: If requested by a consulting Tribe, prior to grading permit issuance, require the establishment of a temporary storage container to house Tribal Cultural Resources until final disposition. Temporary holding containers shall: • Be located in an area that does not impact any onsite sensitive resources; • Be accessible to consulting and monitoring Tribes via public road for vehicle and pedestrian access; and • Provide for the culturally-appropriate storage of resources in paper or fiber bags.						◆
Responsible Department(s)	Planning, Engineering, Public Works					
PRO-HCTCR-30: If Tribal Cultural Resources, Historic Properties and Unique Archaeological Resources, significant archaeological resources (as defined in California Public Resources Code Section 21083.2), or Native American Human						◆

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
Remains are discovered during ground-disturbing, grading or other development activities, require the implementation of inadvertent discovery procedures that, at a minimum, include the following: • Immediately halt all work and further ground disturbance, equipment staging, soil stockpiling, and construction-related activities within the area of discovery and within a minimum 100-foot radius surrounding the discovery as determined appropriate by the consulting Tribes and registered professional archaeologist, and secure the area using appropriate protective measures, such as silt fencing, temporary barriers or other appropriate methods until consultation and evaluation of the discovery is completed and appropriate treatment measures are identified. Work may continue outside of the halt work area; • Immediately notify the City of Lake Elsinore, which shall subsequently and promptly notify the consulting Tribes; • Coordinate with the consulting Tribes (or Most Likely Descendant) and registered professional archaeologist and any other relevant qualified professionals to evaluate the discovery and, in good-faith, determine whether it constitutes a significant archaeological resource (as defined in California Public Resources Code Section 21083.2), Tribal Cultural Resource, Historic Property, Unique Archaeological Resource, or Native American Human Remains, as appropriate; • Engage in meaningful and good-faith discussions to identify and determine culturally-appropriate treatment, handling and long-term protections for the discovery with the goal of reaching agreement; • If the parties are unable to agree on any one or more identification, treatment, documentation and protection measure(s), the parties shall consult with the City on any disagreements. The City will consider all information from the good-faith discussions and recommendations from the consulting Tribes, registered professional archaeologist, project applicant and other relevant qualified professionals, and shall make a final determination on the disputed identification, treatment, documentation and protection measures; • Document final decisions in a written treatment agreement; and					

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
• Work shall not resume within the protected discovery area until authorized by the City.					
Responsible Department(s) Planning, Building & Safety					
PRO-HCTCR-31: Follow the Secretary of the Interior Standards for Preservation, Rehabilitation, Restoration, and Reconstruction for the treatment of Historic Property Structures.					◆
Responsible Department(s) Planning					
PRO-HCTCR-32: Recognize that Native American Human Remains, including Burial Areas, located within the City of Lake Elsinore are the Ancestral Remains and sacred cultural heritage of the present-day Luiseño (Payómkawichum) Tribes. In recognition of the cultural and historical significance of Native American Burial Areas, ensure the respectful treatment and culturally-appropriate mitigation and management of Native American Human Remains and associated Tribal Cultural Resources, including requiring avoidance and minimization of impacts to the greatest extent feasible. In the event of an inadvertent discovery of Native American Human Remains during project development or ground-disturbing activities, and in addition to compliance with the applicable requirements of the California Health & Safety Code and the California Public Resources Code, the City will require, the following: immediate halt of all work within a minimum 100-foot radius surrounding the discovery as determined appropriate by the consulting Tribes and registered professional archaeologist, use of protective measures for the discovery area such as silt fencing, temporary barriers or other appropriate protection methods, prompt notification and consultation with consulting Tribes and applicable agencies, and meaningful good-faith discussions concerning the identification of the discovery, and culturally-appropriate treatment, handling and any long-term protections with the goal of reaching agreement. If the parties are unable to agree on any one or more identification, treatment, documentation and protection measure(s), the parties shall consult with the City on any disagreements. The City will consider all information from the good-faith discussions and recommendations from the consulting Tribes, registered professional archaeologist, project applicant, and other relevant qualified					◆

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
professionals, and shall make a final determination on the disputed identification, treatment, documentation and protection measures. All final decisions will be documented in a written agreement. Work shall not resume within the halt work area until authorized by the City					
Responsible Department(s) Planning and Engineering					
PRO-HCTCR-33: Incorporate tribal input into long-range land use planning, policies, zoning, and development standards for public and private lands.					◆
Responsible Department(s) Planning					
PRO-EJ-20: As recommended by California Air Resources Board (CARB), the City shall continue to require projects that would result in construction activities within 1,000 feet of residential and other land uses that are sensitive to toxic air contaminants (e.g., hospitals, nursing homes, day care centers), as measured from the property line of the project, to prepare a construction health risk assessment in accordance with policies and procedures of the Office of Environmental Health Hazard Assessment and California Environmental Quality Act (CEQA) Guidelines that identifies mitigation measures and appropriate enforcement mechanisms capable of reducing potential cancer and non-cancer risks below the Southern California Air Quality District (SCAQMD) threshold.					◆
Responsible Department(s) Planning					
PRO-EJ-21: Require applicants for residential and/or other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) to implement the best practices identified by the SCAQMD.					◆
Responsible Department(s) Planning					
PRO-EJ-22: Expand trees and landscaping to build an extensive green buffer between residential neighborhoods and freeways, and industrial districts to help reduce air pollution impacts. Prioritize residential neighborhoods that are designated as DACs.					◆
Responsible Department(s) Planning					

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-EJ-23: Identify cooling centers and increase availability of cooling centers in DAC identified communities.	◆				◆
Responsible Department(s) — Emergency Services					
PRO-EJ-24: Promote and expand urban agricultural opportunities, particularly community supported agriculture, within the DACs, including home gardens, community gardens, urban orchards, farmers' markets, and small-lot urban agricultural projects on underutilized sites, park or community facilities, schools, and remnant vacant properties.					◆
Responsible Department(s) — Community Development					
PRO-EJ-25: Implement the Parks Master Plan and the Trails Master Plan.					◆
Responsible Department(s) — Recreation					
PRO-EJ-26: Develop a process for interdepartmental collaboration to improve the health of Lake Elsinore residents.		◆			
Responsible Department(s) — City Manager					
PRO-EJ-27: Provide training for City staff and officials about how the built environment and transportation choices affect health equity, economic opportunity, well-being, and quality of life.		◆			
Responsible Department(s) — Planning and Engineering					
PRO-EJ-28: Seek resources to fund programs and projects to improve community health outcomes.					◆
Responsible Department(s) — City Manager					
PRO-EJ-29: Identify specific City staff as dedicated community liaisons and identify DAC community leaders as a means of bridging the public-private gap.	◆				◆
Responsible Department(s) — City Manager					
PRO-COSP-46: Continue to promote the Alberhill area's transition from extractive/mining activities to residential and other supporting uses.					◆

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Planning and Engineering					
PRO-COSP-47: Continue to participate in the Western Riverside County Multiple Species Habitat Conservation Plan, the LEAPS program, and the Implementing Agreement; with a strategy that focuses on quality assemblage of conservation acreage.						◆
Responsible Department(s)	Planning					
PRO-COSP-48: Work with public and private landowners to decrease the risk of flooding through projects that reduce and/or store runoff during rainfall events.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-COSP-49: Continue to implement the SCAQMD's control measures, subsequently revised, supplemented, or replaced, to control fugitive dust (i.e., particulate matter PM2.5 and PM10) during demolition, ground disturbing activities, and/or construction.						◆
Responsible Department(s)	Planning, Engineering, and Code Enforcement					
PRO-COSP-50: Conduct inventories of communitywide and municipal GHG emissions, at least every five years, consistent with State law.						◆
Responsible Department(s)	Planning and City Manager					
PRO-COSP-51: Require regular energy audits of existing City-owned and operated structures, identifying levels of existing energy use and potential conservation and efficiency measures.						◆
Responsible Department(s)	Public Works					
PRO-COSP-52: Continue to monitor and mitigate the impacts of new and evolving uses, such as logistics use developments, on local air, water, and soil resources.						◆
Responsible Department(s)	Planning					
PRO-COSP-81: Monitor status of wetlands and stream corridors to ensure healthy habitats.						◆
Responsible Department(s)	Public Works and Planning					

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-82: Implement the Community Services Master Plan to improve and increase public access to Lake Elsinore.						◆
Responsible Department(s)	Recreation					
PRO-COSP-107: Implement the Community Services Master Plan.						◆
Responsible Department(s)	Recreation					
PRO-COSP-108: Maintain and update the Community Services Plan, which describes general locations for regional recreation facilities.						◆
Responsible Department(s)	Recreation					
PRO-COSP-109: Implement a recreational needs assessment survey on the adequacy and level of use of existing facilities and need for new facilities on a periodic basis.				◆		
Responsible Department(s)	Recreation					
PRO-COSP-110: Allow for a variety of facilities and spaces to continue supporting Lake Elsinore's extreme sports.						◆
Responsible Department(s)	Planning and Recreation					
PRO-COSP-111: Improve tree canopy coverage and increase shade structures to reduce urban heat and support recreational use in the summer.						◆
Responsible Department(s)	Engineering					
PRO-COSP-112: Implement the Active LE Mobility Plan, 2019.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-COSP-113: Strengthen sidewalks connectivity throughout the City to promote safe access to parks and open spaces.						◆
Responsible Department(s)	Engineering and Public Works					

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-19: Track progress on the implementation of the regional emergency preparedness plans and update the City's EOP regularly based on lessons learned from exercises and real-world incidents.						◆
Responsible Department(s)	Emergency Services					
PRO-PSNAQ-20: Continue to dedicate resources to Community Emergency Response Training (CERT). Offer CERT programming at the neighborhood level to help residents build disaster response skills. Regular evacuation training and reminders for residents to maintain at least 3 to 10 days of emergency supplies would enhance community resilience and readiness for effective evacuations.						◆
Responsible Department(s)	Emergency Services					
PRO-PSNAQ-21: Work with the Riverside County Sherriff and CAL Fire to determine and meet community needs for services.						◆
Responsible Department(s)	City Manager					
PRO-PSNAQ-22: Enhance vehicular, pedestrian, and bicyclist traffic flow and safety, especially near sensitive sites such as schools to fulfill Safe Routes to School Plan and other mobility and safety plans.			◆			◆
Responsible Department(s)	Engineering					
PRO-PSNAQ-23: Coordinate with local transit agencies to utilize high-capacity public transit vehicles during evacuations, reducing reliance on single-occupancy vehicles.						◆
Responsible Department(s)	Engineering					
PRO-PSNAQ-24: Prohibit parking and remove parked vehicles along evacuation routes during red flag or other emergencies.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-PSNAQ-25: Ensure ongoing serviceability of primary and secondary evacuation routes, including pavement quality and maintenance of dirt roads.						◆
Responsible Department(s)	Public Works and Emergency Services					

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-26: Use intelligent transportation systems (ITS) to monitor traffic conditions and adjust response.					◆
Responsible Department(s) — Engineering					
PRO-PSNAQ-27: Maintain Police Department programs that support residents and businesses in community efforts to prevent crime and improve neighborhood safety.					◆
Responsible Department(s) — Police					
PRO-PSNAQ-28: Maintain code enforcement programs that require private and public property owners to minimize fire risks by maintaining buildings and properties to prevent blighted conditions, removing excessive or overgrown vegetation (e.g., trees, shrubs, weeds), and removing litter, rubbish, and illegally dumped items from properties.					◆
Responsible Department(s) — Code Enforcement					
PRO-PSNAQ-29: Ensure operational readiness of the Emergency Operations Center (EOC) by conducting annual training for staff and maintaining, testing, and updating equipment to meet current standards.					◆
Responsible Department(s) — Emergency Services					
PRO-PSNAQ-49: Implement and update, as necessary, a Hazards Mitigation Plan in response to emerging information about natural hazards associated with earthquakes, flooding, wildfire, and droughts.					◆
Responsible Department(s) — Emergency Services					
PRO-PSNAQ-50: Continue to require that hazardous materials used in business and industry be used, handled, transported, and stored in accordance with federal, state, and local regulations.					◆
Responsible Department(s) — Building & Safety and Engineering					

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-51: Ensure adequate capacity and safeguards on transportation routes used to transport hazardous materials to prevent or minimize impacts from accidental release.					◆
Responsible Department(s) — Engineering and Public Works					
PRO-PSNAQ-52: Require construction equipment to be properly maintained according to manufacturers' specifications.					◆
Responsible Department(s) — Code Enforcement, Planning, and Engineering					
PRO-PSNAQ-53: Restrict the idling of construction equipment to no longer than 10 minutes.					◆
Responsible Department(s) — Code Enforcement, Planning, and Engineering					
PRO-PSNAQ-54: Require equipment operators to use only diesel equipment or diesel vehicles with engines built in 1996 or later.					◆
Responsible Department(s) — Code Enforcement, Planning, and Engineering					
PRO-PSNAQ-55: Require control measures for windborne emissions such as watering active construction areas, covering open stockpiles or vehicles hauling loose materials, and paving or applying non-toxic soil stabilizers on unpaved access roads and temporary parking areas.					◆
Responsible Department(s) — Code Enforcement and Engineering					
PRO-PSNAQ-67: Regularly conduct joint disaster response exercises, including full-scale earthquake drills, to practice coordination and resource-sharing among responsible agencies.					◆
Responsible Department(s) — Emergency Services					
PRO-PSNAQ-88: Maintain all public roads in accordance with State regulations.					◆
Responsible Department(s) — Engineering and Public Works					
PRO-PSNAQ-96: Improve existing or install new stormwater drainage systems (e.g., permeable pavements, retention basins) around public facilities to better					◆

Table IM-6: Implementation Programs: Ongoing Processing and Procedures

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
manage runoff into storm drains and sewers during heavy rainfalls and reduce the risk of flooding.						
Responsible Department(s)	Engineering and Public Works					
PRO-PSNAQ-97: Use 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.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-PSNAQ-117: Ensure long-term planning efforts include improvements to multi-modal transportation networks that include biking lanes and pedestrian-friendly streets.						◆
Responsible Department(s)	Engineering					
PRO-PSNAQ-127: Use the Federal Transit Administration's construction noise and vibration thresholds as applicable to assess impacts to surrounding land uses and identify measures during the project approval process to ensure the threshold is met prior to project approval.						◆
Responsible Department(s)	Engineering and Planning					
PRO-PSNAQ-128: Consider ways to reduce roadway noise to normally acceptable levels in areas where noise standards may otherwise be exceeded (e.g., where homes front regional/arterial streets and in areas of mixed-use development).						◆
Responsible Department(s)	Engineering and Planning					

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-LUCC-27: Work with local banks and financial institutions to develop an interest-free rehabilitation loan program that promotes the sustainable upgrade and reuse of older homes and apartment buildings, commercial buildings, and industrial buildings rather than full-scale replacement.						◆
Responsible Department(s)	Economic Development					
PRO-LUCC-28: Collaborate with local and regional business and professional groups to incorporate cultural resources such as local arts, "Lake Elsinore" oriented materials and themes into their business promotions.						◆
Responsible Department(s)	City Manager					
PRO-LUCC-29: Collaborate with the Chamber of Commerce and other business associations to develop a menu of tools business owners can use toward maintaining the character of Downtown.						◆
Responsible Department(s)	City Manager and Economic Development					
PRO-LUCC-30: Work with community members, non-profits, and government agencies to identify and acquire available land (or acquire use of the land) for urban farms, community gardens, and/or additional park space such as civic spaces, parking lots, vacant plots, rights-of-ways, school sites. Special consideration should be given to properties located in Disadvantaged Communities.						◆
Responsible Department(s)	Community Development and Recreation					
PRO-LUCC-31: Provide a coordinated program of education, outreach, and advocacy for community gardens, tree planting, maintenance, and community engagement.						◆
Responsible Department(s)	City Manager					
PRO-MI-40: Designate scenic highways on SR-74 in coordination with Caltrans. Upon the successful relinquishment of SR-74, conduct studies to update/improve roadway design, efficiency, and aesthetics.			◆			

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Engineering					
PRO-MI-41: Regularly coordinate with local and regional agencies to enhance and improve regional travel within the City, particularly regional transit options.						◆
Responsible Department(s)	Engineering					
PRO-MI-42: Consider participating in a regional partnership to conduct community capacity building around water supply risks and water supply contamination (including microplastics and forever chemicals).						◆
Responsible Department(s)	Engineering and Public Works					
PRO-MI-43: Promote water use efficiency through public education, incentives, rebates, technical assistance, customer programs, and information about indoor and outdoor water use efficiency measures.						◆
Responsible Department(s)	City Manager and Economic Development					
PRO-MI-44: Provide information and explore incentive opportunities to encourage property owners to install catchment, graywater systems, and other water recycling systems; remove paving; and install low-impact development features, such as permeable pavers, bioswales, and other green infrastructure components.						◆
Responsible Department(s)	Engineering and City Manager					
PRO-MI-45: Regularly meet with RCFCD to increase infiltration, provide treatment, promote groundwater recharge, reduce flood risk, capture trash, and enhance the environment.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-MI-46: Meet with RCFC to: • Identify flood control facilities and other water ways appropriate for urban greening; and • Ensure flood control facilities are maintained and upgraded in accordance with the Drainage Master Plan.			◆			◆

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Engineering and Public Works					
PRO-MI-47: Meet with EVMWD to: • Increase service provision to the city and SOI; • Expand recycled water availability; • Consider innovative and sustainable wastewater treatment methods, such as local brewery's ethanol waste for denitrification, or nitrogen removal from wastewater; and • Identify water supply facilities and equipment for risk of flooding and identify methods to minimize flooding impacts on those facilities.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-MI-48: Meet with SCE, The Gas Company, and telecommunication companies to ensure facilities are maintained and operated in a manner that improves public safety while maintaining or increasing availability.						◆
Responsible Department(s)	Engineering and Public Works					
PRO-MI-49: Work with telecommunication service providers to: • Increase availability and affordability; and • Provide free wireless services in public spaces.						◆
Responsible Department(s)	City Manager					
PRO-MI-50: Continue public education programs about waste reduction, including recycling, composting, yard waste, wood waste, and household hazardous waste.						◆
Responsible Department(s)	City Manager					
PRO-MI-51: Consult with appropriate regional, state, and federal agencies to monitor water quality and address local sources of groundwater and soil contamination, including underground storage tanks, septic tanks, and industrial uses, as necessary, to achieve State and federal water quality standards.						◆
Responsible Department(s)	Engineering and Public Works					

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-HCTCR-34: Establish and conduct regular (at least quarterly) government-to-government meetings between the City of Lake Elsinore and Culturally Affiliated Tribal governments. Discussion items may include, but are not limited to, early consultation; relationship building; shared government goals; and coordination on planning initiatives.					◆
Responsible Department(s) — Planning, Engineering, and City Manager					
PRO-HCTCR-35: Provide opportunities to culturally affiliated Luiseño Tribal governments to participate in planning, educational and community engagement efforts that recognize and reflect the cultural heritage and continued cultural affiliation of the Luiseño people to the City of Lake Elsinore.					◆
Responsible Department(s) — Planning					
PRO-HCTCR-36: Develop an archaeological, historic, and cultural resources awareness program that informs the public about the archaeological, historic, and cultural resources including but not limited to installing plaques and/or educational signage at locations of cultural significance and significant events.		◆			
Responsible Department(s) — Planning and Recreation					
PRO-HCTCR-37: Continue to support the Lake Elsinore Historical Society including its heritage walking tour, and other programs.					◆
Responsible Department(s) — Planning and City Manager					
PRO-HCTCR-38: Partner with the local tourism industry, school districts, property owners, businesses, nonprofit organizations, and other public agencies to develop and promote heritage tourism opportunities, integrating efforts with ongoing initiatives for economic development and the creative economy.					◆
Responsible Department(s) — Economic Development					
PRO-HCTCR-39: Work with local schools and historic organizations to engage and interest residents of all ages in Lake Elsinore's archaeology, history, and historic and cultural sites, structures, and neighborhoods.					◆

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s): Planning and City Manager					
PRO-HCTCR-40: Establish methods, such as website postings, social media and periodic flyers to educate property owners and residents about the City's historic preservation program.					◆
Responsible Department(s): City Manager					
PRO-EJ-30: Consult with California Air Resources Board (CARB) and the South Coast Air Quality Management District (SCAQMD) to ensure the appropriate monitoring of stationary source emissions and to receive aid and assistance to reduce exposures to harmful air pollutants, especially in DACs.		◆			
Responsible Department(s): City Manager					
PRO-EJ-31: Continue to coordinate with the SCAQMD to: • Explore ways to initiate data collection efforts for a community emissions reduction and/or community air monitoring plan, including the identification of: information needed (new or updated), potential data sources and the resources needed, and strategies to engage residents and collect information; • Provide/replace home air filters in the DACs with high efficiency particle arresting filtration (HEPA), minimum efficiency reporting value (MERV) ratings, or similar; and • Continue the use of the PurpleAir monitoring, reporting, and response programs.		◆			
Responsible Department(s): Planning and Engineering					
PRO-EJ-32: Collaborate with health service organizations, including Riverside County Department of Environmental Health and Riverside University Health System, among others, to identify environmental risk factors, especially in DACs and other areas where more than 10 percent of adults have asthma.					◆
Responsible Department(s): Lake & Community Operations					
PRO-EJ-33: Encourage local water districts to:					◆

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing

• Conduct drinking water quality assessments in the DACs to determine types and sources of water pollution and identify mitigation and remediation strategies;
• Provide water filters to schools, workplaces, and residences within the DACs with lower local drinking water scores;
• Establish a monitoring, reporting, and response program to detect changes in drinking water quality and address changes in risk to users; and
• Conduct drinking water quality informational sessions to:
  ○ Raise awareness about local drinking water quality and potential health impacts; and
  ○ Address drinking water quality risks in homes, schools, and workplaces by increasing awareness of household water filtration system and critical system performance maintenance strategies such as mold clean out.					

Responsible Department(s) — Public Works and Lake & Community Operations					
PRO-EJ-34: Continue to work with waterbody experts to create a water cleanup program particularly oriented to the DACs.					◆
Responsible Department(s) — Engineering and Lake & Community Operations					
PRO-EJ-35: Continue to raise awareness regarding: • Local waterbody quality and its potential health impacts on recreational uses, such as swimming or eating fish caught from the lake; • Peoples' role in keeping the water clean and healthy, such as reducing use of fertilizers and proper disposal of chemicals; • Brownfields impacting their communities and community members' role in supporting cleanup and redevelopment efforts; and • The health impacts of extreme heat exposure and resources to mitigate and reduce exposure.					◆
Responsible Department(s) — City Manager and Lake & Community Operations					
PRO-EJ-36: Continue to work with refuse collection companies to provide free disposal services for pollutants such paint, batteries, and vehicle oil and other fluids.					◆

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	Engineering and Public Works					
PRO-EJ-37: Create public-private partnerships to: • Supply heat pump cooling systems to DAC residences and businesses; • Provide temporary or mobile healthcare and medical services within DACs; and • Partner with community-based organizations that have relationships with non-English- speaking and English-as-a- second-language residents in DACs to reach out on local initiatives and issues.						◆
Responsible Department(s)	City Manager and Lake & Community Operations					
PRO-EJ-38: Consider conducting special environmental justice informational meetings for development projects that could pose impact on DACs, including projects that may handle hazardous materials, emit air pollution, and/or create truck traffic.						◆
Responsible Department(s)	Planning					
PRO-EJ-39: Use equitable outreach strategies that engage all segments of the community, giving priority to DACs, including: • Using participatory facilitation techniques. Holding meetings in Americans with Disabilities Act (ADA)-compliant locations; • Hosting pop-up outreach in popular community spaces and at well-publicized events, to reach people where they are already gathered; • Holding engagement opportunities in different locations throughout the community at different times of the day and week and use parallel methods such as in-person and online; • Collaborating with local community-based organizations to help plan and conduct outreach; • Providing translation services for materials and discussions; • Considering the provision of "in-language" presentations, hiring bi-lingual staff to engage non-English speakers in addition to providing translation services, working with nonprofit and other organizations to provide real-time communications;						◆

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
• Identifying, evaluating, and eliminating existing barriers-such as age, income, and voter registration status-for Lake Elsinore residents to serve on and engage with City Council, boards, committees, and commissions, prioritizing the DAC residents; • Consider paying elected and non-elected community members for their time spent on public outreach, attending committee meetings and hearings, and other civic duties; • Consider providing childcare for outreach, committee and public meetings; and • Implement strategies to ensure that the composition of City committees, boards, and commissions reflect the diversity of the community, with particular attention to including DAC members.					
Responsible Department(s) — City Manager and City Clerk					
PRO-EJ-40: Support the establishment of neighborhood associations (regardless of ownership tenancy) throughout Lake Elsinore, particularly in DACs.					◆
Responsible Department(s) — City Manager					
PRO-COSP-53: Collaborate with wildlife and conservation agencies to identify areas to target for conservation and preservation of native habitats, creating wildlife corridors, while allowing open space to be accessed for recreation, resource management, and public safety purposes.					◆
Responsible Department(s) — Planning					
PRO-COSP-54: Continue to participate in the Santa Ana Regional Water Board's TDML Revision Task Force and its programs.					◆
Responsible Department(s) — Engineering and Public Works					
PRO-COSP-55: Coordinate with the Regional Conservation Authority to support native habitat acquisition and native species plantings.					◆
Responsible Department(s) — Planning					

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-56: Consult with the Regional Conservation Authority (RCA) and adjacent jurisdictions to ensure MSHCP guidelines adherence and maximize regional trails interconnectedness.					◆
Responsible Department(s) — Planning					
PRO-COSP-57: Consult with the California Department of Fish and Wildlife (CDFW) to identify significant environments and priorities for acquisition or maintenance of open space areas based on biological and environmental concerns and develop a strategy for maintaining areas that will preserve the protected and sensitive populations of plants and animals. Strategies shall be based on federal, state, and local regulations relevant to the protection of the identified species, including, but not limited to, Federal or California Endangered Species Act, and United States Fish and Wildlife Services Programmatic Biological Opinion, as subsequently revised, supplemented, or replaced.					◆
Responsible Department(s) — Planning and Engineering					
PRO-COSP-58: Implement stormwater pollution prevention outreach to increase community awareness of pollution impacts to creeks and preserve waterways.					◆
Responsible Department(s) — City Manager and Public Works					
PRO-COSP-59: Coordinate with local and regional stakeholders to review and implement suggestions in the State's Healthy Soils Initiative.					◆
Responsible Department(s) — City Manager					
PRO-COSP-60: Explore opportunities to partner with US EPA to develop sustainable design strategies through the Greening America's Communities Program.					◆
Responsible Department(s) — Planning and Engineering					
PRO-COSP-61: Work with regional partners on strategic land protection and stewardship actions that increase carbon sequestration, minimize conversion to land uses that have a lower capacity to sequester carbon, and preserve contiguous open					◆

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
space areas to better protect ecosystems that are under pressure from a changing climate, allowing greater mobility of species.					
Responsible Department(s) — City Manager and Planning					
PRO-COSP-62: Coordinate with the County and private landowners to support local agricultural producers to plan, implement, and scale natural carbon sequestration.					◆
Responsible Department(s) — Planning					
PRO-COSP-63: Provide public information to educate residents and businesses on the GHG reduction strategies and to support individual changes in energy and water use, transportation mode choices, material use, and waste reduction.					◆
Responsible Department(s) — City Manager and Planning					
PRO-COSP-64: Provide information on the cost savings potential and other benefits of energy audits and energy-efficient retrofits to encourage their preparation for buildings throughout Lake Elsinore.					◆
Responsible Department(s) — City Manager and Planning					
PRO-COSP-65: Use education and incentives to promote and sustain energy conserving design and practices.					◆
Responsible Department(s) — City Manager and Planning					
PRO-COSP-66: Participate in state and regional efforts to develop appropriate policies and review procedures for the installation of photovoltaic solar and other forms of distributed energy generation.					◆
Responsible Department(s) — Planning, Building & Safety, and Engineering					
PRO-COSP-67: Seek to participate in utility sponsored renewable energy programs that allow the city to receive a significant portion of energy from renewable sources.					◆
Responsible Department(s) — Public Works					

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-68: Support the development of local-serving renewable energy projects that expand the availability of local renewable energy, provide sustainable local jobs, and support local and regional housing, economic development, and sustainability goals and initiatives.					◆
Responsible Department(s): Planning and Economic Development					
PRO-COSP-69: Support State and utility efforts to improve grid resilience and capacity.					◆
Responsible Department(s): Engineering					
PRO-COSP-83: Collaborate with local, state, and regional agencies and organizations to identify resource conservation opportunities and share information.					◆
Responsible Department(s): Planning, Engineering, and Recreation					
PRO-COSP-84: Continue to convene community events and programs that allow community members to provide feedback on natural resources and parks/open space policies and programs.					◆
Responsible Department(s): Planning and Recreation					
PRO-COSP-85: Promote and encourage community involvement in urban ecology projects that preserve or expand neighborhood green space, create space for communities to gather, and connect people to nature.					◆
Responsible Department(s): Planning and Recreation					
PRO-COSP-86: Support and encourage water conservation and inform the public about practices and programs to minimize water pollution.					◆
Responsible Department(s): Public Works and Emergency Services					
PRO-COSP-114: Encourage public agencies that own vacant land within the City to enhance their property with new recreation facilities.					◆
Responsible Department(s): Recreation					

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-COSP-115: Collaborate with developers, landowners, and business owners to integrate pocket parks in or near commercial corridors such as North Elsinore.					◆
Responsible Department(s) — Planning and Recreation					
PRO-COSP-116: Develop a community engagement program that provides information about the community gardens' benefits to users' physical health and mental wellbeing.					◆
Responsible Department(s) — City Manager					
PRO-PSNAQ-30: Lead inter-jurisdictional emergency planning processes using best practices identified by the State of California.					◆
Responsible Department(s) — Emergency Services					
PRO-PSNAQ-31: Lead the planning, design, and coordination of large-scale, regional disaster preparedness exercises that involve all area jurisdictions, to test operational plans, response protocols, and resource-sharing mechanisms. Ensure exercises are inclusive of different sectors (e.g., schools, hospitals, businesses, and local governments) and address identified regional risks.		◆			
Responsible Department(s) — Emergency Services					
PRO-PSNAQ-32: Work with police, transit agencies, and school districts to provide additional transportation options where ambulance availability may be limited.					◆
Responsible Department(s) — Emergency Services					
PRO-PSNAQ-33: Communicate effectively with residents regarding restrictions and ensure enforcement by Code Enforcement and Police.					◆
Responsible Department(s) — City Manager					
PRO-PSNAQ-34: Collaborate with Caltrans and neighboring jurisdictions to address congestion on I-15 and SR-74, exploring strategies like road closures, priority lanes, and restricting through traffic.					◆
Responsible Department(s) — Engineering					

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-35: Coordinate with the school district to provide services that help at-risk youth avoid making poor choices or facing adverse life conditions, with services including on-site counseling, crisis intervention services, emergency hotlines, case management services, job and internship opportunities, and recreation programs.						◆
Responsible Department(s)	Lake & Community Operations					
PRO-PSNAQ-36: Partner with neighboring cities, regional agencies, local school districts, local businesses, and community organizations to conduct emergency and disaster preparedness exercises that test operational and emergency response plans.						◆
Responsible Department(s)	Emergency Services					
PRO-PSNAQ-37: Develop citywide public service announcements (PSAs) through various channels (TV, radio, social media, and community bulletins) to teach emergency preparedness best practices and emphasize the importance of self-sufficiency.						◆
Responsible Department(s)	Emergency Services and City Manager					
PRO-PSNAQ-38: Conduct outreach to ensure individuals have evacuation plans and develop efficient response systems during emergencies.						◆
Responsible Department(s)	Emergency Services and City Manager					
PRO-PSNAQ-39: Publicize pedestrian and bicycle pathways as designated alternative evacuation routes.						◆
Responsible Department(s)	City Manager and Public Works					
PRO-PSNAQ-40: Coordinate with residents, businesses, school districts, and community and neighborhood organizations to develop and expand partnerships to prevent crime, build public trust, and proactively address public safety issues.						◆
Responsible Department(s)	Police					

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-41: Train and educate public volunteers in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.					◆
Responsible Department(s): Fire					
PRO-PSNAQ-56: Continue to coordinate with the Santa Ana Regional Water Quality Control Board on remediation, cleanup, and risk evaluation prior to changes in site use in areas where hazardous materials and petroleum products have impacted soil or groundwater.					◆
Responsible Department(s): Engineering and Public Works					
PRO-PSNAQ-57: Consult with state, federal, and Riverside County agencies to develop and promote best practices related to the use, storage, transportation, and disposal of hazardous materials.					◆
Responsible Department(s): Engineering, Fire, Public Works					
PRO-PSNAQ-58: Work with landowners and support funding identification and cleanup of identified brownfield sites. • Support the SCAQMD in its development of improved ambient air quality monitoring capabilities and establishment of standards, thresholds, and rules to address, and where necessary mitigate, the air quality impacts of new development. • Work with Riverside County and regional agencies to evaluate the feasibility of implementing a special fund and a system of charges (e.g., pollution charges, user fees, congestion pricing, and toll roads) requiring, where possible, individuals who undertake polluting activities to bear the economic cost of their actions.					◆
Responsible Department(s): Engineering and Code Enforcement					
PRO-PSNAQ-59: Partner with the local waste handler to develop a public education campaign to promote recycling.					◆

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs		Implementation Target Period				
		2026-2028	2029-2036	2037-2045	Annual	Ongoing
Responsible Department(s)	City Manager, Engineering, and Public Works					
PRO-PSNAQ-60: Promote programs that educate the public about regional air and water quality issues, opportunities, and solutions.						◆
Responsible Department(s)	City Manager					
PRO-PSNAQ-68: Coordinate training for Community Emergency Response Team (CERT) volunteers and publicize training sessions to the City's residents and business owners.						◆
Responsible Department(s)	Emergency Services					
PRO-PSNAQ-69: Maintain emergency preparedness information and handouts at key community gathering spaces and distribute at community events.						◆
Responsible Department(s)	City Manager and Emergency Services					
PRO-PSNAQ-70: Use the City's website and other media resources to inform and educate residents and business owners on emergency preparedness and recovery matters.						◆
Responsible Department(s)	City Manager and Emergency Services					
PRO-PSNAQ-89: Collaborate with senior services, community centers, and local schools to coordinate evacuation and emergency response plans.						◆
Responsible Department(s)	Emergency Services and Recreation					
PRO-PSNAQ-90: Continue to work with the Riverside County Fire Department to: • Ensure that fire services are maintained at adequate levels. While working with the Riverside County Fire Department, monitor the City of Lake Elsinore's fire protection rating and work with the Riverside County Fire Department to correct deficiencies and to ensure ongoing training is conducted; • Conduct twice annual inspections of fire hydrant and water supply sources. Require the owner of the equipment (private property, public agency, etc.) to immediately correct issues as necessary; and						◆

Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

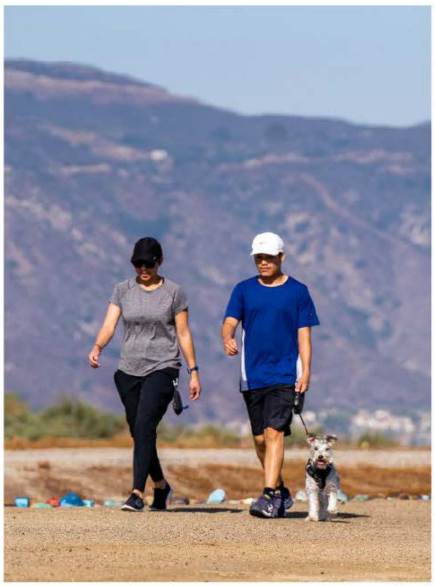
Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
• Identify anticipated locations of water supplies and work with appropriate agencies to maintain necessary water levels on an annual basis.					
Responsible Department(s) — Engineering, Public Works, and Fire					
PRO-PSNAQ-91: Collaborate with the regional fire agencies on strategies available to maintain diverse plant composition (e.g., less combustible native plants), undertake appropriate thinning of vegetation, and maintain fuel breaks without permanently damaging native habitat. As appropriate, refer to and implement appropriate strategies of the Riverside County Fire Department Strategic Fire Plan.					◆
Responsible Department(s) — Fire					
PRO-PSNAQ-92: Provide evacuation notices and fire safety information accessible to people with communication barriers (e.g., using braille, multiple languages, and text-to-speech systems).					◆
Responsible Department(s) — City Manager and Fire					
PRO-PSNAQ-118: Collaborate with SCE and nonprofit organizations to ensure that those who depend on electricity supply for medical devices and refrigerated medication have backup energy supplies during outages, including extreme heat and wind events.					◆
Responsible Department(s) — City Manager					
PRO-PSNAQ-119: Educate the community about the dangers of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures and other severe weather occur.					◆
Responsible Department(s) — City Manager					
PRO-PSNAQ-120: Establish programs to help communities assess and reduce their risk exposure (e.g., home retrofitting, flood risk assessments).					◆
Responsible Department(s) — Building & Safety, Engineering and Fire					

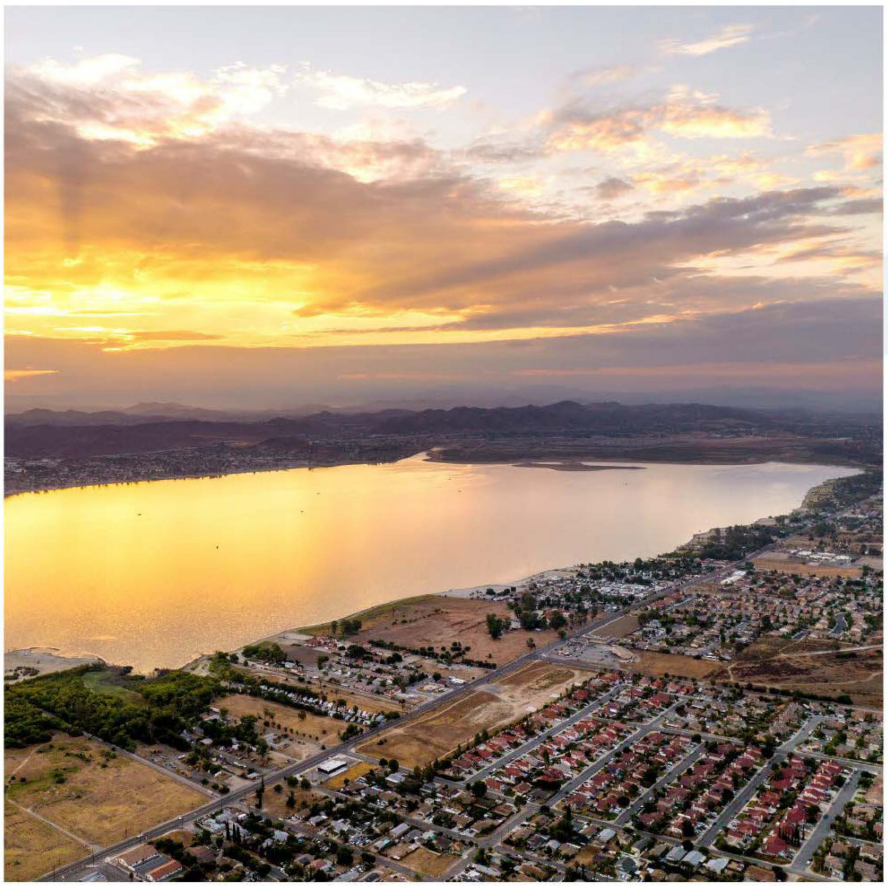
Table IM-7: Implementation Programs: Ongoing Collaboration, Consultation, and Community Engagement

Implementation Programs	Implementation Target Period				
	2026-2028	2029-2036	2037-2045	Annual	Ongoing
PRO-PSNAQ-129: Work with: • Private parties to reduce or eliminate noise exceeding allowed levels from industrial and commercial sources that impact nearby residential areas; and • Caltrans to evaluate and develop traffic noise mitigation programs along SR-74 and I-15.					◆
Responsible Department(s)	Planning and Engineering				

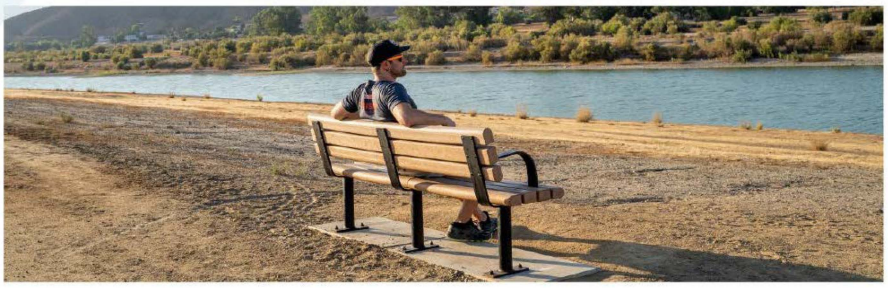
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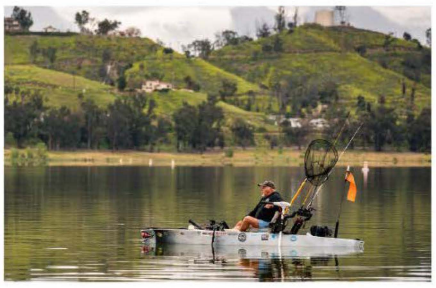
CLIMATE ACTION & ADAPTATION PLAN











JANUARY 2026

CITY OF LAKE ELSINORE
DREAM EXTREME

ACKNOWLEDGEMENTS

The Lake Elsinore Climate Action and Adaptation Plan (CAAP) is supported by the Adaptation Planning Grant Program implemented by the Governor's Office of Land Use and Climate Innovation.

City of Lake Elsinore

Damaris Abraham, Community Development Director

Adam Gufarotti, Assistant Director of Lake & Community Operations

Carlos Serna, Associate Planner

Bailey MacLean, Management Analyst

Yu Tagai, City Engineer

Consultant

Poonam Boparai, Principal-in-Charge

Andrew Beecher, Senior Climate Action Planner

Luis Montes, Climate Action Planner/Outreach Specialist

Adam Qian, Climate Adaptation Planner

Natalie Kataoka, Climate Action Analyst

Corey Alling, Graphics Specialist

Michele Mattei, Publishing Manager

Riley Smith, Senior Publishing Specialist

As communities in California experience more frequent, prolonged, and severe impacts from climate change, communities and governments at all scales are developing strategies and implementing actions to build a climate-resilient future. However, many jurisdictions, especially under-resourced communities in California, lack the capacity, tools, guidance, and resources to effectively prepare for climate impacts.

The Adaptation Planning Grant Program addresses this capacity gap by providing funding to help fill planning needs, providing communities with the resources to identify climate resilience priorities, and supporting the development of climate resilience projects across the state. The Adaptation Planning Grant Program enables communities to climate risk and adaptation considerations into planning activities and prepare for climate readiness and resilience in the long term.

The Adaptation Planning Grant is part of the Integrated Climate Adaptation and Resiliency Program (ICARP) housed within the Governor's Office of Land Use & Climate Innovation. ICARP advances statewide climate adaptation and resilience by coordinating investments, partnerships, and climate science to ensure people, natural systems, and the built environment are protected, prepared, and thrive in the face of climate change.

Through direct and equity-focused investments and resources, ICARP helps build climate-adapted and equitable communities in California, with a focus on solutions that address the impacts of climate change and reduce greenhouse gas emissions. ICARP works to advance these priorities across all levels of government by developing actionable science and research; providing guidance, tools, and technical assistance; and administering climate resilience-focused grant programs.

Learn more: https://lci.ca.gov/climate/icarp/

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ABBREVIATIONS AND ACRONYMS

°C	Celsius
°F	Fahrenheit
2022 Scoping Plan	2022 Scoping Plan for Achieving Carbon Neutrality
AB	Assembly Bill
APG	Adaptation Planning Guide
BAU	business-as-usual
BE	Building Energy
CAAP	Climate Action and Adaptation Plan
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards
CalOES	California Governor's Office of Emergency Services
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Lake Elsinore
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Community Protocol	US Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions
CPUC	California Public Utilities Commission
CSD	California Department of Community Services and Development

DEIR	Environmental Impact Report
EPA	Environmental Protection Agency
EV	electric vehicle
EVMWD	Elsinore Valley Municipal Water District
FEMA STAPLEE	Federal Emergency Management Agency Social, Technical, Administrative, Political, Legal, Economic, Environmental framework
FEMA	Federal Emergency Management Agency
FHSZ	High or Very High Fire Hazard Severity Zones
GC	Green Community
GHG	greenhouse gas
GPU	General Plan Update
GWP	global warming potential
HVAC	heating, ventilation, and air conditioning
ICARP	Integrated Climate Adaptation and Resiliency Program
ICLEI	ICLEI—Local Governments for Sustainability
IIJA	Infrastructure Investment and Jobs Act
IPCC	Intergovernmental Panel on Climate Change
IRA	Inflation Reduction Act
I-REN	Inland Regional Energy Network
LCI	Governor's Office of Land Use and Climate Innovation
LEED	Leadership in Energy and Environmental Design
LHMP	Local Hazard Mitigation Plan
LRA	Local Responsibility Area
MJLHMP	Multi-Jurisdictional Hazard Mitigation Plan
$MTCO_2e$	metric tons of carbon dioxide equivalent
N_2O	nitrous oxide

NA	not applicable
PV	photovoltaic
RCP	Representative Concentration Pathway
RFS	Renewable Fuel Standard
RTA	Riverside Transit Agency
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SOI	Sphere of Influence
SRA	State Responsibility Area
SW	Solid Waste
TR	Transportation
UWMP	Urban Water Management Plan
VA	Vulnerability Assessment
VMT	vehicle miles traveled
W	Water
WRCOG	Western Riverside Council of Governments

EXECUTIVE SUMMARY



Executive Summary

The vision for Lake Elsinore is to "Dream Extreme" by fostering a destination for action sports and seeking innovative, inclusive, and enduring solutions to provide services and opportunities for community members. Extreme weather and other hazards brought on by climate change are a challenge that must be addressed to protect residents, workers, and businesses in Lake Elsinore. Increased occurrences of extreme heat, extreme precipitation and flooding, drought, and wildfires put populations and critical infrastructure at risk. The City of Lake Elsinore (City) Climate Action and Adaptation Plan (CAAP) presents a framework for the City to implement policies and programs that seek to build resilience to climate hazards while limiting local contributions of greenhouse gases (GHGs) that contribute to worsening climate change.

The City of Lake Elsinore (City) developed its first Climate Action Plan (CAP) in 2011, which provided a long-range roadmap for the City to enable sustainable growth. Building on this previous effort, the CAAP incorporates strategies for reducing local GHG emissions while addressing communitywide adaptation to climate change.

Lake Elsinore Background

Lake Elsinore (city) has a population of around 70,000 and is located in western Riverside County. The city is approximately 43 square miles with 11 planning districts and is known for its historical sites and recreational activities. The City's Sphere of Influence (SOI) extends into unincorporated Riverside county land and covers a total of 72 square miles. The city surrounds Lake Elsinore, the largest freshwater lake in southern California and referred to as Entengvo Wumoma by the Luiseño Indians.

The climate experienced in Lake Elsinore is semi-arid, with generally mild temperatures and occasional rainfall in the winter months and high temperatures in summer months. Extreme heat (temperatures over 103.8 °F) is a primary climate hazard, with up to 31 extreme heat days per year expected by mid-century. Wildfire and extreme precipitation are other important hazards in Lake Elsinore, especially when the impacts combine to trigger landslides and mudflows.

The Holy Fire of 2018 caused evacuations for Lake Elsinore residents and created conditions for mudslides later that year when heavy rainfall saturated burn scars. Periods of drought also threaten lake levels that sustain recreational activities and a water delivery system that already relies heavily on imported water.

The primary sources of GHG emissions in Lake Elsinore that contribute to global climate change are fuel combusted in vehicles and energy used in buildings. Lake Elsinore is a primarily residential city, with only about 7% of workers in the city also living in Lake Elsinore, 31% commuting to Lake Elsinore for work, and 62% commuting out (City of Lake Elsinore 2024a). Energy use in residential buildings contributes about two-thirds of total citywide energy use, while nonresidential buildings contribute the remaining third. The consumption of resources by residents and businesses also contributes GHG emissions in smaller amounts through the generation of waste and wastewater and use of water.

Purpose

The City has taken a proactive approach to climate change, adopting its first CAP in 2011. The CAP identified major sources of emissions in the city and proposed strategies for reducing emissions. Since adoption of the 2011 CAP, new legislation has been adopted at the State level to establish long-term GHG reduction targets. In addition, climate datasets and methodologies have evolved over this time period. To reflect these changes, and to address climate change holistically by incorporating an analysis of climate vulnerabilities, the City undertaken development of this CAAP. The CAAP will continue to serve as a long-term roadmap to reduce GHG emissions and improve the resilience of the Lake Elsinore community.

The City of Lake Elsinore CAAP is supported by the Adaptation Planning Grant Program at the Governor's Office of Land Use and Climate Innovation (LCI). The Adaptation Planning Grant Program is an initiative of LCI's Integrated Climate Adaptation and Resiliency Program (ICARP). ICARP advances climate adaptation and resilience in California by coordinating investments, partnerships and climate science to ensure people, natural systems, and the built environment are protected, prepared, and thrive in the face of climate change.

Plan at-a-glance

The CAAP has two primary objectives: to build adaptive capacity to climate hazards and to reduce local GHG emissions. The following sections provide a brief overview of the City's strategies to achieve these outcomes.



Climate Adaptation Strategies

The City has identified 74 climate adaptation strategies to reduce risks, protect vulnerable residents, and enhance resilience across the community. These strategies were informed by a Vulnerability Assessment, which identified population groups and community assets that are most at risk to current and future climate hazards. The strategies are organized under five (5) goals, which are summarized in Table ES-1. Additional information on the Vulnerability Assessment, and climate adaptation goals and strategies can be found in Chapter 3.

Table ES-1 Climate Adaptation Goals Summary

Climate Adaptation Goal	Number of Strategies
Goal 1: Improve The Overall Climate Resilience of the City of Lake Elsinore.	17
Goal 2: Prepare for More Frequent Drought Events and Enhance the City's Overall Water Supply Resilience.	12
Goal 3: Prepare for Increased Temperatures and More Frequent Extreme Heat Events.	11
Goal 4: Prepare for More Frequent Extreme Precipitation, Flooding, Landslide, Mudflow, and Debris Flow Events.	16
Goal 5: Prepare For and Adapt to Increased Wildfire Risk	18

Climate Action Strategies

The climate action strategies are intended to reduce Lake Elsinore's contribution of GHG emissions across the major sources of emissions. The strategies are organized into five (5) focus areas and are informed by analysis of current emissions (a GHG emissions inventory) and projections of future emissions that consider growth within the city limits and SOI. The strategies were designed to balance the need to reduce local GHG emissions to levels that are consistent with State regulatory targets while allowing for continued economic and population growth. The GHG emissions analysis that informs the development of the climate action strategies is summarized in Chapter 2. This includes a GHG emissions inventory that establishes baseline levels, forecasts of future emissions, and development of reduction targets that are consistent with key State legislation. Details on climate action strategies, measures, and actions are provided in Chapter 4. Table ES-2 summarizes the climate action strategies organized by focus area.

Table ES-2 Climate Action Strategies Summary

Focus Area	Number	Strategy
Building Energy	BE-1	Energy Efficiency and Decarbonization
	BE-2	Renewable Energy
	BE-3	Energy Education
Transportation	TR-1	Active Transportation
	TR-2	Transit
	TR-3	Zero-Emissions Vehicles and Equipment
	TR-4	Smart Growth
Water	W-1	Water Conservation
	W-2	Recycled Water
Solid Waste	SW-1	Recycling and Compost
	SW-2	Local Produce
Green Community	GC-1	Green Jobs
	GC-2	Urban Tree Canopy
	GC-3	Green Construction Materials

Chapter 1
INTRODUCTION



Chapter 1

1.1 Climate Action Planning Overview

The City of Lake Elsinore (hereafter referred to as "City") has a population of around 70,000 and is located in western Riverside County. The city is approximately 43 square miles with 11 planning districts and is known for its historical sites and recreational activities. The City's Sphere of Influence (SOI) extends into unincorporated Riverside county land and covers a total of 72 square miles. The city surrounds Lake Elsinore, the largest freshwater lake in southern California, and is referred to as Entengvo Wumoma by the Luiseno Indians. With 3,000 surface acres and over 14 miles of shoreline, Lake Elsinore is ideal for fishing, boating, jet skiing, water skiing, wake boarding, kayaking, paddle boarding, windsurfing, and swimming. The Cleveland National Forest is located to the southwest of the City's SOI. The city is located east of the Santa Ana Mountains, characterized by hot summers and cool winters typical of a Mediterranean climate. The city has grown at a rapid pace over the last decade and is expected to outpace Riverside county's growth over the next 25 years. As the city and local community continue to experience this significant growth, and as climate change presents new challenges and exacerbates existing challenges, it presents an opportunity for the City to build a more sustainable future through the development of this climate action and adaptation plan (CAAP).

The City has taken a proactive approach to climate change, adopting its first climate action plan (CAP) in 2011. The CAP identified major sources of emissions in the city and proposed strategies for reducing emissions. Since adoption of the 2011 CAP, new legislation has been adopted at the State level to establish long-term GHG reduction targets. In addition, climate datasets and methodologies have evolved over this time period. To reflect these changes, and to address climate change holistically by incorporating an analysis of climate vulnerabilities, the City undertaken development of this CAAP. The CAAP will continue to serve as a long-term roadmap to reduce GHG emissions and improve the resilience of Lake Elsinore communities.

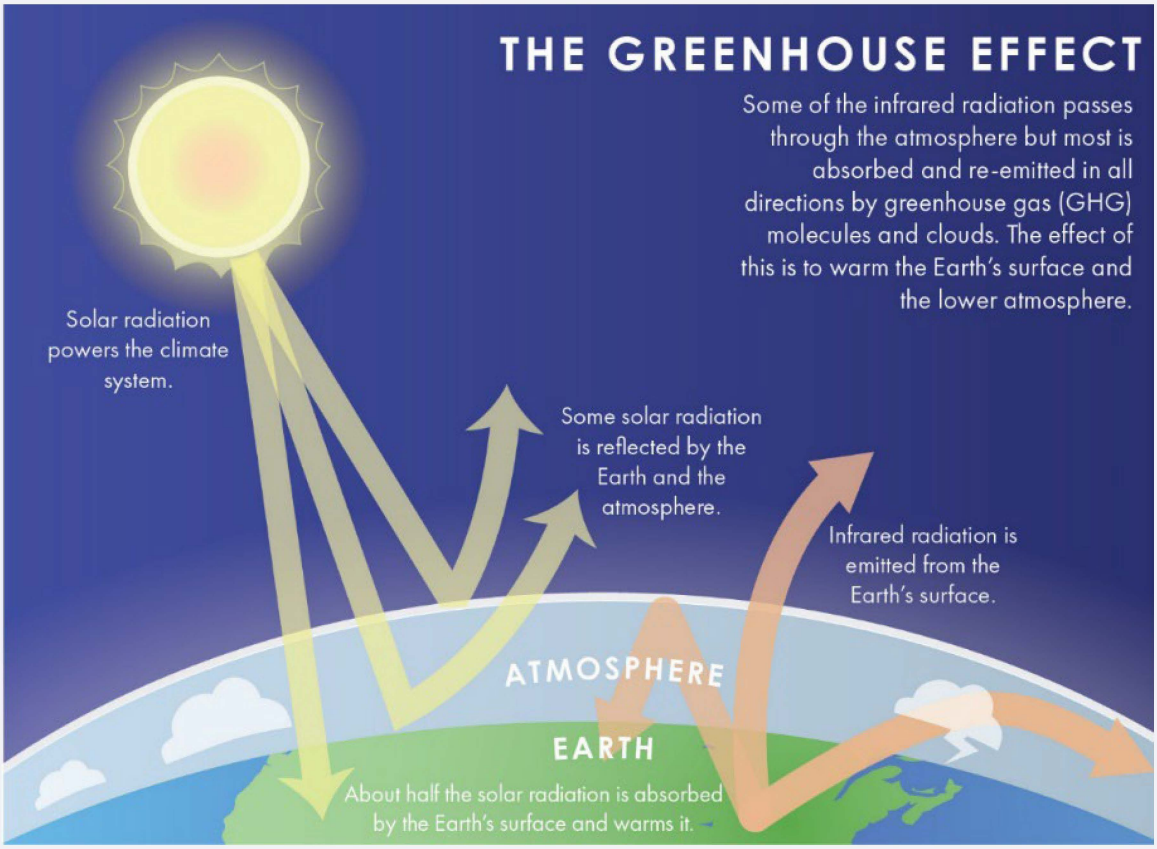
The City of Lake Elsinore CAAP is supported by the Adaptation Planning Grant Program at the Governor's Office of Land Use and Climate Innovation (LCI). The Adaptation Planning Grant Program is an initiative of LCI's Integrated Climate Adaptation and Resiliency Program (ICARP). ICARP advances climate adaptation and resilience in California by coordinating investments, partnerships, and climate science to ensure people, natural systems, and the built environment are protected, prepared, and thrive in the face of climate change.

Climate Change Science

The greenhouse effect, illustrated in Figure 1.1, is a natural process that insulates the Earth and helps to regulate its temperature. After absorbing sunlight, the Earth emits heat in the form of infrared radiation. This radiation is then absorbed by naturally occurring atmospheric gases called GHGs. These gases, which mainly consist of methane (CH_4), carbon dioxide (CO_2), water vapor, and nitrous oxide

(N_2O), all act as effective global insulators by absorbing some of the infrared radiation that is emitted by Earth and re-emitting it back down toward the planet. This process, where some heat is prevented from escaping out of the atmosphere, is what keeps temperatures on Earth conducive to life. Without the greenhouse effect, Earth would not be able to support life as we know it.

Figure 1.1 The Greenhouse Effect



Source: Prepared by Ascent in 2022.

The combustion of fossil fuels and other anthropogenic (i.e., human-caused) activities since the Industrial Revolution in the 19th century have introduced GHGs into the atmosphere at an increasingly accelerated rate. These significantly elevated levels of GHGs above natural ambient concentrations have intensified the greenhouse effect, causing the Earth to warm at an unprecedented and unnatural rate. This effect, known as climate change, is the driver behind changes in other phenomena, including more extreme weather patterns, rapid melting of the polar ice caps, rising sea levels, and other impacts on biological resources and humans.

There is scientific evidence that observed increases in atmospheric GHG concentrations and the consequential warming of Earth's atmosphere, oceans, and land are linked to human activities and influence. Human activities are estimated to have caused approximately 2 degrees Fahrenheit (°F) of warming across the globe compared to pre-industrial era levels (i.e., before the year 1900). The global average

temperature is expected to increase by up to approximately 8 °F by the end of the century unless additional efforts to reduce GHG emissions are made (IPCC 2021). The GHG emissions that have created this warming—those released between the pre-industrial era and the present—will persist for hundreds to thousands of years and create further long-term impacts to the climate system (IPCC 2018).

In Riverside county, temperatures are expected to rise between 3.7 to 6.5 °F by 2099, almost three times the statewide average (California Department of Public Health 2017). The region is also susceptible to climate events such as wildfire, with over 500,000 acres designated as a very high fire hazard severity zone (CAL FIRE 2023). The impacts of climate change will continue to affect the environment and communities, resulting in adverse effects to economy, human health, and ecosystems.

1.2 Purpose and Co-Benefits

Planning for the effects of climate change is an iterative process. The CAAP builds upon the framework of the 2011 CAP, consisting of a baseline inventory, GHG emissions forecasts, GHG reduction targets, and proposed strategies to help the City meet its emissions targets. Emissions reductions progress since 2011 was incorporated into the CAAP, while accounting for methodologies that have changed since the original CAP. Development of the CAAP has been coordinated with the City's General Plan Update and is intended to serve as a "Plan for the Reduction of Greenhouse Gases" under the California Environmental Quality Act.

In addition to the original elements of the 2011 CAP, the CAAP utilizes a vulnerability assessment to identify the city's exposure to climate related hazards. An analysis of the city's sensitivity to these hazards and the City's existing adaptive capacity to prepare for and adapt to the impacts is provided in Chapter 3. An array of adaptation strategies were developed to help the City improve its capacity to address these hazards and enhance community resilience. The CAAP planning process for both GHG reduction and adaptation planning is illustrated in Figure 1.2 below.

Figure 1.2 GHG Mitigation and Adaptation Planning Process



CAAP development was centered around the needs of Lake Elsinore community members. Feedback from community engagement was incorporated in the design of GHG reduction strategies, emphasizing social equity and environmental justice. An important component of CAAP strategies, besides GHG emissions reductions and climate adaptation, are the additional environmental, economic, and social "co-benefits." Co-benefits are positive effects that would result from CAAP strategy implementation, ranging from improvements to air and water quality to improved commuting options. Potential benefits of climate mitigation and adaptation actions were identified and assigned a unique icon displayed in Figure 1.3. Co-benefits identified in this CAAP include:

- Improved Health and Well-being: The CAAP would improve the health and well-being of community members through reduced air pollution (e.g., through reduction in vehicle trips and transition to cleaner energy sources) and improved mental health (e.g., through access to clean and green spaces).
- Cost Savings: The CAAP would provide savings related to energy efficiency (e.g., lower energy bills), infrastructure resilience (e.g., avoidance of costly repairs for damage that would have happened otherwise), and healthcare.
- Healthy Natural Environment: The CAAP would improve environmental conditions through biodiversity conservation (e.g., protecting and restoring ecosystems that support essential ecosystem functions, such as pollination, water filtration, and carbon sequestration), water conservation, and waste reduction.
- Economic Opportunity: The CAAP would improve local economic conditions through job creation (e.g., investments in renewable energy and green infrastructure resulting in economic growth and diversification), innovation and entrepreneurship, and tourism and recreation (e.g., through preserving landscapes and biodiversity hotspots, which can indirectly stimulate local economies and generate revenue).
- Equity: Strategies in the CAAP are intended to enhance social inclusion (e.g., addressing disparities, promoting greater access to resources), environmental justice (e.g., mitigating cumulative impacts from environmental stressors, fair distribution of environmental benefits), and economic empowerment.
- Community Resilience: The CAAP would improve community resilience through improved infrastructure resilience, improved disaster preparedness, and enhanced community cohesion.
- Resource Conservation: The CAAP would contribute to resource conservation through sustainable resource management (e.g., preservation of natural resources, efficient use of resources, protecting ecosystem services).

Figure 1.3 Co-Benefits Icons



1.3 Climate Planning Efforts

Collective action across federal, state, and local governments is essential to reduce GHG emissions and improve the resiliency of communities against the impacts of climate change. Action can take multiple forms; emissions reduction targets, regulations, and long-term planning documents have been a key part of the efforts to address climate change in California. An overview of relevant legislation and resources is provided below.

Federal Efforts

The Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Act, was passed by Congress in November 2021 to provide a once-in-a-generation bipartisan infrastructure bill. IIJA is the largest long-term investment to rebuild roads, bridges, and railways; expand access to high-speed internet; tackle the climate crisis; advance environmental justice; and invest in underrepresented communities. By investing in transportation and public transit, GHG emissions will be reduced and clean, zero-emission vehicles will be incentivized.

Corporate Average Fuel Economy Standards

On April 1, 2022, the US Department of Transportation updated its Corporate Average Fuel Economy standards to apply to mileage standards for passenger cars and light trucks. The standards apply to model years 2024 and 2026, requiring an industry-wide fuel economy average of approximately 49 miles per gallon for passenger cars and light trucks for model year 2026. The new standards will increase fuel efficiency 8 percent annually for model years 2024 to 2025, and 10 percent for model year 2026.

Inflation Reduction Act

The Inflation Reduction Act (IRA) was signed into law by President Biden on August 16, 2022. The IRA is intended to address climate pollution by investing in GHG reduction strategies. Goals of the IRA include deficit reduction to fight inflation, invest in domestic energy production and manufacturing, and reduce carbon emissions by roughly 40 percent below

2005 levels by 2030. It builds on the opportunities passed into law by the IIJA through supporting projects across electric vehicle charging, power infrastructure and climate resilience. Examples include supporting US manufacturing of solar panels, wind turbines, batteries, and critical materials by expanding production tax credits; providing direct incentives for American families to decarbonize their homes; and establishing the Greenhouse Gas Reduction Fund to support rapid deployment of low- to zero- emission technologies to benefit disadvantaged communities.

Renewable Fuel Standard Program

The Renewable Fuel Standard (RFS) program was created under the Energy Policy Act of 2005 and further expanded by the Energy Independence and Security Act of 2007, which amended the Clean Air Act. On June 3, 2022, the US Environmental Protection Agency (EPA) finalized a package of regulatory changes to set biofuel volumes for 2020, 2021, and 2022 to reach the objectives of the RFS. The goals are to increase the amounts of renewable fuels to be blended into transportation fuel in increasing amounts each year. The renewable fuels in the RFS program must emit lower levels of GHGs relative to the petroleum fuel it replaces.

State Efforts

Assembly Bill 32

The Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions. AB 32 put a cap on GHGs and set a target of reducing statewide emissions to 1990 levels by 2020. California achieved the AB 32 target in 2016.

Senate Bill 32

The Global Warming Solutions Act of 2016 (Senate Bill [SB] 32) codified a target of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030, expanding upon AB 32.

Assembly Bill 1279

The California Climate Crisis Act (AB 1279), signed in September 2022, further established the State's GHG emissions reduction targets to 85 percent reduction in anthropogenic emissions below 1990 levels by 2045 and net zero GHG emissions by 2045. The bill requires the California Air Resources Board (CARB) to work with other State agencies to develop and implement comprehensive strategies, policies, and regulations to meet this target.

2022 Scoping Plan

CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) in December 2022, providing a comprehensive roadmap for California to achieve its goal of carbon neutrality by 2045. Building on previous plans, it incorporates the latest scientific findings, technological advancements, and policy developments to guide the State toward a sustainable, low-carbon future.

Local and Regional Efforts

2022 Western Riverside Council of Governments Subregional CAP

The Western Riverside Council of Governments (WRCOG) Subregional Climate Action Plan Update serves as a framework for GHG emissions reductions in the subregion. The document built on the 2014 climate action plan (also referred to as CAPtivate) and established a target year of 2030 in accordance with SB 32. A series of local measures were identified, including estimated emissions reductions and implementation tracking metrics.

Elsinore Valley Municipal Water District Urban Water Management Plan

The Elsinore Valley Municipal Water District (EVMWD) Urban Water Management Plan (UWMP) was adopted in 2020 as a long-term water resource planning document for EVMWD. The UWMP identifies water supply needs for its service area over the next 25 years. The update was completed to address regulations enacted since the 2015 UWMP.

County of Riverside Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan

The County of Riverside published its Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) in 2018, with an update in 2023. The LHMP identifies hazards within Riverside County and includes mitigation actions intended to prevent and prepare for disaster occurrences.

1.4 Community Engagement

Collaboration with the community is integral to climate action planning and implementation. As a document intended to improve the resiliency of the community, local needs and voices are essential to the process. The City ensured there were ample opportunities for public engagement to inform CAP development. Figure 1.4 reflects takeaways from workshops and surveys the City hosted. A full summary of community outreach and engagement activities and outcomes is provided in Appendix A.

Figure 1.4 Community Engagement Feedback



Workshops

The City hosted engagement opportunities like workshops to involve the public and interested parties in the CAAP development process. Public workshops were intended to share an overview of climate vulnerabilities in the region and how the CAAP could increase resiliency of infrastructure, the economy, and the environment through mitigation and adaptation. The first workshop was hosted on March 19, 2025, and covered climate vulnerabilities as well as a discussion of the GHG inventory. Attendees were able to provide feedback during presentation polls and interactive activities.

Pop-Ups

Local events like pop-ups at community gatherings allowed the City to connect with community members in a familiar space. Pop-ups were hosted at multiple event locations to ensure engagement with diverse perspectives at different points in the CAAP planning process. The first pop-up event took place at the December 23, 2024 Santa Dash, largely focused on the CAAP's purpose and next steps. Subsequent pop-ups at the July 24, 2025 Night Market and September 13, 2025 Emergency Preparedness Fair included an interactive activity where participants placed stickers corresponding with priority outcomes from the CAAP.

Questionnaire

The City launched a community questionnaire from December 2024 to April 2025 to gather input from the community on local concerns, priorities, and potential actions that could be incorporated into the CAAP. To maximize engagement with the questionnaire, the City employed a variety of strategies including social media campaigns, presentations at City Council meetings, Santa Dash pop-up, and advertisements on the project website, via emails, and newsletters. The questionnaire received widespread engagement with a total of 373 responses. Approximately 66 percent of residents responded that climate change poses a threat to their friends and family. The highest priorities for residents included green infrastructure and reduced energy costs. Some of the most popular responses to Question 3 are displayed in Figure 1.5. Questions included in the survey were as follows:

Question 1: How likely do you think it is that climate change will affect the health and safety of you, your friends, and/or your loved ones?

Question 2: Which three climate impacts concern you the most?

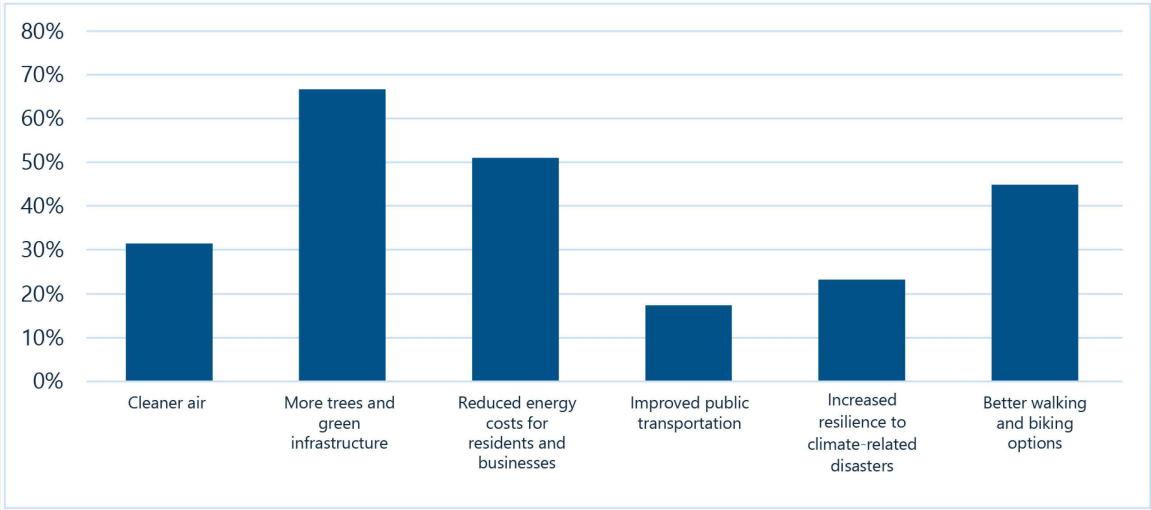
Question 3: Which outcomes would you most like to see from Lake Elsinore's Climate Plan?

Question 4: Please identify your level of concern with the following: environmental and economic categories.

Question 5: What barriers, if any, make it harder for you to adopt more environmentally friendly actions in your day-to-day life?

Question 6: Which of the following methods of support would help you overcome barriers you identified in Question 5?

Figure 1.5 Top 6 Desired Outcomes from the Climate Action Plan



Chapter 2

GREENHOUSE GAS EMISSIONS



Chapter 2

This chapter summarizes an accounting of greenhouse gas (GHG) emissions generated by activities within the City. It presents the City's baseline GHG emissions levels in 2022 and the anticipated increase in emissions if no local actions are taken through the year 2045. Additionally, this chapter establishes targets for reducing GHG emissions consistent with statewide GHG reduction targets and goals for the years 2030 and 2045.

2.1 Why Prepare a GHG Emissions Inventory?

Preparing a GHG emissions inventory is the first critical step in the overall climate action planning process. To develop and implement a Climate Action and Adaptation Plan (CAAP) that will effectively reduce GHG emissions, local governments must first have a comprehensive understanding of the emissions that are generated by activities within their jurisdictions. GHG emissions inventories not only serve to provide this knowledge, but they also act as the basis for measuring progress and provide agencies with a framework to track emissions over time and assess the effectiveness of CAP implementation.

2.2 Baseline GHG Inventory

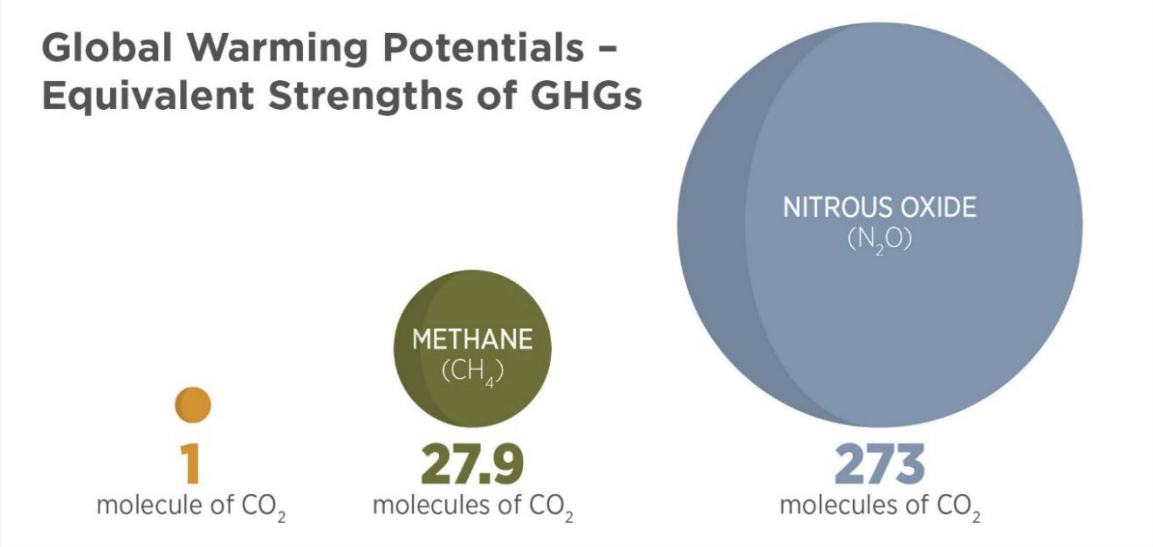
A GHG inventory provides a detailed accounting of the sources and quantities of GHG emissions generated from activities within the City. This CAAP uses 2022 as its updated baseline inventory year, compared to the 2008 baseline year from the original CAP. The GHG inventory was prepared using the ICLEI–Local Governments for Sustainability (ICLEI) protocols for local-scale accounting of emissions. This protocol reflects refinements in the planning process that have resulted from research in the field and shared knowledge from local governments engaged in climate action planning. The most recent guidance for community-scale emissions is ICLEI's US Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (Community Protocol), Version 1.2 (ICLEI 2019). State agencies, such as the Governor's Office of Land Use and Climate Innovation (LCI) and the California Air Resources Board (CARB), recommend that GHG emission inventories be prepared consistent with the guidelines in the Community Protocol.

The three primary GHGs included in this inventory are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Emissions of these gases are converted to a comparable unit by multiplying each non-CO_2 gas by their global warming potential (GWP), enabling the reporting of emissions in terms of carbon dioxide equivalent (CO_2e). This conversion allows consideration of all gases in comparable terms and makes it easier to communicate how various sources and types of GHG emissions contribute to climate change. Emissions are reported in metric tons of CO_2e ($MTCO_2e$), the standard measurement for the amounts of GHG emissions created and released into the atmosphere. GWP values for CH_4 and N_2O included in the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report were used for calculating emissions estimates (IPCC 2021).

Figure 2.1 illustrates the comparison of the GWP of CH_4 and N_2O with that of CO_2. The 2022 inventory estimates citywide emissions in six sectors: building energy, on-road transportation, off-road vehicles and equipment, solid waste, water supply, and wastewater treatment.

Moreover, the CAAP is being developed within the context of the City's General Plan Update (GPU) and its associated Environmental Impact Report (DEIR), which considers the environmental effects of growth within the Lake Elsinore city limits and its Sphere of Influence (SOI). As such, the GHG emissions analysis for the CAAP, including the GHG emissions inventory, was prepared to maintain consistency with the boundary of the GPU and includes estimates of GHG emissions for both the city limits and SOI.

Figure 2.1 Global Warming Potentials – Equivalent Strengths of GHGs



Note: GHG = greenhouse gas.

Source: Created by Ascent in 2025.

The 2022 baseline inventory estimated that the community emissions were approximately 488,339 $MTCO_2e$ (Table 2.1). Emissions from on-road transportation, which included emissions from fossil fuel (e.g., gasoline and diesel) combustion in vehicles, accounted for approximately 58 percent of community emissions. The second-largest sector, building energy, contributed approximately 33 percent of community GHG emissions in 2022. Both the solid waste and off-road vehicles and equipment sectors generated 4 percent of the City's emissions. Water supply contributed 1 percent of the total emissions. Wastewater treatment contributed less than 1 percent of the total emissions. The City's GHG emissions by sector in 2022 are displayed in Figure 2.2.

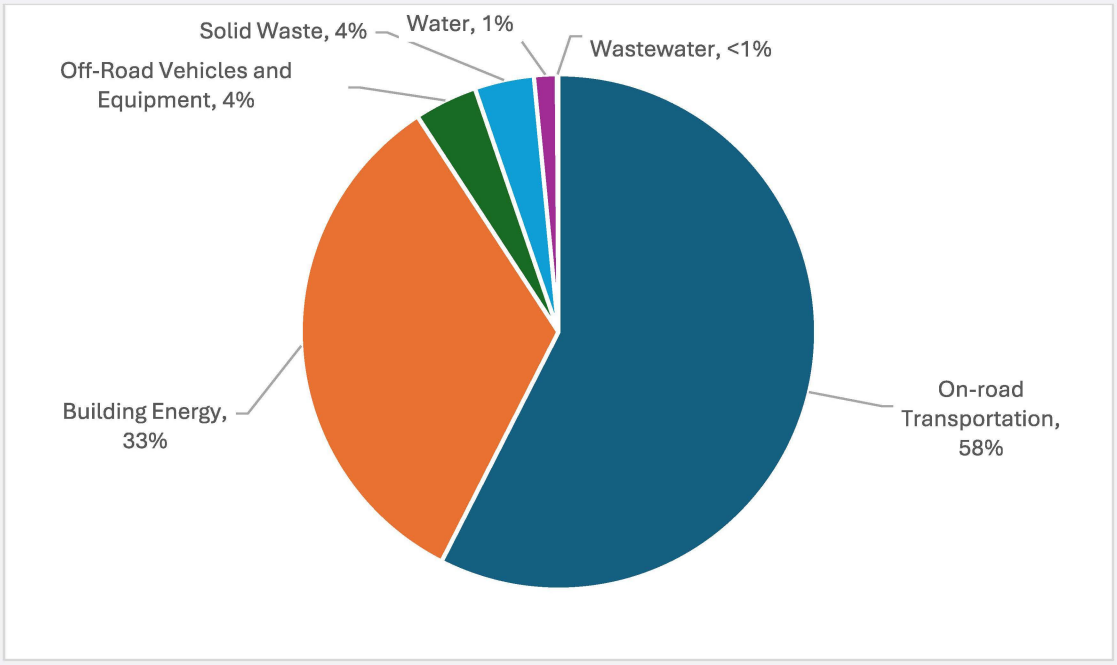
Table 2.1 Greenhouse Gas Emissions Inventory

Sector	GHG Emissions ($MTCO_2e$)	Percent of Total GHG Emissions (%)
On-Road Transportation	280,784	58
Building Energy	162,526	33
Off-Road Vehicles and Equipment	19,336	4
Solid Waste	18,224	4
Water	6,982	1
Wastewater	487	<1
Total	**488,339**	**100**

Notes: Actual GHG emissions have been rounded to the nearest thousand, and percentages have been rounded to the nearest whole percent. Rounding was conducted independently after all calculations were made. / % = percent; < = less than; GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Analysis conducted by Ascent in 2025.

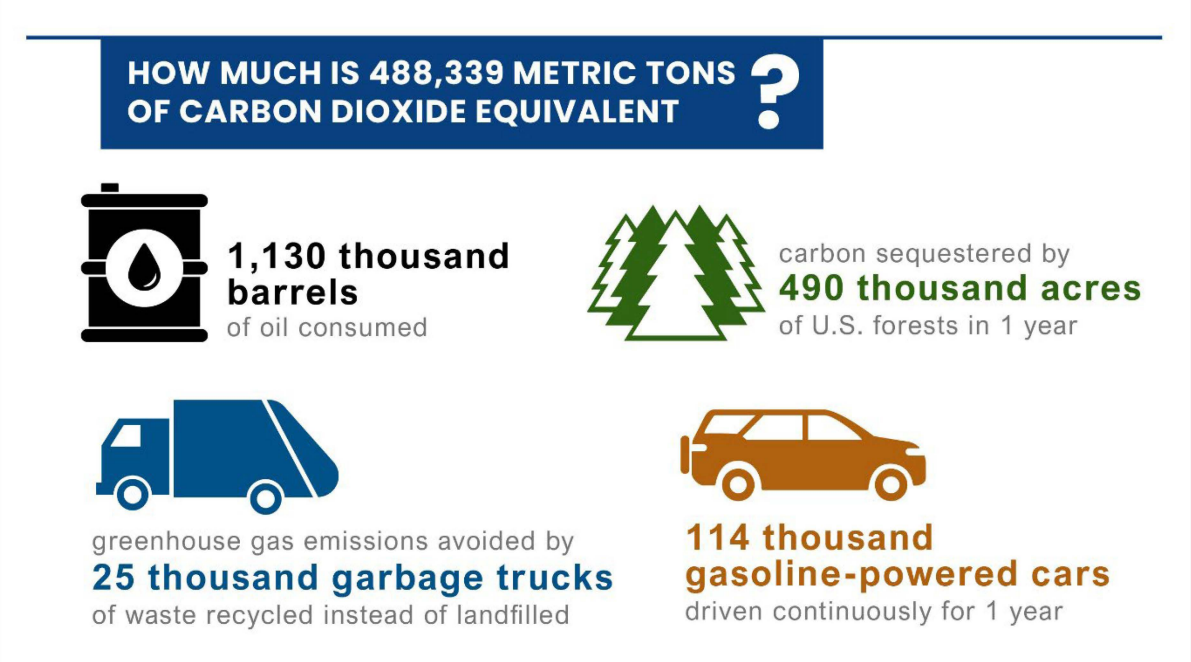
Figure 2.2 2022 Greenhouse Gas Emissions Inventory



Source: Created by Ascent in 2025.

As shown in Figure 2.3, citywide emissions in 2022 of 488,339 $MTCO_2e$ are equivalent to combusting 1,130,608 barrels of oil, or the amount of carbon that can be sequestered by 489,833 acres of US forests in one year. It is also equivalent to 24,651 garbage trucks of waste recycled instead of landfilled and total combustion from 113,908 gasoline-powered passenger vehicles driving continuously for one year (EPA 2024).

Figure 2.3 Greenhouse Gas Emissions Equivalencies



Source: EPA 2024.

2.3 GHG Emissions Forecasts

GHG emissions forecasts provide a modeled estimate of future GHG levels based on a continuation of trends in activity, population, and job growth. The forecasts also account for known regulatory actions by State and federal agencies (i.e., "legislative" actions) that are expected to reduce emissions in the future. Emissions forecasts provide insights into the scale of local reductions needed to achieve GHG emissions reduction targets after applying anticipated reductions from regulatory actions.

This CAP includes two forecast scenarios: a "business-as-usual" (BAU) scenario, and a legislative-adjusted BAU scenario. The BAU scenario is based on a variety of scaling factors for each sector (or activities that occur within the sector[s]) in the City and assumes no additional State or federal actions will occur after 2022 (the updated baseline inventory year). In the legislative-adjusted BAU scenario, the BAU forecast is "adjusted" to account for the effects of State and federal laws and regulatory actions on the City's forecasted emissions.

The forecasts estimate emissions for the years 2030 and 2045, which align with the State's GHG reduction target years established in key legislation and policies, including Senate Bill (SB) 32 and Assembly Bill (AB) 1279, as well as an interim target to align with the Lake Elsinore General Plan Update horizon year.

"Business-as-Usual" Forecast

The BAU forecast estimates GHG emissions based on assessing how emissions generated by community activities will change over time without federal, State, or local action. The BAU forecast only includes expected employment and population changes in the future. Based on 2022 GHG emissions levels, this scenario estimates annual GHG emissions in Lake Elsinore will increase steadily and rise by approximately 27 percent in 2030 and 77 percent in 2045 (Table 2.2). This projected increase in BAU emissions is due to anticipated growth in demographics and vehicle activity within the city.

Table 2.2 Business-as-Usual Greenhouse Gas Emissions Forecast

Sector	GHG Emissions ($MTCO_2e$)	
	2030	2045
On-Road Transportation	350,215	470,410
Building Energy	211,710	307,658
Off-Road Vehicles and Equipment	24,124	41,180
Solid Waste	24,090	33,439
Water	8,749	12,252
Wastewater	615	864
Total	**620,623**	**865,804**

Notes: Actual GHG emissions have been rounded to the nearest thousand and percentages have been rounded to the nearest whole percent. Rounding was conducted independently after all calculations were made. / % = percent; < = less than; GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Analysis conducted by Ascent in 2025.

Legislative-Adjusted Greenhouse Gas Emissions Forecast

Legislative-adjusted BAU emissions forecast evaluates how the City's GHG emissions would change over time, accounting for legislative actions at the federal and State levels, such as regulatory requirements to increase vehicle fuel efficiency. This forecast provides the City with the information needed to focus efforts on certain emissions sectors and sources that have the most GHG reduction opportunities.

Based on 2022 GHG emissions levels, this scenario estimates annual GHG emissions in Lake Elsinore will decrease by approximately 9 percent in 2030 and 57 percent in 2045 (Table 2.3). This projected decrease in Legislative-adjusted BAU emissions is due to the accounting for legislative actions at the federal and State levels.

Table 2.3 Legislative-Adjusted Greenhouse Gas Emissions Forecast

Sector	GHG Emissions ($MTCO_2e$)	
	2030	2045
On-Road Transportation	258,720	86,072
Building Energy	130,739	51,908
Off-Road Vehicles and Equipment	23,380	35,938
Solid Waste	24,090	33,439
Water	6,931	-
Wastewater	580	622
Total	**444,439**	**207,979**

Notes: Actual GHG emissions have been rounded to the nearest thousand and percentages have been rounded to the nearest whole percent. Rounding was conducted independently after all calculations were made. / % = percent; < = less than; GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Analysis conducted by Ascent in 2025.

2.4 GHG Emissions Reduction Targets

The emissions reduction targets in this CAAP have been established to be consistent with statewide GHG emissions targets. As directed in SB 32 and AB 1279, the State aims to reduce annual GHG emissions to:

- 40 percent below 1990 levels by 2030,
- 85 percent below 1990 levels by 2045, and
- Net zero GHG emissions by 2045.

The State's targets are in line with the scientifically established levels needed to limit the rise in global temperature to no more than 2 degrees Celsius (°C), equivalent to 3.6 degrees Fahrenheit [°F], the warming threshold at which major climate disruptions, such as mega-droughts, are projected. These targets also pursue efforts to limit the global temperature increase even further to no more than 1.5 °C, equivalent to 2.5 °F (United Nations 2015:3).

The City aims to reduce GHG emissions in proportion to the State's targets and goals. Community emissions levels from 1990 are not available, which is the case for most local jurisdictions in California. Therefore, community GHG reduction targets for the City's CAP were developed relative to the City's emissions in 2022 and established in proportion with statewide reduction for all emissions sectors relevant to the City's jurisdiction, consistent with CARB guidance. Estimating equivalent reductions needed from the 2022 baseline, the City aims to reduce emissions to:

- 21 percent below 2022 levels by 2030, and
- 88 percent below 2022 levels by 2045.

The City's 2030 target requires GHG emissions to be reduced to 388,224 $MTCO_2e$ in 2030. In 2045, GHG emissions will need to be reduced to 57,278 $MTCO_2e$. Achievement of the 2045 target will require significant investments at the State level to transform the transportation and energy sectors to low- and zero-carbon, as well as improvements in and deployment of carbon removal technologies. Additional details on the GHG technical analysis can be found in Appendix B and Appendix E.

2.5 Local Emissions Gap

State and federal regulations alone will not be sufficient to achieve the City's GHG emissions reduction targets. The City needs to implement additional actions to close the remaining "local emissions gap" and achieve its reduction targets. Table 2.4 and Figure 2.4 display the City's forecasted emissions, targets, and the local emissions gap.

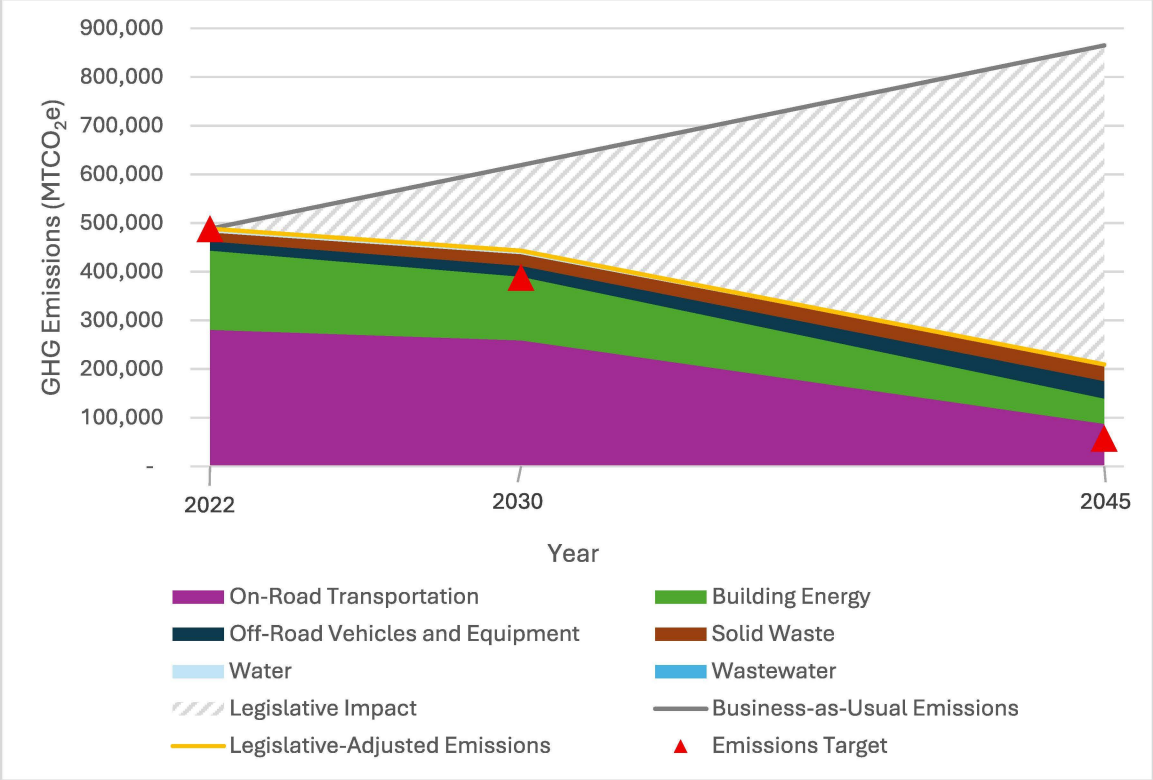
Table 2.4 Greenhouse Gas Local Emissions Gap

Sector	GHG Emissions ($MTCO_2e$)	
	2030	2045
Business-as-Usual Emissions	620,623	865,804
GHG Emissions Target	388,224	57,278
GHG Reductions Needed to Meet Target	230,638	807,628
Total Reductions from Federal and State Legislation	176,184	657,825
Local Emissions Gap	56,215	150,701

Notes: Actual GHG emissions have been rounded to the nearest thousand and percentages have been rounded to the nearest whole percent. Rounding was conducted independently after all calculations were made. GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Analysis conducted by Ascent in 2025.

Figure 2.4 Legislative-Adjusted Greenhouse Gas Emissions Forecast



Notes: GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Analysis conducted by Ascent in 2025.

Chapter 3
CLIMATE ADAPTATION



Chapter 3

This chapter describes the context of climate change adaptation and resilience for the City of Lake Elsinore. It outlines the climate change adaptation planning process; summarizes the city's exposure to existing and projected climate change effects, sensitivity to these effects and potential climate-related impacts, and the City's existing adaptive capacity to address these impacts. This chapter summarizes the Climate Resiliency Vulnerability Assessment (VA), which was finalized in April 2024 and developed in preparation for the Lake Elsinore General Plan Update. The VA, which includes additional information, data, and methodologies, can be found in Appendix C. A vulnerability assessment is a detailed analysis of how changing climate conditions can harm people, physical structures, and other community assets throughout the city. The VA assesses the increasing severity of climate change hazards to Lake Elsinore's people and assets and identifies the ones likely to face the greatest risks. In addition, this chapter identifies adaptation goals and strategies for the City to adapt to climate change effects and potential climate-related impacts.

Note that in this chapter, "City" (capitalized) refers to the City of Lake Elsinore as a local government agency, while "city" (lowercase) refers to the entire geographic area of Lake Elsinore.

3.1 Risks & Vulnerabilities

Overview

Climate change impacts are already occurring at global, regional, and local scales and will continue to intensify in the city. The primary effects of climate change evaluated in the VA include increased temperatures and changes in precipitation patterns. These primary climate change effects are projected to amplify risks from secondary climate change impacts, including wildfires, extreme heat events, extreme precipitation and flooding, and drought. While these climate change impacts have historically occurred across the city and surrounding regions, their frequency, intensity, and/or duration will increase due to climate change.

While it is imperative that global greenhouse gas (GHG) emissions be reduced to combat climate change, it is equally important for communities to prepare for the impacts of climate change and improve resilience through adaptation planning. Regional and local efforts are essential in building climate resilience—the capacity of a community to prepare for disruptions, recover from shocks and stresses, and adapt and grow from a disruptive experience arising from climate-related challenges. These efforts can lead to a greater understanding of localized climate change effects and a better sense of strategies to minimize their impacts. In many instances, there are already plans, policies, and programs in place at the local and regional levels that address existing climate change effects. In some instances, these may be sufficient to address existing climate change effects. In other cases, significant gaps may exist, and therefore, new and revised plans, policies, and programs will be needed. This Climate Action and Adaptation Plan (CAAP) aims to identify and address those gaps.

Adaptation Planning Process

The adaptation planning process aims to strengthen community resilience to climate change impacts. A resilient community is one that is prepared for current and future climate change effects and can minimize disruption when these impacts occur. Resilient communities can recover from climate change effects more quickly and rebuild in ways that enhance their future adaptive capacity.

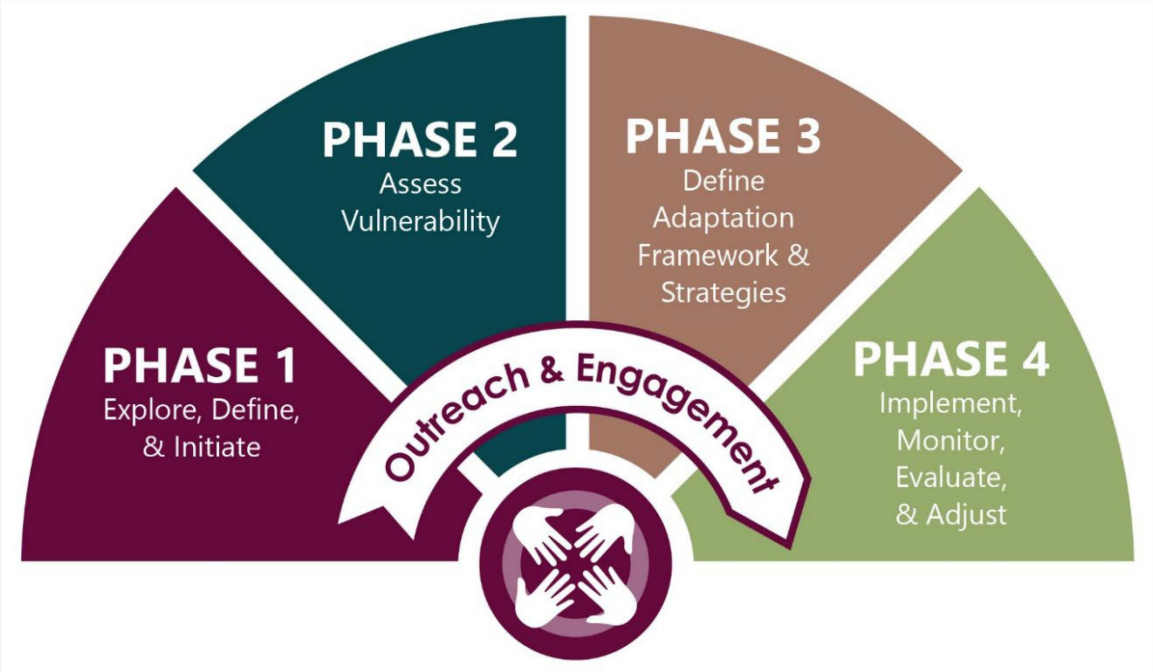
To assist local governments with adaptation planning, the California Governor's Office of Emergency Services (Cal OES) developed the California Adaptation Planning Guide (APG), which provides communities with vulnerability assessment and adaptation planning guidance. Last updated in June 2020, the APG includes a step-by-step process that communities may use to help plan for the impacts of climate change. The APG provides a framework for communities to identify potential climate change effects and important physical, social, and natural assets (e.g. critical facilities, disadvantaged communities, critical habitats); create adaptation strategies to address the impacts of climate change effects; and develop a monitoring and implementation framework for climate change adaptation. The APG served as the primary guidance document for preparing the adaptation components of this CAAP (Cal OES 2020).

The APG includes a four-phase process, illustrated in Figure 3.1, which allows communities to assess their specific climate vulnerabilities and informs strategies for communities to reduce risk and prepare for current and future impacts of climate change effects.

- **Phase 1, "Explore, Define, and Initiate,"** includes scoping and defining the adaptation planning effort. This involves identifying key interested parties, potential climate change effects, and important populations and assets in the community.
- **Phase 2, "Assess Vulnerability,"** includes an analysis of the potential impacts and adaptive capacity associated with climate change effects to determine the vulnerability of populations and community assets. The vulnerability assessment is composed of four steps: exposure, sensitivity and potential impacts, adaptive capacity, and vulnerability scoring.
- **Phase 3, "Define Adaptation Framework and Strategies,"** focuses on developing adaptation strategies to address the risks posed by climate change effects based on the results of the vulnerability assessment.
- **In Phase 4, "Implement, Monitor, Evaluate, and Adjust,"** the adaptation framework is implemented, consistently monitored and evaluated, and adjusted based on continual learning, feedback, or triggers.

The VA prepared for the City fulfilled the objectives of Phase 2: "Assess Vulnerability." Section 3.2 of this chapter advances the process by addressing the objectives of Phase 3: "Define Adaptation Framework and Strategies." The following subsections under Section 3.1 provide a summary of the VA findings.

Figure 3.1 Climate Adaptation Planning Phases



Source: CalOES 2020; adapted by Ascent in 2025.

Vulnerability Assessment Process

The City's VA provides a comprehensive analysis of community vulnerabilities to climate change. It identifies and characterizes projected climate change effects that are anticipated to impact the community. Following Phase 2 of the APG, the VA identifies and characterizes projected climate impacts and addresses four key questions:

- Exposure: what climate change effects will the city experience?
- Sensitivity and Potential Impacts: what aspects of the community (i.e., populations, built environment, community functions) will be affected? How will climate change affect the points of sensitivity?
- Adaptive Capacity: what is currently being done and what ability does the City have to address the impacts?
- Vulnerability Scoring: how vulnerable is the city to each climate change effect?

The VA was conducted according to APG guidance using the steps outlined above. For the exposure analysis, potential climate impacts were assessed using Cal-Adapt—a climate modeling tool developed by the California Energy Commission and the University of California, Berkeley that uses downscaled global climate model data. One future emissions scenario, known as a Representative Concentration Pathway (RCP), was applied in the VA: RCP 8.5, which reflects a high GHG emissions trajectory. This scenario assumes that global emissions continue to rise throughout the 21st century with little to no climate policy. The geographic boundary of the city was used as the study area for this analysis of climate change effects.

In addition to Cal-Adapt, several existing resources were reviewed to obtain

information about climate change effects. Data from California's Fourth Climate Change Assessment (LCI et al. 2018) and the 2017 Lake Elsinore Local Hazard Mitigation Plan (City of Lake Elsinore 2017), along with additional resources (see Appendix C), were reviewed to assess the various potential climate change effects and associated impacts within the city.

Summary of Climate Change Effects

The VA was prepared to help the City identify the most urgent climate vulnerabilities in the community that should be prioritized during the adaptation strategy development process. The results also informed the prioritization of strategy implementation. The full VA, including detailed data, additional information, and references, can be found in Appendix C. Prioritization criteria and results of the prioritization exercise are provided in Appendix D.

Exposure and Sensitivity Analysis Summary

The following sections summarize the projected exposures and their impact on the city's population groups and community assets. The climate change effects evaluated include drought and water supply, increased temperature and extreme heat, extreme precipitation and flooding, and increased wildfire risk. As part of the VA, a total of 17 population groups and 15 community assets were identified. Population groups include, but are not limited to, low-income households, households in poverty, and cost-burdened households. Community assets include, but are not limited to, major roads and highways, airports, and electric transmission and distribution lines.

To evaluate how significant the impacts of each relevant exposure are for these sensitive populations and assets, a set of guiding questions was applied to ensure the assessment considered a broad range of potential harms, following the APG's guidance. These questions include, but are not limited to:

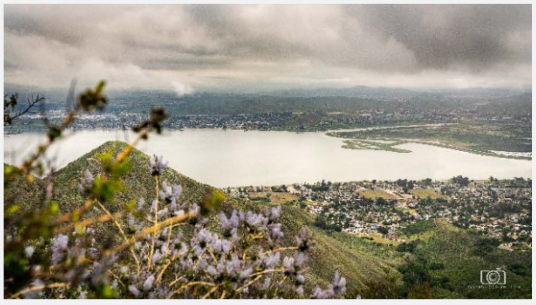
- What types of impacts may occur?
- Is there a risk of behavioral or mental harm, loss of economic activity, or other nonphysical effects?
- How long would the impacts persist?

Based on this analysis, impacts to each population group and community asset were ranked from low to high for each relevant exposure. Additional details on the methodology used in the VA can be found in Appendix C.

Drought and Water Supply

Drought is a recurring hazard in Lake Elsinore and throughout Southern California, and it is expected to become more frequent, severe, and prolonged under a changing climate. Although projections suggest that annual precipitation will remain close to historical averages, climate models indicate that rainfall patterns will be less stable, with longer dry periods punctuated by more extreme precipitation events. Rising temperatures and more frequent extreme heat days will further intensify drought impacts by increasing evaporation from lakes and reservoirs, reducing soil moisture, and accelerating water loss across the region. These changes not only threaten water supply but also place stress on ecological systems and increase wildfire risk as vegetation becomes more flammable during extended dry periods.

The city's potable water supply is heavily dependent on imported water, which accounts for about 65 percent of Elsinore Valley Municipal Water District (EVMWD)'s total supply. Imported water is sourced primarily through the Colorado River Aqueduct and the State Water Project, with supplemental supplies from Lake Skinner in Temecula and Lake Mathews in Riverside. Local groundwater and surface water from Canyon Lake provide the remainder. While this reliance on imported water provides some protection from local drought conditions, it also makes the community vulnerable to regional and statewide shortages under hotter and drier conditions. Locally, Lake Elsinore itself relies on rainfall and urban runoff for recharge. During drought conditions, lake levels can drop significantly, leading to degraded water quality, algae blooms, and fish kills, which in turn threaten recreation and tourism, a major economic driver and part of the City's community identity.



The impacts of drought and water scarcity are not felt equally across the community. Financially constrained households are particularly vulnerable as drought can lead to higher water utility costs and greater maintenance expenses, straining already limited budgets. These households may have fewer resources to invest in water-efficient appliances, landscaping, or home retrofits. Socially or physically isolated communities are also at greater risk, as they may be cut off from emergency resources if water service is disrupted or if communication barriers limit access to drought-related advisories. Seniors, individuals with chronic health conditions, and those dependent on medical devices are additionally vulnerable, as service interruptions in water or wastewater systems can directly impact health and safety.



Critical community assets face significant risks as well. Water infrastructure can be impaired when reservoir levels drop too low, limiting the ability to deliver reliable supplies. Wastewater systems also become stressed when reduced flows hinder their ability to operate effectively, and pump stations or distribution systems may be damaged under drought-related conditions, particularly when combined with wildfire impacts. Natural and managed resources, including wildlands and open spaces around the city, are particularly sensitive to prolonged drought, which weakens ecological health, reduces habitat quality, and increases fire ignition potential. These cascading impacts can reduce the recreational, ecological, and protective functions of local landscapes.

Taken together, drought in Lake Elsinore poses both direct threats to water supply and quality and indirect cascading risks to public health, infrastructure, natural systems, and the local economy. Building resilience requires acknowledging the city's dual vulnerabilities: dependence on

external imported supplies that may diminish under regional drought, and reliance on local water bodies that support recreation, tourism, and community well-being but are highly sensitive to changing climate conditions.

Increased Temperatures and Extreme Heat

Extreme heat is expected to become much more frequent and intense in Lake Elsinore as the climate warms. Historically, the city's annual average maximum temperature was about 78 °F (1961–1990). By mid-century, this could rise to 83 °F, and by the end of the century to nearly 87 °F (CEC 2025a). Under the high-emissions scenario (RCP 8.5), residents may experience 31 to 51 extreme heat days per year by mid- and end-century, with heat waves lasting up to 15 days (CEC 2025b). The extreme heat season, once limited to May through October, could expand to cover most of the year. These changes will elevate health risks, strain energy and water systems, and limit safe opportunities for outdoor activities.

Table 3.1 Changes in Annual Average Maximum Temperature and Extreme Heat Events

Annual Averages	Historical (1961-1990)	Mid-Century (2035-2064)	End-Century (2070-2099)
Annual Average Maximum Temperature	78.1ºF	83.3 ºF	86.7 ºF
Number of Extreme Heat Days	5	31	51
Number of Days in Longest Stretch of Consecutive Extreme Heat Days	3	9	15

Note: Extreme heat threshold: 103.8 °F. All extreme heat data and projections are based on Representative Concentration Pathway 8.5. °F = Fahrenheit.

Source: CEC 2025a, 2025b.

Financially constrained households may struggle to keep homes cool, leading to unsafe indoor temperatures. Outdoor workers and unhoused residents are directly exposed to high heat, increasing risks of dehydration and heat illness. Seniors, children, and people with chronic health conditions are more susceptible to heat stress, especially if they lack access to air-conditioned spaces or reliable transportation to cooling centers.

Prolonged extreme heat places stress on the electric grid, raising the risk of power outages during peak demand. Emergency and health services may be strained as staff face fatigue and greater demand for response. Older homes, schools, and community facilities without modern cooling systems can quickly become unsafe. Natural areas and open spaces are also at risk, as high heat combined with drought can degrade ecosystems and increase wildfire hazards.

Extreme Precipitation and Flooding

Flooding is a primary hazard of concern in Lake Elsinore. Severe or prolonged rainfall can overwhelm streams, drainage systems,

and urban storm systems, causing localized and regional flooding. Flash floods are especially dangerous because they develop quickly with little advance warning.

Flood events can cause severe impacts to people, property, and infrastructure, including drowning risk, erosion and slope instability, damage to roads and utilities, and destruction of buildings and personal property. Large portions of the city lie within Federal Emergency Management Agency 100-year flood hazard zones, which are areas with a one percent chance of flooding in any given year.

Lake Elsinore has the following history of significant flooding events:

- In February 2019, flooding and mudflows occurred in areas adjacent to the 2018 Holy Fire burn area after heavy rains.
- In 1980, heavy rainstorms caused Lake Elsinore to flood, destroying nearby homes and businesses. This led to the construction of the Lake Elsinore Management Project (1988–1994) and improvements to water release from Canyon Lake Dam.

Flood management is the joint responsibility of the Riverside County Flood Control and Water Quality Management District and the City of Lake Elsinore. All new development projects must consider flooding and storm drainage, with limited encroachment allowed into the 100-year floodplain fringe (primarily for public facilities).

Although Southern California is projected to experience overall decreases in precipitation, the frequency of extreme precipitation events is expected to rise under climate change. These changes are likely to increase the frequency and severity of flood events in Lake Elsinore, even though precise projections are not yet available at the local scale.



Financially constrained households may struggle to repair or retrofit flood-damaged homes, leaving them in unsafe conditions. Physically or socially isolated communities can lose access to water, energy, or evacuation assistance during flood events. Seniors, people with disabilities, and those with chronic illnesses may face difficulties evacuating or coping if services are disrupted.

Flooding can damage low-lying roads, cutting off access to goods, services, and emergency response. Water and wastewater systems may be overwhelmed, while power lines and substations near flood zones are vulnerable to outages. Communication systems such as cell towers in flood-prone areas can fail, limiting emergency alerts. Residential, commercial, and public buildings may be damaged, with mold growth or unsafe conditions prolonging recovery. Flooding also degrades natural areas and open space, reducing ecosystem health and increasing long-term risks.

Increased Wildfire Risk

Wildfires are a persistent and growing hazard in Lake Elsinore due to the region's Mediterranean climate of hot, dry summers, steep and varied terrain, and abundant vegetation. Fires may ignite naturally from lightning or Santa Ana winds, but most are

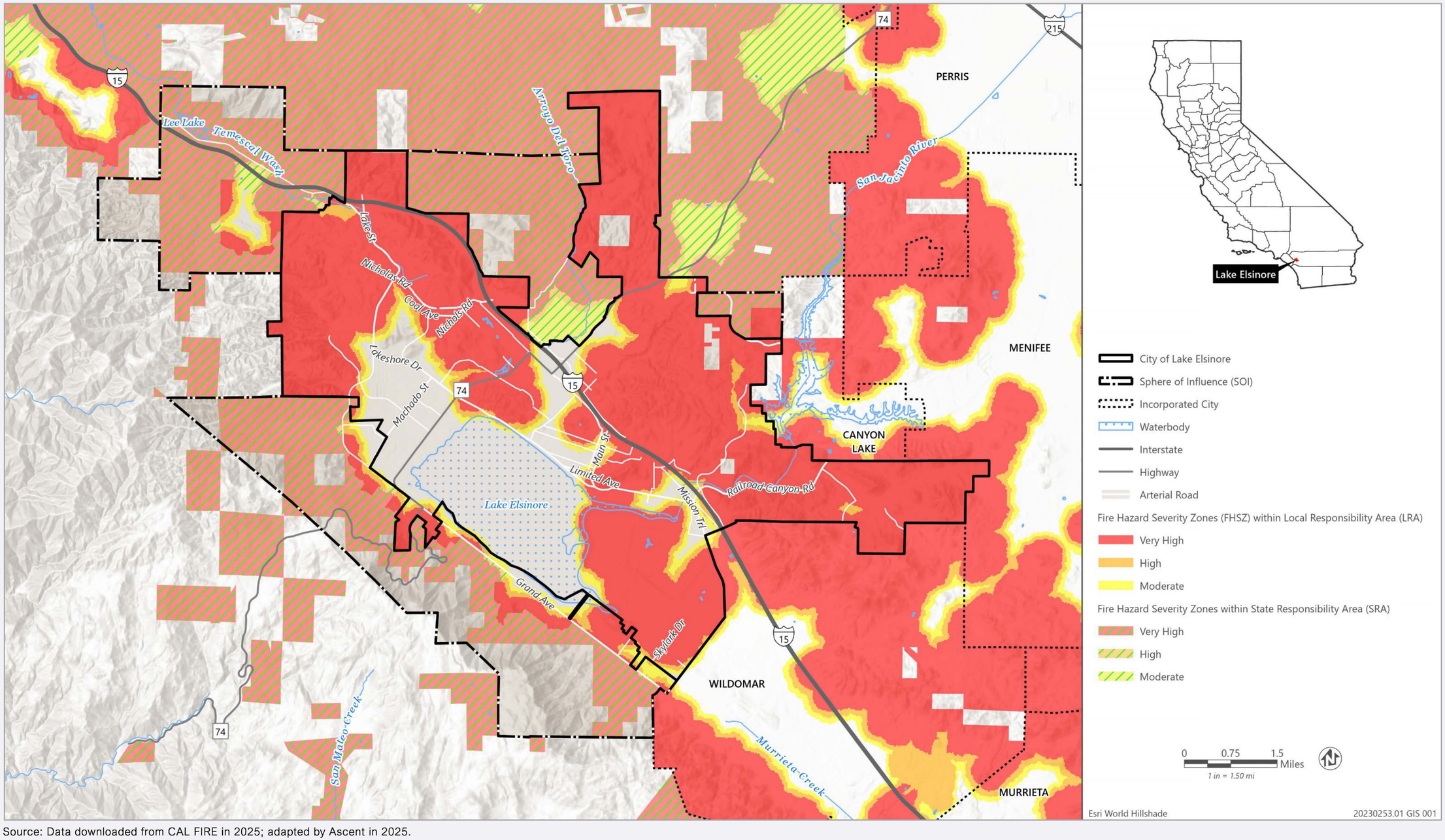
caused by human activity such as smoking, campfires, equipment use, or arson. Recently, many wildfires in Riverside county have been linked to arson or equipment sparks. The mix of dry fuels, high winds, and rugged topography creates conditions where fires can spread rapidly and become extremely difficult to control. Grasslands and shrublands in particular pose elevated risk because they ignite easily and burn quickly at high temperatures, especially during wind-driven events. Much of Lake Elsinore and its Sphere of Influence is mapped by the California Department of Forestry and Fire Protection (CAL FIRE) to fall within High or Very High Fire Hazard Severity Zones (FHSZs), underscoring the level of exposure within the city and surrounding areas.

The City contracts with the Riverside County Fire Department and CAL FIRE for fire protection services. CAL FIRE is responsible for State Responsibility Areas (SRAs), which generally cover undeveloped lands and natural areas, while the County Fire Department provides services in Local Responsibility Areas (LRAs), including incorporated areas and developed communities. On federal lands, the U.S. Forest Service has primary responsibility, often working in coordination with CAL FIRE and Riverside County. This tiered system of fire protection means that effective wildfire management depends heavily on interagency coordination and resource sharing, particularly during large-scale fire events. Figure 3.2 below shows the FHSZs, and various SRAs and LRAs within the city and surrounding areas.

Wildfires have already had serious consequences for Lake Elsinore. The 2018 Holy Fire burned 92 square miles of the Cleveland National Forest, including more than 23,000 acres and 160 buildings within city limits. The fire forced large-scale evacuations, destroyed homes and infrastructure, and left behind steep, unstable slopes that later produced flooding and mudflows during heavy rains. Historical data indicate that nearly 80 percent of wildfires in the region occur during the summer and fall, with about one quarter ignited during Santa Ana wind events. These wind-driven fires are especially destructive due to their speed and intensity, often overwhelming firefighting efforts and leaving little time for evacuation.

Looking ahead, climate change is projected to further increase both the frequency and severity of wildfires in Lake Elsinore. Rising temperatures and prolonged droughts will create longer and drier fire seasons. Vegetation that dries out earlier in the year will provide more continuous fuel, and soils weakened by drought will be less able to recover after fires. These conditions are also expected to heighten the risks of secondary hazards such as flash floods, erosion, landslides, and mudflows in recently burned areas. According to the California Fourth Climate Change Assessment, the region could see more than a 60 percent increase in burned area from Santa Ana wind-driven fires and more than a 75 percent increase from non–Santa Ana wind-driven fires by mid-century. Models also suggest a long-term shift: while burned area may decline toward the end of the century due to fuel reductions from repeated burning, the overall trend will be toward more severe and damaging wildfire events over the coming decades (LCI et al. 2018).

Figure 3.2 City of Lake Elsinore Fire Hazard Severity Zones, Local Responsibility Areas and State Responsibility Areas



Source: Data downloaded from CAL FIRE in 2025; adapted by Ascent in 2025.

At-risk groups, including seniors, people with chronic illnesses, children, and financially constrained households, are especially vulnerable to wildfire smoke, which can worsen respiratory and cardiovascular conditions. Residents with limited mobility or resources may also face difficulties evacuating quickly during fire events or coping with secondary hazards like post-fire flooding and mudflows.

Wildfires can damage or destroy homes, schools, and public facilities, displacing residents and disrupting essential services. Smoke and ash can render buildings unusable until cleaned or repaired. Critical infrastructure such as power lines, water systems, and roads are also at risk, leading to outages, unsafe conditions, and barriers to emergency response. Natural areas, including hillsides and open space, are highly susceptible to burning, and post-fire conditions often increase erosion, landslides, and debris flows.

Summary of Adaptive Capacity

The third step of the VA process evaluates the City's adaptive capacity to address climate change impacts. In the context of climate adaptation, adaptive capacity measures a community's current and future ability to address the impacts of climate change effects.

The City's adaptive capacity to address climate change impacts can be assessed through its current policies, plans, programs, and resources, along with those of relevant regional and State agencies and organizations. This adaptive capacity review reveals how effectively the City can minimize climate vulnerabilities and implement adaptation strategies. Table 3.2 shows a summary of existing plans and reports that contribute to the City's adaptive capacity to address the anticipated impacts of climate change effects.

The City has already taken a number of actions to address climate change impacts on its communities. The Riverside County Multi-Jurisdictional Hazard Mitigation Plan (MJLHMP) and the Lake Elsinore Local Hazard Mitigation Plan (LHMP) establish the foundation for assessing and addressing hazards in the region, including those intensified by climate change, while strengthening overall community resilience. Beyond the MJLHMP and LHMP, the City maintains several additional adaptive efforts in place to address climate change effects. More details on the City's adaptive capacity can be found in the VA in Appendix C.

Vulnerability Assessment Results

The VA evaluates 17 population groups and 15 community assets for each relevant climate exposure, assessing both impact and adaptive capacity. Each group or asset is assigned a final vulnerability score on a scale of V1 to V5, adjusted for risk and timing of the exposure. Scores of V4 or V5 are considered significant, reflecting high susceptibility to harm. The 17 population groups and their associated scores are shown in Table 3.3, and the 15 community assets and their associated scores are shown in Table 3.4. Additional detail on the methodology and full results of the Vulnerability Assessment can be found in Appendix C

Table 3.2 Adaptive Capacity in Local and Regional Existing Plans and Reports

Climate Change Effects				
Plan or Report	Drought and Water Supply	Increased Temperature and Extreme Heat	Extreme Precipitation and Flooding	Increased Wildfire Risk
Lake Elsinore General Plan (2011)	—[1]	✓	✓	✓
Lake Elsinore Local Hazard Mitigation Plan (2023)	—[1]	✓	✓	✓
Lake Elsinore Climate Action Plan (2011)[2]	—	—	—	—
Riverside County Multi-Jurisdictional Local Hazard Mitigation Plan (2023)	✓	✓	✓	✓
Riverside County Climate Action Plan (2019)[2]	—	—	—	—
Western Riverside Council of Governments Western Riverside County Vulnerability Assessment and Adaptation Strategies (2019)	☒	☒	☒	☒

[1] This denotes that while a given plan explores how drought will affect Lake Elsinore's populations and assets, it does not contain drought-specific policies and adaptation measures.

[2] The climate action plans do not identify hazard-specific policies and adaptation measures, although GHG reduction policies and measures could reduce the future probability and severity of climate-induced hazards.

Source: City of Lake Elsinore 2024b.

Table 3.3 Population Groups and Vulnerability Scores

Population Group	Drought	Extreme Heat	Flooding	Wildfire
Low-income Households	N/A	V4	V5	V4
Households in Poverty	N/A	V5	V5	V5
Cost-burdened Households	N/A	<V4	<V4	<V4
Severely Overcrowded Households	N/A	<V4	<V4	<V4
Renters	N/A	<V4	V4	<V4
Mobile Homes	N/A	<V4	<V4	V4
Persons without Access to Transportation or Telecommunications	N/A	<V4	V5	V5
Linguistically Isolated Communities	N/A	<V4	<V4	V4
Low-Resources Racial or Ethnic Minorities	N/A	<V4	V4	V4
Outdoor Workers	V5	V4	V4	V4
Healthcare Workers, First Responders, and Protective Service Occupations	V5	V4	V4	V4
Houseless Population	V5	V4	V5	V4
Children (Under 14 Years of Age)	N/A	V5	<V4	V5
Persons with Disabilities	N/A	V4	V4	V5
Persons with Chronic Health Problems	N/A	V5	<V4	V5
Seniors (65+)	N/A	V4	<V4	V5
Persons Living Alone	N/A	<V4	<V4	<V4

Source: City of Lake Elsinore 2024b.

Note: N/A = Not Applicable; < = lower than. For population groups with vulnerability scores below V4 (<V4), please refer to Appendix C for the full set of scores and additional details.

Table 3.4 Community Assets and Vulnerability Scores

Population Group	Drought	Extreme Heat	Flooding	Wildfire
Airports	N/A	N/A	<V4	<V4
Transit Routes	N/A	N/A	<V4	<V4
Major Roads and Highways	N/A	N/A	V4	V4
Freight	N/A	N/A	V4	V4
Electrical Substations	N/A	V4	<V4	V4
Electrical Transmission and Distribution Lines	N/A	V4	<V4	V4
Water and Wastewater Infrastructure	<V4	<V4	V4	<V4
Flood Control Infrastructure	V4	N/A	V4	<V4
Emergency Services	N/A	V4	V4	V4
Communication Services	N/A	<V4	<V4	V5
Areas of Concentrated Residential Development	N/A	<V4	V5	V4
Government Buildings and Sites	N/A	<V4	<V4	<V4
Key Employment or Commercial Centers	N/A	<V4	<V4	<V4
Schools	N/A	<V4	<V4	<V4
Wildlands and open spaces	V4	<V4	<V4	<V4

Source: City of Lake Elsinore 2024b.

Note: N/A = Not Applicable; < = lower than. For community assets with vulnerability scores below V4 (<V4), please refer to Appendix C for the full set of scores and additional details.

Based on the results of the VA, increased wildfire risk poses the greatest vulnerability in the city, as shown by Tables 3 and 4 above. Thirteen population groups are significantly vulnerable to wildfire, more than any other hazard. This is followed by increased temperatures and extreme heat (nine groups), extreme precipitation and flooding (nine groups), and drought and water supply (three groups). Similarly, community assets show the highest vulnerability to wildfire, with seven assets rated significant. This is followed by extreme precipitation and flooding (six assets), increased temperatures and extreme heat (three assets), and drought and water supply (two assets). Refer to Appendix C for more details on the VA scoring results.

Many populations in Lake Elsinore are highly vulnerable to extreme heat, flooding, landslides, and wildfire due to both the severity of impacts and limited adaptive capacity. Households in poverty and low-income households are more vulnerable because of fewer financial resources and limited ability to respond or recover, while socially isolated communities may struggle to receive emergency notifications or evacuate quickly. Seniors, people with disabilities, and those with chronic illnesses face additional risks because of mobility challenges or reliance on medical equipment that cannot be transported easily. Outdoor workers, health and emergency service workers, and unhoused individuals are also especially vulnerable because of their constant exposure to hazardous conditions. Although some regional and local programs exist, additional local measures are needed to strengthen resilience and support the city's most vulnerable populations.

Many of Lake Elsinore's key infrastructure systems, including roads, freight routes, water and wastewater networks, and the electrical grid, are highly vulnerable to climate hazards due to their scale, integration, and cost of relocation or redesign. Flooding, wildfire, or other hazards can damage or close major roads and highways, isolating residents and disrupting access to essential services. Emergency and communication services are also at risk, as climate events increase demands on staff, equipment, and coordination, with multi-jurisdictional collaboration becoming more critical during major disasters. Buildings, particularly in areas of concentrated residential development, face high vulnerability, and while retrofits or upgrades can reduce risks, they are often costly or infeasible for many property owners, especially households in poverty and low-income households. Without adequate protection or insurance, buildings could sustain long-term damage or even become uninhabitable under chronic climate stresses. Wildlands and open spaces are similarly at risk, as drought, extreme heat, and wildfire degrade vegetation, wildlife habitat, and slope stability, leading to cascading risks such as pest infestations, erosion, and landslides. While local and regional policies and plans exist to address these vulnerabilities, additional strategies are also needed to strengthen the resilience of critical assets across the city.

3.2 Goals & Strategies

Lake Elsinore faces growing risks from climate change effects and hazards. The City's VA identified population groups and community assets that are most at risk, highlighting the importance of proactive adaptation efforts. Building on these findings, the City developed a set of climate adaptation goals and strategies to reduce risks, protect vulnerable residents, and enhance resilience across the community.

Methodology

The adaptation goals and strategies were developed by reviewing Lake Elsinore's existing plans, such as the City's General Plan Safety Element, LHMP, and regional efforts led by Riverside County and the Western Riverside Council of Governments, and identifying gaps where vulnerabilities remained. Goals represent broad outcomes the City seeks to achieve, while strategies identify specific actions, programs, and policies to achieve these goals. The goals and strategies presented below form the foundation of Lake Elsinore's long-term approach to enhancing climate adaptation and building climate resilience.

Climate Adaptation Goals and Strategies

Goal 1: Improve The Overall Climate Resilience of the City of Lake Elsinore.

Strategies identified under this goal focus on comprehensively preparing the city for impacts from climate change hazards and improving the city's overall climate resilience.

Strategy All-1: Implement and monitor the effectiveness of existing policies, actions, and measures identified in the City and regional entities' existing plans, including, but not limited to the hazard mitigation plan(s), general plan safety element and Western Riverside Adaptation and Resiliency Strategy.

Strategy All-2: Enhance the climate resilience of existing and new residential and commercial developments by encouraging and incentivizing the use of pervious paving and climate-smart landscaped surfaces to prepare for more frequent extreme heat, drought and flooding events.

Strategy All-3: Increase the climate resilience of existing and new residential and commercial development through structural strengthening and hardening to adapt to multiple climate change hazards, via updating the City's local building code or adopting targeted amendments to address key climate vulnerabilities.

Strategy All-4: Avoid the future construction of critical facilities and infrastructure in or near climate change hazard-prone areas.

Strategy All-5: Collaborate with nearby jurisdictions and Riverside County to protect existing critical facilities and infrastructure from climate change hazards via regular maintenance and retrofitting.

Strategy All-6: Invest in sustainable backup power sources to provide redundancy and continued services for critical facilities in the event of an outage.

Strategy All-7: Utilize the best available data and research to understand how climate change hazards may affect the city's transportation system and infrastructure. Collaborate with the California Department of Transportation (Caltrans) to improve the climate resilience of the city's transportation system and infrastructure.

Strategy All-8: Incorporate considerations of climate change and health equity into all governmental initiatives and fundamental operations. Ensure that public health initiatives serving vulnerable communities address the disproportionate impacts of climate change hazards on these communities.

Strategy All-9: Integrate climate change considerations into all stages of the City's emergency management planning, encompassing mitigation, preparedness, response, and recovery endeavors.

Strategy All-10: Consider the impacts of climate change hazards when carrying out the City's evacuation planning. Ensure the planning efforts are consistent with the City's emergency operations plan and general plan safety element.

Strategy All-11: Enhance the resilience of energy infrastructure systems against climate change hazards by collaborating with Southern California Edison (SCE) to bolster redundancy in the energy network. Ensure the regular maintenance and retrofitting of energy infrastructure to prepare it for climate change hazards.

Strategy All-12: Maintain and update the City's website with information about current climate change hazards. Enhance the monitoring of these hazards to ensure rapid response and recovery. Coordinate with SCE on the notifications of power outages due to climate change hazards

Strategy All-13: Increase public awareness of climate change hazards and how to prepare for such hazards via the regular community outreach events hosted in the city. Improve collaboration and information sharing among the City, other public agencies, community-based organizations, and vulnerable communities.

Strategy All-14: Identify potential locations throughout the city as new community resilience centers or "resilience hubs." either through new construction or repurposing of existing facilities. Resilience hubs provide places of refuge for vulnerable community members during power outages, extreme weather events, wildfires, or other climate change hazards.

Strategy All-15: Establish backup power and water resources at emergency shelters and cooling centers in case of power outages due to climate change hazards.

Strategy All-16: Coordinate with the County of Riverside Continuum of Care and other existing programs to ensure that emergency shelters are available during climate change hazards. Ensure that vulnerable communities are made aware of these resources.

Strategy All-17: Enhance the climate resilience of existing and new residential and commercial development by promoting structural hardening, pervious surfaces, and climate-smart landscaping to address multiple hazards such as extreme heat, flooding, and wildfire. This may include updates to the City's building

code, targeted retrofits, and incentives or support for resilience upgrades, particularly in disadvantaged communities, mobile home parks, and other vulnerable areas.

Goal 2: Prepare for More Frequent Drought Events and Enhance the City's Overall Water Supply Resilience.

Strategies identified under this goal focus on preparing the city for more frequent drought events and enhancing the city's overall water supply resilience.

Strategy Drought-1: Partner with EVMWD to evaluate the vulnerability of the local water supply systems and networks to climate impacts and develop strategies to enhance the resilience of these systems.

Strategy Drought-2: Collaborate with EVMWD and expand upon existing water conservation-related education and outreach programs for the City's residents and businesses.

Strategy Drought-3: Collaborate with federal, State, and local agencies and organizations to identify future water supplies and explore alternative supply sources.

Strategy Drought-4: Implement systems to capture and store stormwater for reuse in irrigation, landscape maintenance, or non-potable uses. Encourage the installation of greywater and water recycling systems to reuse water for irrigation purposes.

Strategy Drought-5: Collaborate with regional water agencies to stabilize water levels in Lake Elsinore, using supplemental water sources if necessary to maintain the Lake's ecological health and recreational value. Restore the Lake's surrounding wetlands and riparian zones to enhance water retention, improve water quality, and support biodiversity.

Strategy Drought-6: Consider amending the City's Uniform Building Code to require development projects to reduce indoor water consumption by 30% (consistent with 2025 CALGreen Tier 1, Section A5.303.2.3.1), and implement through conditions of approval.

Strategy Drought-7: For outdoor irrigation, recommend using automatic timers and adjusting watering schedules to the cooler hours between 6 p.m. and 6 a.m., which are more restrictive than the current municipal code hours of 5 p.m. to 9 a.m.

Strategy Drought-8: Encourage the adoption of advanced irrigation techniques such as drip irrigation, moisture sensors, and weather-responsive controllers to enhance water efficiency and promote sustainable landscaping practices. Incentivize planting native and drought-tolerant plants that require less watering instead of traditional lawns.

Strategy Drought-9: Restrict water use during construction activities to only those purposes required by regulatory agencies when using water from a construction meter, hydrant meter, or water truck.

Strategy Drought-10: Encourage the installation of water-saving devices for indoor and outdoor uses, including but not limited to open hoses equipped with automatic and positive shutoff nozzles, low-flow showerheads and faucet aerators for residential and commercial buildings, and recirculating pumps for

swimming pools, fountains, and other water features.

Strategy Drought-11: Collaborate with EVMWD to offer residential and commercial customers water efficient rebate to upgrade their properties and fixtures.

Strategy Drought-12: Encourage and expand the implementation of drought-resistant green infrastructure such as street trees and landscaped areas to enhance cooling in both public and private spaces.

Goal 3: Prepare for Increased Temperatures and More Frequent Extreme Heat Events.

The strategies proposed here focus on preparing the city for increased temperatures and more frequent extreme heat events.

Strategy Temp-1: Enhance the City's emergency preparedness and response efforts regarding extreme heat events by developing or enhancing heatwave early warning systems. Consider collaborating with Riverside County or creating the City's own heat action plan.

Strategy Temp-2: Use reflective or permeable pavement materials that reduce heat absorption and mitigate the heat island effect, particularly in parking lots, sidewalks, and streets.

Strategy Temp-3: Collaborate with SCE to prepare the city's electric substations as well as transmission and distribution lines for more frequent extreme heat events by upgrading conductors, transformers, and other critical components with materials that are better suited to withstand higher temperatures, as well as improving the insulation on transmission and distribution lines to prevent overheating.

Strategy Temp-4: Partner with SCE to implement load management strategies and demand response programs to reduce strain on electric substations and transmission lines during extreme heat events.

Strategy Temp-5: Revise the City's municipal code to require new development to plant at minimum two 15-gallon non-deciduous, umbrella-form trees per 30 linear feet of boundary length near buildings through the development review process. Trees shall be planted in strategic locations around buildings or to shade pavement in parking lots and streets.

Strategy Temp-6: Consider amending the City's municipal code to require new non-residential development to use roofing materials having solar reflectance, thermal emittance or solar reflectance index consistent with 2025 CALGreen Tier 1 values (Table A5.106.11.2.1) and implement through conditions of approval.

Strategy Temp-7: Employ passive solar heating techniques whenever possible with new development projects. Such techniques involve, but are not limited to, orienting buildings properly, planting trees to take advantage of the sun, as well as ensuring adequate roof overhangs and proper wall insulation.

Strategy Temp-8: Work with the California Division of Occupational Safety and Health and employers to provide outdoor workers with sufficient training regarding protection from extreme heat conditions, ensuring the maintenance of healthy and safe working environments.

Strategy Temp-9: Coordinate with Riverside Transit Agency to increase shading and heat-mitigating materials on pedestrian walkways and transit stops.

Strategy Temp-10: Restore and enhance plant habitats for natural shading and cooling.

Strategy Temp-11: Reduce public exposure to extreme heat by expanding access to drinking water and shaded spaces in parks, schoolyards, and recreational facilities with a focus on equity and prioritization of underserved communities and high-heat zones.

Goal 4: Prepare for More Frequent Extreme Precipitation, Flooding, Landslide, Mudflow, and Debris Flow Events.

The strategies proposed here focus on preparing the city for more frequent extreme precipitation and flooding events, combined with landslides, mudflows, and debris flow events.

Strategy Flood-1: Implement the Master Drainage Plan adopted by the City in April 2023. Continue to update studies that outline flood hazard areas outside of the Master Drainage Plan.

Strategy Flood-2: Ensure that new construction activities in floodways and floodplains conform to all applicable provisions of the National Flood Insurance Program to protect from flooding.

Strategy Flood-3: Utilize the City's Capital Improvement Program for storm drainage projects and maintenance and improvement of local storm drain systems, including but not limited to channels, pipes, and inlets to ensure capacity for maximum runoff flows.

Strategy Flood-4: Identify and address areas with poor drainage to lower disease risks associated with stagnant water. Enhance education and outreach initiatives to inform communities about potential increases in vector-borne diseases due to stagnant water.

Strategy Flood-5: Encourage retrofits of hardscaped areas to use permeable paving. Permeable paving can also mitigate the heat island effect, as specified in Strategy Temp-2.

Strategy Flood-6: Restore riparian corridors, soft-bottomed streambeds, and seasonal flood basins to help mitigate flood hazards.

Strategy Flood-7: Encourage the creation of floodway setbacks for greenways, trails, and recreation areas while discouraging development within floodways.

Strategy Flood-8: Mandate the construction of channel improvements designed to accommodate 100-year flood flows where applicable. Promote drainage improvements that maintain a natural or semi-natural floodplain.

Strategy Flood-9: Promote low-impact development practices in new construction projects. Low-impact development is a land use and engineering design approach that aims to manage stormwater runoff and protect water quality.

Strategy Flood-10: Assess new development applications for potential flood hazards through project review and California Environmental Quality Act processes using Federal Emergency Management Agency (FEMA) regulations and mapping data. Require compliance with FEMA Special Flood Hazard Area requirements for projects located within or

adjacent to designated flood hazard areas, or when site-specific conditions indicate a flood risk.

Strategy Flood-11: Coordinate with EVMWD and other sanitation districts and waste management agencies to improve sewage and solid waste management infrastructure to lessen the occurrences of floodwater contamination, thereby reducing the spread of pollution and degraded water quality.

Strategy Flood-12: Coordinate with Riverside County Flood Control and Water Quality Management District to identify new locations suitable for multi-benefit flood control that encourage groundwater recharge and habitat restoration.

Strategy Flood-13: Retrofit and/or relocate infrastructure and critical facilities exposed to flooding and landslide hazards to make them more resilient to such hazards, based on GIS-based spatial analyses.

Strategy Flood-14: Ensure the regular maintenance of water and wastewater infrastructure and facilities to prepare them for extreme precipitation events.

Strategy Flood-15: Assess and map areas with bare soil or significant disturbance due to natural hazards such as wildfire events and/or anthropogenic changes to prioritize restoration efforts. Implement targeted restoration activities where feasible by selecting appropriate vegetation, applying erosion control measures, and following best management practices.

Strategy Flood-16: Partner with Riverside County Flood Control and Water Quality Management District, Riverside County, and National Weather Service to deliver robust multilingual education and outreach materials accessible across multiple media forms (e.g. radio, text messaging) to publicize information regarding potential day-to-day flood risk, key terminology, emergency supplies, pet protection, electrical safety, and evacuation routes in the case of flooding.

Goal 5: Prepare For and Adapt to Increased Wildfire Risk.

The strategies proposed here focus on helping the city prepare for and adapt to increased wildfire risk.

Strategy Fire-1: Promote programs aimed at raising public awareness of regional air quality issues and highlighting actionable solutions and improvement opportunities.

Strategy Fire-2: Implement ongoing brush clearance requirements and establish low-fuel landscaping policies to minimize combustible vegetation near the urban-wildland interface.

Strategy Fire-3: Strengthen defensible space inspections in wildfire-prone areas. Create fuel modification zones around developments within high wildfire hazard areas by clearing combustible vegetation within 100 feet of such developments. The fuel modification zone size may be altered with the addition of fire-resistant building techniques.

Strategy Fire-4: Perform fuel reduction projects throughout the city to reduce fire potential. Develop a wildfire risk reduction assessment that the City can use for new development in wildfire-prone areas.

Strategy Fire-5: Develop and enforce construction and design standards that ensure the development project incorporates fire prevention features.

Encourage the use of fire-resistant building techniques for new developments such as non-combustible wall surfacing materials, enclosed materials and features, and automatic fire sprinklers.

Strategy Fire-6: Promote programs that educate city residents about the threat of human wildfire origination from residential practices such as outdoor barbeques and from highway use, such as cigarette littering.

Strategy Fire-7: Continue to follow Riverside County Fire Department's most current guidelines to achieve standard response times and staffing levels to prepare for wildfire events.

Strategy Fire-8: Establish neighborhood and building design standards that minimize wildfire hazards in very high and high fire hazard severity zones. Create wildfire protection zones that reduce the risks to citizens and firefighters from fire dangers.

Strategy Fire-9: Initiate wildfire fuel management practices in parks and open spaces.

Strategy Fire-10: Collaborate with Riverside County and regularly maintain existing fire roads throughout the city to provide fire department access.

Strategy Fire-11: Implement long range fire safe planning through code adoption/policies consistent with the City's General Plan Public Safety, Noise, and Air Quality Element.

Strategy Fire-12: Work with CAL FIRE and the Riverside County Fire Department to map and identify locations that are newly at risk, or at risk for fire hazards because of climate change; implement wildfire mitigation best practices such as maintaining defensible spaces and fire breaks, as well as hardening structures with fire-resistant materials in these mapped and identified locations.

Strategy Fire-13: Coordinate with CAL FIRE, California Department of Fish and Wildlife, University of California Cooperative Extension, and other agencies and organizations to establish post-fire ecological recovery programs to support ecological restoration efforts. Such ecological restoration endeavors could include the reintroduction and establishment of native species, and ecologically-beneficial vegetation management techniques (e.g., prescribed burns, invasive species removal) that would reduce the potential for high-intensity wildfires and improve the resilience of the city's wildlands.

Strategy Fire-14: Retrofit and/or relocate infrastructure and critical facilities exposed to wildfire hazards to make them more resilient to wildfire, based on GIS-based spatial analyses.

Strategy Fire-15: Increase the city's water storage capacity specifically for firefighting purposes, ensuring that fire hydrants are well-distributed in vulnerable and wildfire-prone areas

Strategy Fire-16: Similar to Strategy Flood-5, invest in fire detection and early warning systems such as remote sensors and surveillance technologies to detect wildfires early and notify residents and responders quickly.

Strategy Fire-17: Adhere to Chapter 15.56.020, Part P of the Fire Code pursuant to adopted High Severity Zone Maps.

Strategy Fire-18: Collaborate with the CAL FIRE and the Riverside County Fire Department to support public wildfire education and prevention programs.

Looking Ahead

These goals and strategies provide a roadmap for Lake Elsinore to address climate risks comprehensively, while ensuring that the most vulnerable populations and critical community assets are prioritized. By implementing these actions, the City will be able to enhance public safety, protect natural resources, and strengthen long-term resilience in the face of climate change.

Furthermore, these adaptation strategies are evaluated and prioritized using a set of criteria based on the FEMA STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, Environmental) framework, with an additional Equity criterion incorporated to better reflect community needs. The resulting prioritization matrix provides the City with a clear reference for identifying which strategies should advance first based on feasibility, effectiveness, and equitable outcomes. More information on the prioritization criteria, evaluation process, and full matrix is provided in Appendix D.

Chapter 4
CLIMATE ACTION STRATEGIES AND MEASURES



Chapter 4

To achieve the greenhouse gas (GHG) reduction targets identified in Chapter 2, the City will implement a variety of climate action strategies. In addition to emissions reductions, these strategies would provide benefits such as improved public health, cost savings, and enhanced quality of life for Lake Elsinore residents. This chapter includes the complete list of GHG reduction strategies and accompanying measures and actions.

4.1 Overview

Based on the GHG emissions forecast and input from the community, the City identified opportunities for reducing emissions using a framework of strategies and measures. Each strategy contains one or more measures that provide further focus into the ways the City can impact local GHG emissions. The measures contain specific implementing actions, which are the tangible steps the City will take to realize the measure's overarching objectives. Strategies are organized under focus areas, which represent common themes and objectives. The focus areas, although not synonymous with the emissions sectors described in Chapter 2 (i.e., on-road transportation, building energy, off-road vehicles and equipment, solid waste, water, and wastewater), do encompass and capture each of these sectors. These focus areas include: Building Energy (BE), Transportation (TR), Water (W), Solid Waste (SW), and Green Community (GC).

A total of 14 strategies and 27 measures were identified to achieve emissions reductions from each sector. A summary of all strategies and associated emissions reductions is included in Table 4-1. Additional information on the methods and assumptions used to quantify the GHG reductions associated with the strategies is available in Appendix E.

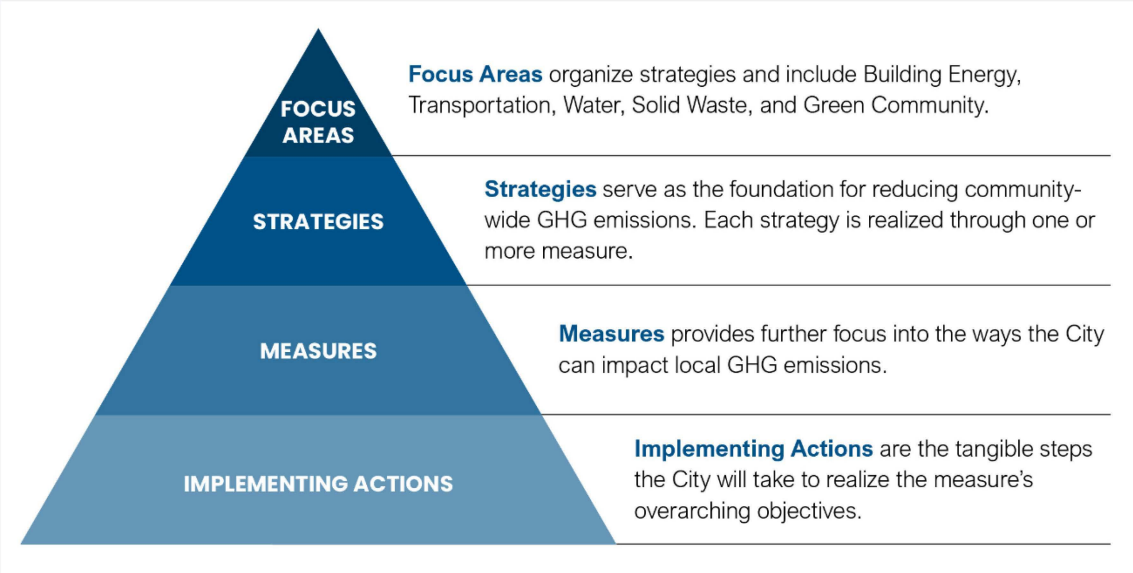


Table 4-1 Climate Action Strategies Summary

Focus Area	Number	Strategy	GHG Reductions ($MTCO_2e$) 2030	GHG Reductions ($MTCO_2e$) 2045
Building Energy	BE-1	Energy Efficiency and Decarbonization	5,207	38,726
	BE-2	Renewable Energy	31,430	0
	BE-3	Energy Education	Not quantified	Not quantified
Transportation	TR-1	Active Transportation	110	451
	TR-2	Transit	1,588	2,399
	TR-3	Zero-Emissions Vehicles and Equipment	0	78,322
	TR-4	Smart Growth	853	1,254
Water	W-1	Water Conservation	7	0
	W-2	Recycled Water	849	0
Solid Waste	SW-1	Recycling and Compost	20,475	29,856
	SW-2	Local Produce	Not quantified	Not quantified
Green Community	GC-1	Green Jobs	Not quantified	Not quantified
	GC-2	Urban Tree Canopy	133	323
	GC-3	Green Construction Materials	Not quantified	Not quantified
Total GHG Reductions			**60,653**	**151,331**

Notes: Totals may not sum exactly due to rounding. GHG = greenhouse gas, $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Analysis conducted by Ascent in 2025.

Table 4.1 summarizes the collective emissions reductions from the measures within each strategy. Of all the identified strategies, those responsible for the largest emissions reductions include: BE-1, BE-2, TR-3, and SW-1. These four strategies make up 96 percent of total emissions reductions. Within each strategy, there are specific measures and actions that contribute to the total reductions; some emissions reductions are achieved through multiple actions, while others result from a single primary action.

Although not all strategies result in quantifiable GHG emissions reductions due to data or methodology limitations, most strategies will contribute to GHG emissions reductions in some capacity. Additionally, there are important co-benefits associated with every strategy (see Section 1.2 for the list of identified co-benefits). In this chapter, co-benefits are applied and displayed at the measure level, where the presence of any particular co-benefit means that at least one action under that measure would either directly or indirectly result in that co-benefit.

4.2 Meeting the Targets

As described in Section 2.5, the City needs to take additional action to meet GHG reduction targets that align with State targets. With implementation of the strategies described in this chapter, the City is expected to be able to reduce local emissions to levels that are consistent with the targets of Senate Bill 32 and Assembly 1279. Table 4-2 demonstrates the analysis of forecasted GHG emissions, with consideration of State and federal legislation and regulations and implementation of the climate action strategies, in comparison to the City's GHG reduction targets. A visual summary of future GHG emissions levels for Lake Elsinore with implementation of all strategies, compared to the targets, is also provided in Figure 4-1.

Table 4-2 Meetings the Targets

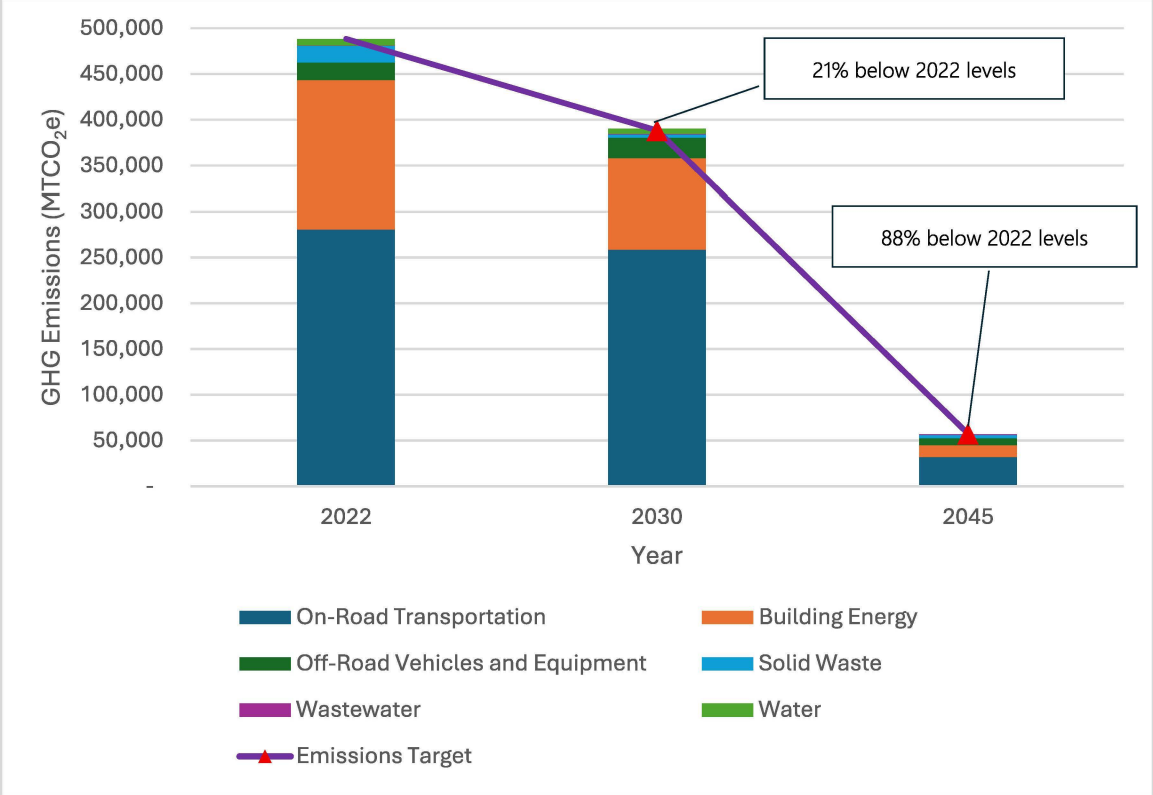
Forecast Scenario	2022	2030	2045
Legislative-Adjusted Business-as-Usual Forecast	488,339	444,439	207,979
GHG Emissions Reductions from Implementation of Strategies	NA	60,653	151,331
GHG Emissions with Implementation of GHG Strategies[1]	**488,339**	**383,786**	**56,648**
Percent Change from 2022 Levels	NA	-21%	-88%
CAAP Target Emissions Levels	**NA**	**388,224**	**57,278**
CAAP Targets (percent reduction from 2022 levels)	NA	21%	88%
Difference between CAAP Targets and GHG Emissions with Implementation of GHG Strategies	NA	-4,438	-630
Target Met?	**NA**	**Yes**	**Yes**

Note: Totals may not sum exactly due to rounding. NA = Not applicable.

[1] GHG Emissions with Implementation of GHG Strategies shows the GHG Emissions Reductions from Implementation of Strategies subtracted from the Legislative-Adjusted Business-as-Usual Forecast.

Source: Analysis conducted by Ascent in 2025.

Figure 4.1 GHG Emissions with Implementation of Climate Action Strategies



Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Created by Ascent in 2025.

Building Energy

BE-1 Energy Efficiency and Decarbonization

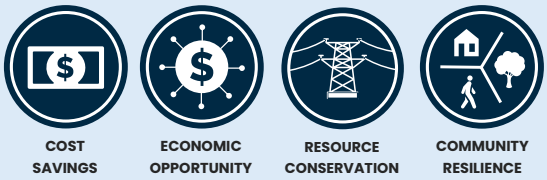
BE-2 Renewable Energy

BE-3 Energy Education



Measure BE-1.1 Encourage building operations that minimize electricity use.

Co-Benefits

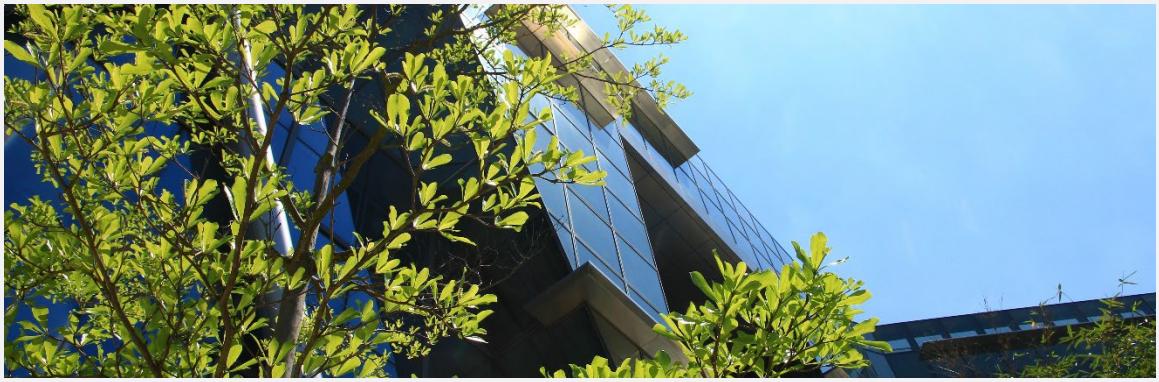


GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

Measure Description

Nonresidential buildings are responsible for 9% of the GHG emissions in Lake Elsinore. To reduce these emissions, building owners and businesses can invest in energy efficient systems and replace natural gas with electricity powered by renewable energy sources. Investments could include upgrades to heating and cooling systems, and the installation of solar energy systems. The City can support the decarbonization of nonresidential buildings by providing incentives such as a Green Business certification, which may contribute to a business's sustainability goals and competitiveness in the marketplace.



Implementing Actions

Action BE-1.1.1

Establish and administer a voluntary Green Business Certification Program to recognize businesses that voluntarily develop and implement energy conservation programs, including energy efficiency improvements, installation of solar energy arrays, and energy-efficient heating and cooling systems\.

Measure BE-1.2 Support efforts to reduce energy burden and track energy consumption.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

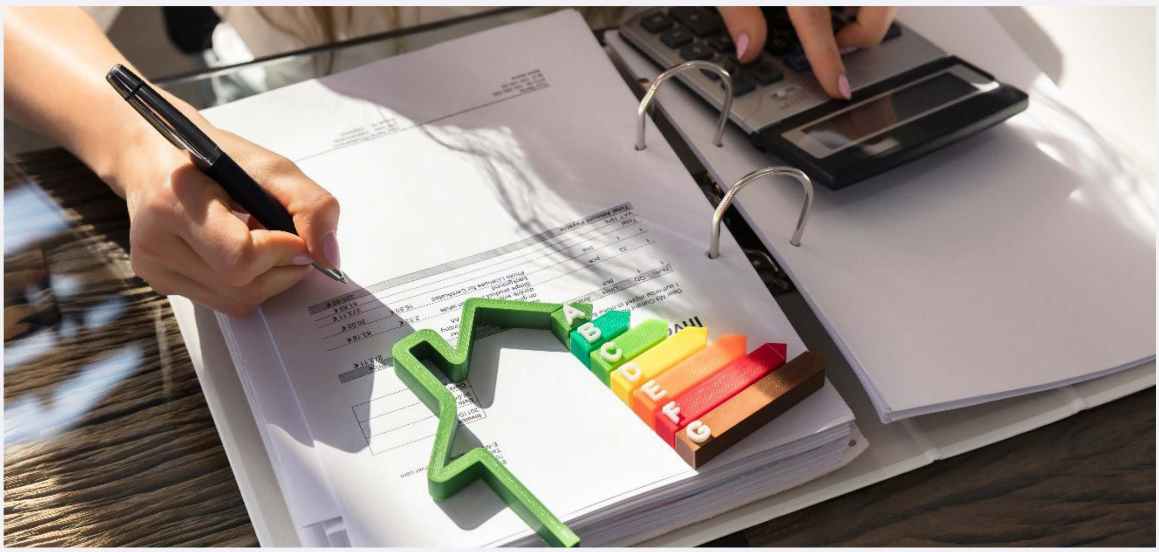
Measure Description

Energy benchmarking programs and discounted rates programs can increase consumer awareness of energy consumption. Greater participation in these programs would reflect a shift toward efficient energy technologies and a reduction in energy use. Building owners can use energy benchmarking, which is the practice of comparing building energy use between historical energy use or against building energy standards, to access energy use data and adjust consumption behavior. Discounted electricity rate programs can be implemented to reduce residential cost burden and barriers to household electrification.

Implementing Actions

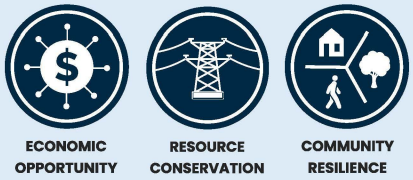
Action BE-1.2.1

Partner with Southern California Edison to advertise their energy benchmarking and discounted rates programs.



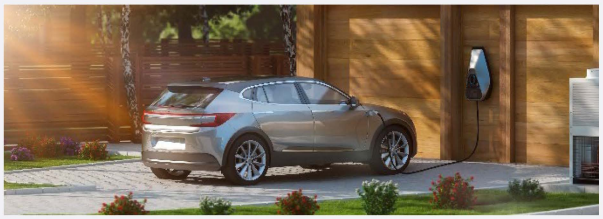
Measure BE-1.3 Develop building performance standards that adhere to or go beyond CALGreen Tier 1 values.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2035: 0 2045: 2,132



Measure Description

Building standards ensure that there are baseline safety and structural regulations all buildings must adhere to. Some requirements under the standards directly contribute to GHG reductions. The California Green Building Standards Code (CALGreen) establishes building standards that include electric vehicle charging infrastructure and the electric-readiness of new buildings. Local agencies can achieve greater emissions reductions by adopting the voluntary CALGreen Tier 1 standards, which include increased energy efficiency targets. There are also certifications such as Leadership in Energy and Environmental Design (LEED), that recognize green building design and may incentivize energy efficient development beyond building standards.

Implementing Actions

Action BE-1.3.1

Evaluate the adoption of an ordinance requiring that all new construction exceed the California Energy Code requirements, based on the 2025 Energy Efficiency Standards consistent with CALGreen Section A4.203.1. Modification to the building code would be informed by:

1) Conducting outreach with internal stakeholders such as City staff and officials, and external stakeholders such as local developers and utility providers.
2) Complete a cost-effectiveness analysis study and obtain California Energy Commission (CEC) approval.

Action BE-1.3.2

Provide incentives for developers to achieve green building standards such as LEED certification, expedited permitting, and density bonuses.

Measure BE-1.4 Retrofit existing residential and nonresidential buildings to use electric heating and cooling technology.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 5,207 2045: 36,594

Measure Description

Natural gas and diesel use in existing nonresidential and residential buildings in Lake Elsinore comprise 35% of building sector emissions. The decarbonization of existing buildings is crucial to the achievement of emissions reduction goals. Heating, ventilation, and air conditioning (HVAC) equipment dependent on natural gas infrastructure are less efficient than newer technologies. Requiring the replacement of equipment with electric alternatives once it has reached end-of-life serves to replace the most inefficient technologies. To support residents and building owners and operators during this shift, financial assistance like rebates can reduce cost-burden at the time of replacement.

Implementing Actions

Action BE-1.4.1

Partner with Southern California Edison to provide rebates/loans for the installation of electric water heaters and HVAC units at time of replacement in existing residential and nonresidential buildings.

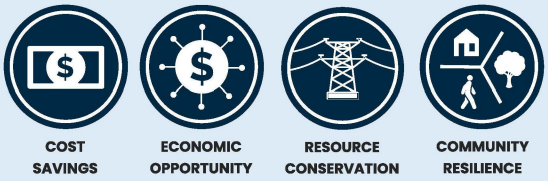
Action BE-1.4.2

Evaluate the adoption of an ordinance requiring air conditioning equipment to use heat pumps at time of replacement in single-family residential housing units consistent with CALGreen voluntary standards Section A4.204.1.1, including exceptions. Modification to the building code would be informed by:

1) Conducting outreach with internal stakeholders such as City staff and officials, and external stakeholders such as local contractors.
2) Complete a cost-effectiveness analysis and obtain CEC approval.

Measure BE-1.5 Replace fixtures with energy efficient options.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

Measure Description

Actions like light fixture replacement and HVAC replacement in municipal buildings can help the City do its part in achieving GHG emission reductions. The replacement of light bulbs is an accessible and cost-effective upgrade for City facilities and residents that can contribute to energy savings and emissions reductions. In addition to light fixtures, sensor technology can prevent energy waste by turning off lights when there is adequate lighting available. These upgrades utilize the most efficient technologies and are among the first steps in improving efficiency.

Implementing Actions

Action BE-1.5.1

Install energy efficient lights, ballasts, and occupancy sensors at all City facilities.

Action BE-1.5.2

Partner with Southern California Edison or a local business to sponsor a LED light bulb distribution program; distribute at least 4,000 LEDs.

Action BE-1.5.3

Replace existing HVAC at City buildings at the end of its life cycle with higher efficiency equipment.



Measure BE-2.1 Facilitate the transition of residential electricity use to 100% renewable energy sources.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 31,430 2045: 0

Measure Description

A transition to renewable energy not only reduces GHGs, it improves the resilience of communities. Natural gas can be subject to fluctuations in market price and releases GHGs in both its production and eventual combustion; renewable energy is a sustainable source of energy with zero emissions associated with the generation of electricity. Solar is a crucial source of energy in California and the resulting electricity can be stored in photovoltaic batteries for long-term use. The shift to renewable energy systems will partially depend on making equipment accessible to the community.



Implementing Actions

Action BE-2.1.1

Create or join a Community Choice Aggregator to establish energy independence and receive electricity from renewable sources. Seek guidance from the California Public Utilities Commission (CPUC) or contact other local jurisdictions (for example those that were a part of Western Community Energy) for partnership.

Action BE-2.1.2

Collaborate with the CPUC and California Department of Community Services and Development (CSD) to offer solar array and photovoltaic battery storage incentives for residents.

Action BE-2.1.3

Conduct outreach to builders and developers to assess the feasibility of community solar project development in Lake Elsinore.

Measure BE-3.1 Develop educational campaigns and programs that inform community members about renewable energy and electrification benefits and opportunities.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A



Measure Description

Educational campaigns and programs can increase awareness of technologies like solar power, electric vehicles, and energy-efficient appliances, encouraging households to transition away from fossil fuels. These technologies are less carbon intensive and offer financial benefits, such as lower utility costs. Solar installation programs run by GRID Inland Empire and the Department of Energy's Weatherization Assistance Program that assist low-income individuals with housing insulation and equipment replacement are examples of beneficial programs. As participation in these programs grows, communities can collectively lower their carbon footprint while improving air quality and public health. By engaging with local communities, educational programs build community resilience, create local green jobs, and promote a more equitable transition to a sustainable energy future.

Implementing Actions

Action BE-3.1.1

Partner with utility providers and other energy efficiency program administrators, such as Inland Regional Energy Network (I-REN) and GRID Inland Empire to spread awareness of clean energy and energy efficiency opportunities/programs. Assist the organization in applications to CPUC and California Department of CSD grants.

Action BE-3.1.2

Develop educational materials/conduct outreach regarding weatherization programs and provide assistance to residents to navigate applications.



Transportation

TR-1 Active Transportation

TR-2 Transit

TR-3 Zero-Emissions Vehicles and Equipment

TR-4 Smart Growth

Measure TR-1.1 Expand active transportation infrastructure by implementing the infrastructure, programmatic, and policy recommendations included in the Active LE Plan.

Co-Benefits

ECONOMIC OPPORTUNITY | HEALTHY NATURAL ENVIRONMENT | IMPROVED HEALTH AND WELLBEING | COMMUNITY RESILIENCE

GHG Emissions Reductions $MTCO_2e$

2030: 110 2045: 451

Measure Description

The City is dedicated to improving mobility and connectivity in Lake Elsinore. In 2019 the City adopted the Active LE Plan to prioritize pedestrian and bicycle improvements. This measure aligns with the recommendations in the Active LE Plan to improve the City's active transportation infrastructure. Active transportation emphasizes the transition away from car-dominant spaces and travel, reducing GHG emissions and improving air quality. Constructing more bike facilities and pathways designated for cyclists and pedestrians can encourage active transportation through a sense of safety and improved accessibility to various locations.

Implementing Actions

Action TR-1.1.1

Support the installation of sidewalks and bike lanes identified in the Active LE Plan.

Action TR-1.1.2

Develop a bikeshare program that connects highly frequented areas of the city.



Measure TR-2.1 Increase opportunities for residents to access alternative transportation and reduce financial barriers to transit ridership.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 1,116 2045: 1,447

Measure Description

Increasing access to alternative transportation can encourage community members to shift away from personal vehicle use. Affordable and accessible transit supports equity by ensuring that all community members can travel sustainably and safely, regardless of income. Greater carpool opportunities, in addition to transit use, reduce traffic congestion and improve air quality, creating healthier urban environments. By investing in alternative transportation, the City can meet climate goals while enhancing mobility and quality of life for residents.

Implementing Actions

Action TR-2.1.1

Provide community-based travel planning with direct outreach to households that is geographically targeted with information, incentives, and support to encourage the use of alternative transportation.

Action TR-2.1.2

Institute a microtransit program for employers with fewer than 100 employees (below the requirements of the existing Transportation Demand Management Program). Provide information, training, and incentives to encourage participation.

Action TR-2.1.3

Identify partnerships for car-share programs and offer reduced pricing for low-income residents.

Action TR-2.1.4

Create a vanpool or shuttle service program to reduce vehicle miles traveled (VMT) from City employee commute.

Measure TR-2.2 Upgrade transit facilities and operations to better accommodate residents.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 471 2045: 952

Measure Description

Improving the accessibility and functionality of transit facilities can encourage more people to choose public transportation over personal vehicles. Reduced traffic congestion and cleaner air contribute to healthier, more livable neighborhoods. Greater participation in transit reduces emissions and fuel use while improving air quality. These upgrades also promote social equity by connecting residents to jobs, schools, and essential services. Better transit supports both climate action and more connected communities.

Implementing Actions

Action TR-2.2.1

Collaborate with Riverside Transit Agency (RTA) to revitalize bus stops, including signage with live updates of bus arrivals, shade structures, and expansion of the service area.

Action TR-2.2.2

Continue partnership with RTA to establish a GoMicro microtransit service area that includes Lake Elsinore.

Action TR-2.2.3

Produce a Multi-Modal Transportation Access Guide, which concisely describes and provides maps on how to reach a major destination in Lake Elsinore by foot, bicycle, transit, rideshare, etc. This information can be provided online, at City buildings, and major destinations in Lake Elsinore.

Action TR-2.2.4

Increase parking spots at existing park-and-ride facilities and add additional spots near high-usage transit stops.

Measure TR-3.1 Increase the adoption of EVs through financial incentives and vehicle replacement policies.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 0 2045: 50,052

Measure Description

Financial incentives and vehicle replacement policies reduce barriers for individuals to purchase electric vehicles (EVs). This phasing out of older, high-emitting gasoline and diesel vehicles reduces emissions and improves local air quality. Financial incentives make EVs more affordable and accessible to more residents, helping to accelerate the transition to cleaner transportation choices. Vehicle replacement programs can also ensure the benefits of cleaner air and reduced fuel costs are distributed equitably.

Implementing Actions

Action TR-3.1.1

Partner with organizations like the South Coast Air Quality Management District (SCAQMD) to offer rebates for hybrid, plug-in-electric, and other low- and zero-emissions vehicles.

Action TR-3.1.2

Develop and adopt a low and zero-emissions replacement/purchasing policy for new and replaced City vehicles.



Measure TR-3.2 Expand EV charging infrastructure.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 0 2045: See TR-3.1

Measure Description

Expanding EV infrastructure plays a key role in reducing GHG emissions. By increasing the availability of public and private charging stations, communities can support the transition away from fossil fuel-powered transportation. Strategically placed charging stations in underserved areas also promote equity in clean transportation access. In addition to these benefits, building EV infrastructure can help create local jobs, support renewable energy investment, and improve air quality. Overall, enhanced charging infrastructure contributes to the social, economic, and climate resilience of the community.

Implementing Actions

Action TR-3.2.1

Consider adopting reach codes that meet CALGreen Tier 1 or 2 EV charging voluntary measures for residential and nonresidential buildings (Sections A4.106.8and A5.106.5.3). Modification to the building code would be informed by conducting outreach with internal stakeholders such as City staff and officials, and external stakeholders such as local developers.

Action TR-3.2.2

Collaborate with the RTA to conduct a study of potential public EV charging station locations.

Action TR-3.2.3

Partner with RTA and Southern California Edison to develop a framework for city-wide EV charging infrastructure and identify financial resources for residents.

Action TR-3.2.4

Survey residents, including those in low-income residential areas, to increase access to charging stations and install stations in priority areas.

Action TR-3.2.5

Conduct an educational campaign to promote the transition to EVs and installation of EV charging stations, highlighting available incentives and rebates.

Measure TR-3.3 Transition away from fossil-fuel powered equipment.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 0 2045: 28,270

Measure Description

Diesel use in construction and portable equipment makes up 54% of Lake Elsinore's off-road emissions. Diesel has higher emissions compared to natural gas and gasoline, and the combustion of fuels like diesel contributes to poor air quality due to emissions of pollutants such as particulate matter. Other fossil-fuel powered equipment like leaf blowers also contribute to degradation of air quality, largely due to inefficient fuel use. Replacing equipment that utilizes fossil fuels with electric alternatives can reduce emissions and provide health benefits to the community.

Implementing Actions

Action TR-3.3.1

Promote SCAQMD electric lawn and garden programs, which provide electric equipment rebates for residents and discounted electric equipment prices for commercial landscapers and gardeners.

Action TR-3.3.2

Consider an ordinance for new development projects that requires use of only electric- and renewable-fueled construction and portable equipment after the year 2035, pending market availability and feasibility of use for such equipment.

Action TR-3.3.3

Develop and adopt a low and zero-emissions replacement/purchasing policy for new and replaced City non-road equipment that considers the technological availability and use feasibility of equipment types.



Measure TR-4.1 Encourage smart-growth strategies that increase connectivity and density.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 853 2045: 1,254

Measure Description

Smart-growth strategies that prioritize increased connectivity and density help make communities more walkable, bikeable, and transit friendly. Mixed-use development reduces the need for long vehicle trips by building housing, jobs, schools, and services closer together. Improved street connectivity and access to public transit promote healthier, more active lifestyles. By focusing growth in already-developed areas, communities can use infrastructure more efficiently and equitably.

Implementing Actions

Action TR-4.1.1

Identify and provide incentives to promote mixed-use, infill, and transit-oriented development, such as a streamlined permitting process, less restrictive parking requirements, less restrictive height limits, lower permit fees, and/or reduced impact fees.

Action TR-4.1.2

Require new subdivisions and large developments to provide sidewalks and bike paths to increase connectivity to transit and activity centers. New infrastructure should connect to the sidewalk and bike networks identified in the General Plan, Bike Lane Master Plan, Trails Master Plan, and Western Riverside County Non-Motorized Transportation plan where feasible.

Action TR-4.1.3

Prioritize development projects that incorporate the Southern California Association of Governments Regional Pilot Initiative Program Development Framework to qualify for future funding opportunities. Develop a checklist or add criteria to planning applications. The program is intended to fund projects that reduce VMT and include housing and equity initiatives.



Measure TR-4.2 Reduce the space dedicated to vehicles.

Co-Benefits

ECONOMIC OPPORTUNITY

IMPROVED HEALTH AND WELLBEING

GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

Measure Description

Reducing the amount of space dedicated to vehicles can discourage car dependency and support alternative modes of transportation. Prioritizing spaces for walking, biking, and public transit creates safer, more accessible streets that support healthier, more active communities. Less paved surface area also reduces heat island effects and stormwater runoff, contributing to improved climate resilience.

Implementing Actions

Action TR-4.2.1

Review/re-evaluate parking minimums for new construction.

Action TR-4.2.2

Consider metered public parking in new and existing central business areas.



Water

W-1 Water Conservation

W-2 Recycled Water



Measure W-1.1 Reduce water consumption through regulation and assisting residents to upgrade to efficient fixtures.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 7 2045: 0

Measure Description

Reduced water consumption not only contributes to water conservation, it can also lower utility costs. To achieve water use reductions the City can adopt policies that set standards for water-efficient appliances and landscaping practices. Incentives, rebates, or direct assistance for upgrading to efficient fixtures such as low-flow toilets, showerheads, and irrigation systems can make water-saving technologies more accessible. These efforts not only preserve limited water supplies but also reduce the energy needed to treat and deliver water.

Implementing Actions

Action W-1.1.1

Consider amendment to the City's Uniform Building Code to require development projects to reduce indoor water consumption by 12% (consistent with CALGreen Tier 1, Section A5.303.2.3.1). Modification to the Uniform Building Code would be informed by conducting outreach with internal stakeholders such as City staff and officials, and external stakeholders such as local developers.

Action W-1.1.2

Collaborate with Elsinore Valley Municipal Water District (EVMWD), Western Municipal Water District and Metropolitan Water District of Southern California to offer customers residential and commercial water efficient rebates to upgrade their properties and fixtures.

Action W-1.1.3

Consider adopting Appendix L of the 2025 California Plumbing Code to implement greater equipment efficiency and prevent water loss.

Measure W-1.2 Increase awareness of water loss through education and audits.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: See W-1.1 2045: See W-1.1

Measure Description

Public education and system audits represent a critical step toward more efficient and sustainable water use. Leaks and outdated infrastructure cause water waste and higher energy use. Conducting regular audits helps identify inefficiencies and results in cost savings for businesses and residents. Upgrading water distribution systems reduces water loss in addition to improved community resilience to climate events like drought. Reduced water loss decreases the energy needed to treat and pump water, further lowering GHG emissions.

Implementing Actions

Action W-1.2.1

Collaborate with EVMWD and expand upon existing water conservation-related educational and outreach programs for the City's residents and businesses.

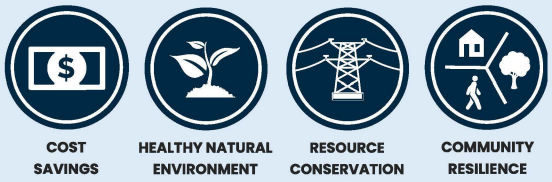
Action W-1.2.2

Collaborate with the EVMWD to offer free water audits to businesses and residents.



Measure W-1.3 Replace lawn irrigation equipment to prevent water loss.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: See W-1.1 2045: See W-1.1

Measure Description

Replacing outdated or inefficient lawn irrigation equipment can prevent water loss and improve landscape sustainability. Upgrading to modern, water-efficient systems like drip irrigation and smart controllers ensures that water is delivered more precisely. These improvements help conserve water and lower utility bills. Efficient irrigation also reduces strain on local water supplies, particularly during drought conditions. By investing in upgraded equipment, communities can prevent water loss.

Implementing Actions

Action W-1.3.1

For outdoor irrigation, recommend residents and businesses use automatic timers and adjusting watering schedules to the cooler hours between 6 p.m. and 6 a.m., which are more restrictive than the current Municipal Code hours of 5 p.m. to 9 a.m.

Action W-1.3.2

Encourage the adoption of advanced irrigation techniques, such as drip irrigation, moisture sensors, and weather-responsive controllers, to enhance water efficiency and promote sustainable landscaping practices. Incentivize residents and businesses to plant native and drought-tolerant plants that require less watering instead of traditional lawns.



Measure W-2.1 Encourage the use of recycled water by increasing access to recycled water systems and informational materials.

Co-Benefits

ECONOMIC OPPORTUNITY

HEALTHY NATURAL ENVIRONMENT

RESOURCE CONSERVATION

COMMUNITY RESILIENCE

GHG Emissions Reductions $MTCO_2e$

2030: 849 2045: 0

Measure Description

Utilizing recycled water can conserve water supplies and contribute to long-term water resilience. Recycled water systems can be used for landscape irrigation, industrial processes, and other non-potable uses. Informational materials help residents, businesses, and property managers understand how recycled water can be safely and effectively used. Increased awareness also helps normalize recycled water use, making it a standard part of sustainable water management. Using recycled water reduces the need for energy-intensive treatment of freshwater, contributing to lower GHG emissions.

Implementing Actions

Action W-2.1.1

Coordinate with EVMWD to establish an educational program to inform residents about on-site recycled water systems, encouraging the reuse of graywater in compliance with the California Regional Water Quality Control Board and Riverside County Health Department.

Action W-2.1.2

Partner with EVMWD to expand its recycled water service area. Install metering systems on newly included residences.





Solid Waste

SW-1 Recycling and Composting

SW-2 Local Produce

Measure SW-1.1 Increase the diversion of organic waste for commercial, residential, and municipal facilities.

Co-Benefits

HEALTHY NATURAL ENVIRONMENT

RESOURCE CONSERVATION

COMMUNITY RESILIENCE

GHG Emissions Reductions $MTCO_2e$

2030: 20,475 2045: 29,856

Measure Description

Proper disposal of food waste and other organics is important for emissions reductions. Organic waste that decomposes in landfills contributes to GHG emissions by producing methane, a more potent GHG than carbon dioxide. By redirecting food scraps, yard trimmings, and other organic materials to composting or anaerobic digestion facilities, communities can reduce these emissions. Improved waste practices can also enhance community health by reducing landfill odors, pests, and groundwater contamination.

Implementing Actions

Action SW-1.1.1

Conduct an outreach campaign to educate residents and businesses about existing waste management programs and resources to increase awareness of the emissions associated with solid waste. Partner with the City's franchise waste hauler CR&R Environmental Services.



Measure SW-1.2 Support the use of sustainable materials.

Co-Benefits

HEALTHY NATURAL ENVIRONMENT | RESOURCE CONSERVATION | COMMUNITY RESILIENCE

GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

Measure Description

Promoting the use of sustainable materials can lower GHG emissions associated with landfilling of items such as plastics. Incentivizing alternatives can facilitate the use of recyclable or compostable materials and the reuse of existing products. These alternatives reduce the amount of waste sent to landfills and do not contribute to soil or water contamination. Less waste generation lessens costs for municipal waste management, encourages sustainable consumer habits, and contributes to the conservation of resources.

Implementing Actions

Action SW-1.2.1

Consider an ordinance to require sustainable take-out foodware to reduce the landfill disposal of single-use plastics.

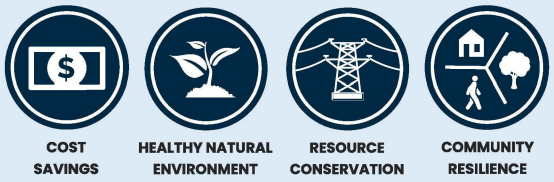
Action SW-1.2.2

Install water bottle filling stations at public facilities to encourage the use of reusable bottles.



Measure SW-1.3 Expand access to recycling and compost materials and programs.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

Measure Description

Increasing the accessibility of composting and recycling can encourage greater participation within the community. This can be achieved by providing educational resources and establishing partnerships with entities that do not currently have food diversion systems in place. Composting organic materials produces nutrient-rich soil that can also be supplied to residents. In addition to its environmental benefits, organic waste diversion can create local green jobs in waste management, compost production, and sustainable landscaping.

Implementing Actions

Action SW-1.3.1

Partner with the City's franchise waste hauler CR&R Environmental Services to provide free compost giveaways to residents.

Action SW-1.3.2

Collaborate with the Lake Elsinore Unified School District to implement a composting program to divert organic waste.



Measure SW-1.4 Enable the proper disposal of non-organic waste.

Co-Benefits

HEALTHY NATURAL ENVIRONMENT
RESOURCE CONSERVATION
COMMUNITY RESILIENCE

GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

Measure Description

Proper disposal of non-organic waste, such as plastics, metals, and electronic materials, plays a crucial role in reducing emissions. If these materials are landfilled, they can release GHGs and toxic substances into the air and soil. Recycling these materials can reduce the need for new raw materials, and therefore reduce the energy used to produce new products. The provision of resources like bins and equipment and accessible recycling facilities can encourage the recycling of non-organic waste.

Implementing Actions

Action SW-1.4.1

Partner with battery storage and solar panel businesses to establish a battery/panel recycling program.

Action SW-1.4.2

Reduce the use of and improper disposal of greases and oils by partnering with companies that specialize in oil recycling and disposal.



Measure SW-2.1 Improve access to local healthy produce.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

Measure Description

Improving access to local healthy produce has significant benefits for both the community and the environment. Fresh produce contributes to well-rounded diets and better physical health. Purchasing produce through local agriculture strengthens the local economy. Growing food at the individual or community level contributes to resiliency against food system disruptions and reduces the need to travel great distances to access food. These community efforts contribute to lower GHGs via less vehicle travel to transport produce, and create an opportunity to reduce food waste if all organics are recycled or composted.

Implementing Actions

Action SW-2.1.1

Partner with community groups and consider an ordinance that establishes community gardens as a permitted use and/or identify locations that can be rezoned for agricultural use.

Action SW-2.1.2

Partner with local food pantries to develop a nutritional foods educational campaign that promotes healthy food alternatives and recipes. Encourage pantries to stock healthy food options.





Green Community

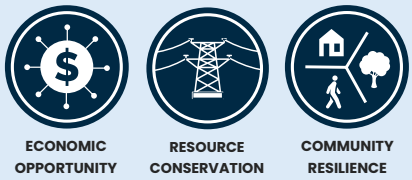
GC-1 Green Jobs

GC-2 Urban Tree Canopy

GC-3 Green Construction Materials

Measure GC -1.1 Enhance economic resilience by investing in green job development.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

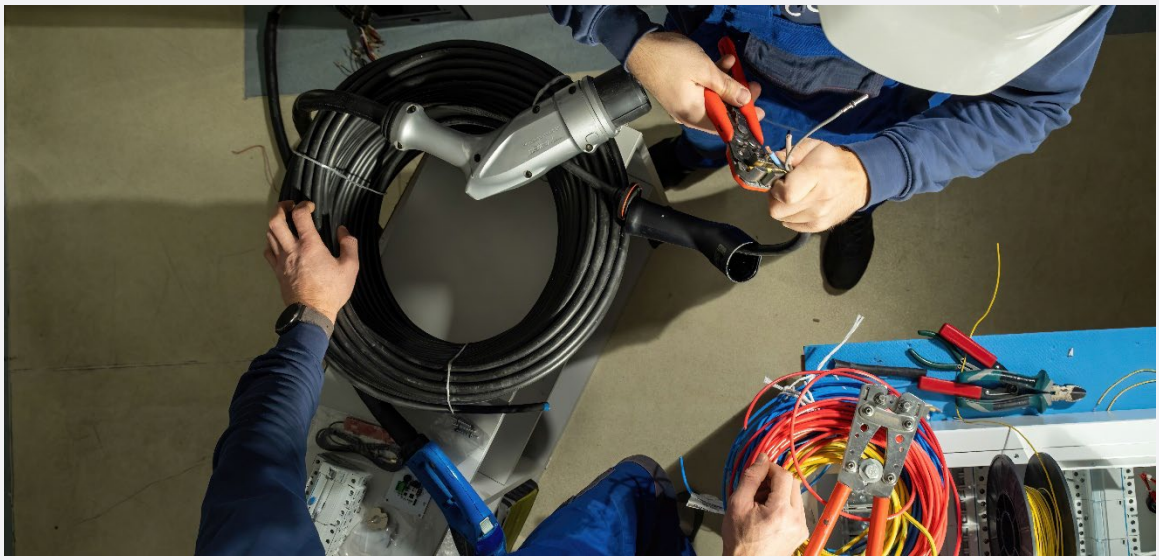
Measure Description

Green jobs help support the transition of emission-intensive activities to greener alternatives. Green jobs include positions such as solar and EV installation, sustainable agriculture, and environmental restoration. Providing educational opportunities and workforce training are essential to infrastructure development, sustainable operations, and achieving emissions reductions. Investing in green industries also keeps more economic activity within local communities, supporting small businesses and local growth. By building a workforce skilled in green industries, communities can adapt more effectively to changing economic and environmental conditions.

Implementing Actions

Action GC-1.1.1

Establish partnerships with local community colleges to strengthen the clean energy workforce and streamline hiring for municipal programs.



Measure GC-2.1 Expand urban tree canopy to reduce the urban heat island effect.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: 133 2045: 323

Measure Description

An urban tree canopy is important for protecting the health of community members. Trees provide natural shade which helps lower temperatures in areas with dense buildings and largely paved surfaces. A larger tree canopy improves air quality by filtering pollutants and absorbing carbon dioxide. The sequestered carbon also serves as emissions reductions. In addition to cooling and sequestration benefits, trees can contribute to urban biodiversity and improve individual wellbeing. Investing in urban tree planting strengthens community resilience against extreme heat while promoting public health and environmental sustainability.

Implementing Actions

Action GC-2.1.1

Require new development to plant at minimum two 15-gallon native, non-deciduous, umbrella-form tree per 30 linear feet of boundary length near buildings.

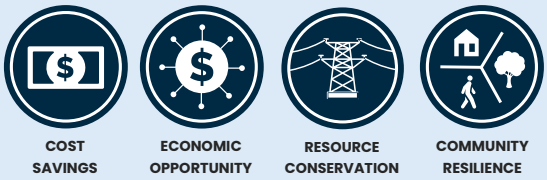
Action GC-2.1.2

Consider adding tree planting to capital projects where feasible.



Measure GC-3.1 Reduce emissions associated with construction by requiring materials be low-carbon or recycled.

Co-Benefits



GHG Emissions Reductions $MTCO_2e$

2030: N/A 2045: N/A

Measure Description

Traditional construction materials, like cement and steel, are significant sources of GHG emissions. However, recycled or low-carbon alternatives can significantly reduce emissions from essential building materials. Utilizing recycled materials also reduces waste sent to landfills and conserves natural resources. Prioritizing low-carbon or recycled materials helps promote a circular economy and is aligned with a community's long-term climate and sustainability goals.

Implementing Actions

Action GC-3.1.1

Provide educational information on the benefits and options for low-carbon materials to encourage new development to use low-carbon materials for building construction. *Action GC-3.1.2*

Amend the Municipal Code to require development projects to divert, recycle or salvage at least 65% of nonhazardous construction and demolition debris generated at the site (consistent with CALGreen Tier 1, Section A5.408.3.1).

Action GC-3.1.3

Require all construction and demolition projects to be accompanied by a waste management plan for the project and a copy of records for proper disposal of waste shall be provided to the City prior to final permit approval.



Chapter 5
IMPLEMENTATION AND MONITORING



Chapter 5

This chapter outlines the process by which the City of Lake Elsinore (City) will implement its Climate Action and Adaptation Plan (CAAP) strategies and measures, and how progress will be monitored over time to ensure the CAAP is effective in reducing greenhouse gas (GHG) emissions and building climate resilience in the city. This chapter also discusses the application of the CAAP for future development projects in relation to the California Environmental Quality Act (CEQA).

5.1 Implementation Strategy

Effective implementation of the CAAP will require ongoing management and oversight. Multiple ongoing and interrelated City efforts serve as the basis for the CAAP implementation strategy. For example, the City's General Plan Update is a complementary effort that can be leveraged to implement the CAAP. Individual strategies and actions will be brought forward through the City's annual budgeting process, whereupon the city can allocate its resources to ensure progress is maintained and CAAP goals are achieved. Chapters 3 and 4 provide information for each strategy to help guide the implementation of CAAP actions.

Adaptation Strategies

Climate adaptation strategies are evaluated and prioritized using a set of criteria based on the FEMA STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, Environmental) framework, with an additional Equity criterion incorporated to better reflect community needs. The resulting prioritization matrix provides the City with a clear reference for identifying which strategies should advance first based on feasibility, effectiveness, and equitable outcomes. More information on the prioritization criteria, evaluation process, and full matrix is provided in Appendix D.

Climate Action Strategies and Measures

Information on implementation timelines and responsible departments for GHG reduction measures and implementing actions is provided in Appendix F. This provides transparency as to how an action will reduce GHG emissions and provides accountability by identifying implementation timeframes and responsible departments. The schedule by which each measure is to be implemented, beginning from the year the CAAP is adopted, range from short-term (before 2030), mid-term (2030 to 2034), long-term (2035 or later), and ongoing. These designations, in addition to considerations of equity, will help City staff determine which measures should be implemented and when, which will contribute to the effectiveness of the CAAP.

Regarding emissions reductions, the City has identified target indicators and data needs to track the impact of each strategy with an associated GHG reduction potential. These target indicators intend to show the collective impact of measures in making progress toward 2030 and 2045 targets. These target indicators are available in Appendix F. Collecting the appropriate data is essential to provide an accurate indicator of strategy completion progress.

5.2 California Environmental Quality Act

The CAAP was developed with the intent to serve as a resource for CEQA streamlining, per the provisions of state CEQA Guidelines Section 15183.5. Under these provisions, a project that is subject to discretionary review and is consistent with the City's General Plan Update's growth projections can streamline its GHG analysis under CEQA by demonstrating consistency with applicable GHG reduction measures in the CAAP.

A "qualified" CAP, or a GHG reduction plan consistent with CEQA Guidelines Section 15183.5, will allow project-specific environmental documents, if eligible, to tier from and/or incorporate by reference the CAP's programmatic review of GHG impacts in their cumulative impact analyses for GHGs. Streamlined projects fulfill the City's strategic approach to environmental sustainability, expediting environmental review while meeting the demand for green development. Environmental review for the CAAP is being incorporated into the ongoing General Plan Update process.

5.3 Monitoring and Updates

Once the CAAP is adopted, the City will begin implementing measures and actions and collecting any necessary data needed for monitoring. City staff will need to evaluate and monitor CAAP performance over time and alter or amend the plan if it is not following the emissions trends needed to meet its reduction targets. This will include conducting periodic GHG emissions inventories and analyzing individual actions' performance, as well as incorporating CAAP implementation needs into the annual budgeting cycle. Each quantified climate action strategy included in the CAAP has an associated quantitative target indicator to track success in making the shifts needed to reduce GHG emissions. This monitoring approach will also allow City staff to ensure the CAAP stays relevant and effective.



To gauge progress over time, CAAP monitoring will also require updates to its GHG emissions inventory. An updated GHG inventory is a critical piece of monitoring data for the CAAP. Inventory updates are recommended every two years to ensure continuity and timely intervention as needed. Since the CAAP includes emissions from both the Lake Elsinore City Limits and Sphere of Influence (SOI), the City will conduct an updated GHG emissions inventory as areas of the SOI are annexed into the City Limits. Appendix B provides a breakdown of the GHG inventory between the City Limits and SOI, and monitoring progress towards reaching GHG reduction targets will need to consider both boundaries.

The City will monitor and report on CAAP implementation activities every two years, along with a GHG inventory update. The reports are anticipated to include the most recent GHG emissions data, the implementation status of each action, and progress toward achieving the target indicators. As technologies and markets change and the City implements the actions in the CAAP, these reports will be used to track progress and identify actions that need to be improved, adjusted, or removed. The reports would also provide transparency and promote engagement with the public for CAAP implementation.

Ensuring that the measures identified in the CAAP result in emissions reductions and resilience improvements is central to the success of the CAAP. Achieving these goals will require investments and long-term commitments from the City government as well as participation from staff in various City departments. The success of CAAP implementation will also depend on the participation of residents, businesses, and other stakeholders in Lake Elsinore.

Finally, the City will prepare a comprehensive update to the CAAP every five years. The next update is anticipated to be in 2030. Future updates will be necessary to account for any new state or federal legislation, measures, and actions that may have been difficult to implement previously due to a lack of available technologies or high upfront implementation costs, and any relevant findings and recommendations from the City's monitoring reports.



Chapter 6

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Chapter 6

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Appendix A

Community Engagement Summary

DRAFT

Climate Action and Adaptation Plan for the City of Lake Elsinore

Prepared for:

City of Lake Elsinore
130 S Main Street
Lake Elsinore, California 92530

December 2025

20230253.01

DRAFT

Climate Action and Adaptation Plan for the City of Lake Elsinore

Prepared for:

City of Lake Elsinore
130 S Main Street
Lake Elsinore, California 92530
951.674.3124

Prepared by:

Ascent
2550 Fifth Avenue, Suite 640
San Diego, CA 92103
619.219.8000

December 2025

20230253.01

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Attachments

Attachment A Spanish Translated Questionnaire
Attachment B Virtual Workshop Materials
Attachment C Pop-up Boards
Attachment D Collateral Materials

1 INTRODUCTION

The City of Lake Elsinore Climate Action and Adaptation Plan (CAAP) is a planning effort aimed at reducing greenhouse gas emissions (GHG) and preparing the community for the impacts of climate change. The CAAP establishes a roadmap for local climate action, identifying strategies to reduce emissions from transportation, buildings, and waste, while also addressing climate adaptation needs to protect residents, businesses, and infrastructure from climate hazards such as extreme heat, flood, drought, and wildfire.

Community engagement is important for the success of the CAAP. Through the planning process, the City of Lake Elsinore sought input from residents, businesses, and community organizations to:

- Identify key priorities for climate action and adaptation efforts
- Ensure that strategies reflect local needs and values
- Build community support for plan implementation
- Center equity and ensure all community members have opportunities to participate

Community engagement for the Lake Elsinore CAAP consisted of multiple interrelated activities designed to reach diverse audiences and gather meaningful input:

- Questionnaire – A survey accessible to all community members to gather broad input on climate priorities and concerns
- Virtual Workshop – An online community workshop providing an overview of the CAAP and facilitating discussion on climate priorities
- Pop-Up Events – In-person engagement at community locations to reach residents where they already gather and ensure accessible participation
- Collateral Materials – Electronic and printed informational materials distributed throughout the community to raise awareness about the CAAP and opportunities for participation

This document summarizes key themes, engagement tools, and feedback received, which together helped inform the CAAP.

1.1 KEY THEMES

Across all engagement activities, consistent themes emerged from community input:

Priorities:

- Wildfire and extreme heat are top climate concerns, followed by drought
- Lake health and water quality improvement as a priority environmental concern
- Urban greening, expanded tree canopy, and more parks and green spaces

Public Health:

- Air quality deterioration related to construction, vehicle emissions, and industrial sources
- Extreme heat impacts on health and safety for vulnerable populations

Transportation and Mobility:

- Traffic congestion throughout the city
- Dedicated bike paths, improved walkability, and safer pedestrian infrastructure
- Better public transportation options and safety concerns as barriers

Energy and Infrastructure:

- Solar energy expansion, concerns about costs and accessibility
- Transition to renewable energy sources and EV charging infrastructure
- Energy grid reliability and energy-efficient buildings

Water Management and Resource Conservation:

- Protect and improve water quality of Lake Elsinore
- Groundwater depletion and aquifer replenishment
- Water-efficient landscaping, rainwater capture, and graywater systems
- Reduced water consumption through drought-tolerant plantings

Economic Considerations:

- Financial constraints as a barrier to environmentally friendly actions
- Utility bills, fuel costs, housing, and fees and taxes are high
- Financial assistance programs, incentives, and support for property owners

Housing and Development:

- Residential sprawl and its impacts on natural habitats
- Need for higher-density, mixed-use development to improve walkability and densify city hubs
- HOA restrictions and need for more housing options

Food Access and Urban Agriculture:

- Community gardens as environmental solutions
- Access to healthy and affordable food options, with zoning challenges limiting urban farming

Planning and Implementation:

- More information about funding sources, timelines, and measurable outcomes
- Ongoing community involvement, education on climate impacts, and partnerships with local organizations

2 ENGAGEMENT APPROACH

The following section outlines the City's approach to engagement for the CAAP planning process and the details of specific components of the engagement process.

2.1 QUESTIONNAIRE

The City launched a community questionnaire from December 2024 to April 2025 to gather input from the community on local concerns, priorities, and potential actions that can be incorporated into the City's CAAP development efforts. A total of 373 responses were received. This document summarizes the questionnaire responses and highlights key themes identified.

Outreach Activities

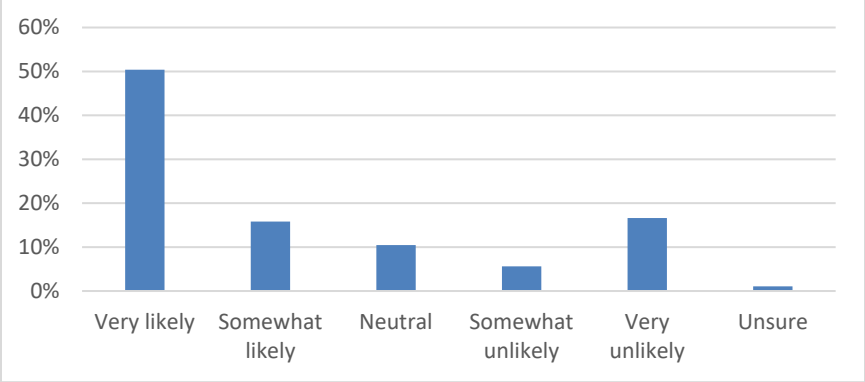
The City employed multiple outreach strategies to maximize participation:

- Social media campaigns across City social media platforms
- Pop-up event at the Santa Dash on December 23, 2024
- Presentations at City Council meetings
- Regular email newsletter notifications
- Posting on the project website

Summary of Questions and Responses

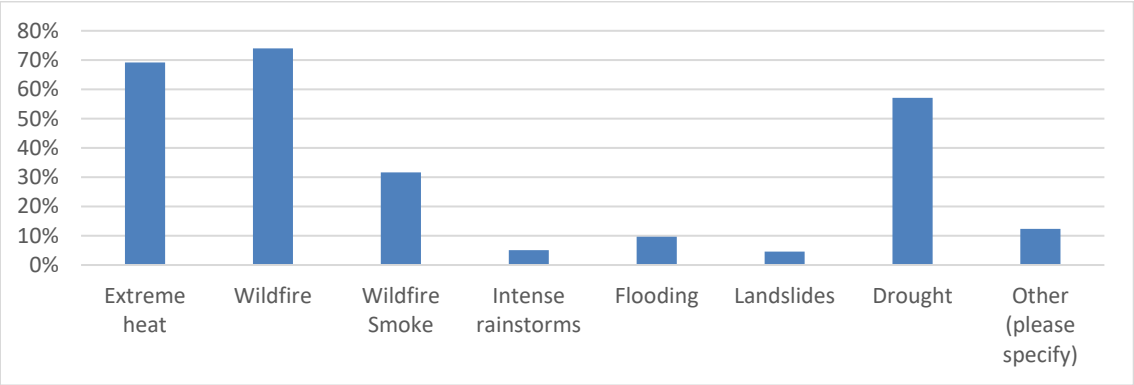
Responses to the multiple-choice questions are summarized using charts and graphs below. Open-ended and 'other' responses were coded by subject matter, and common themes were identified and summarized. The questionnaire and its corresponding results are presented in the sections below.

Question 1: How likely do you think it is that climate change will affect the health and safety of you, your friends, and/or your loved ones?



The survey results show strong support for how climate changes may affect one's health and safety, with about 66% of respondents indicating they are either "Very likely" (50%) or "Somewhat likely" (16%). However, approximately 22% express skepticism of climate change health and safety impacts, with 6% responding "Somewhat unlikely" and 17% "Very unlikely."

Question 2: Which three climate impacts concern you the most? (Please select up to three options)

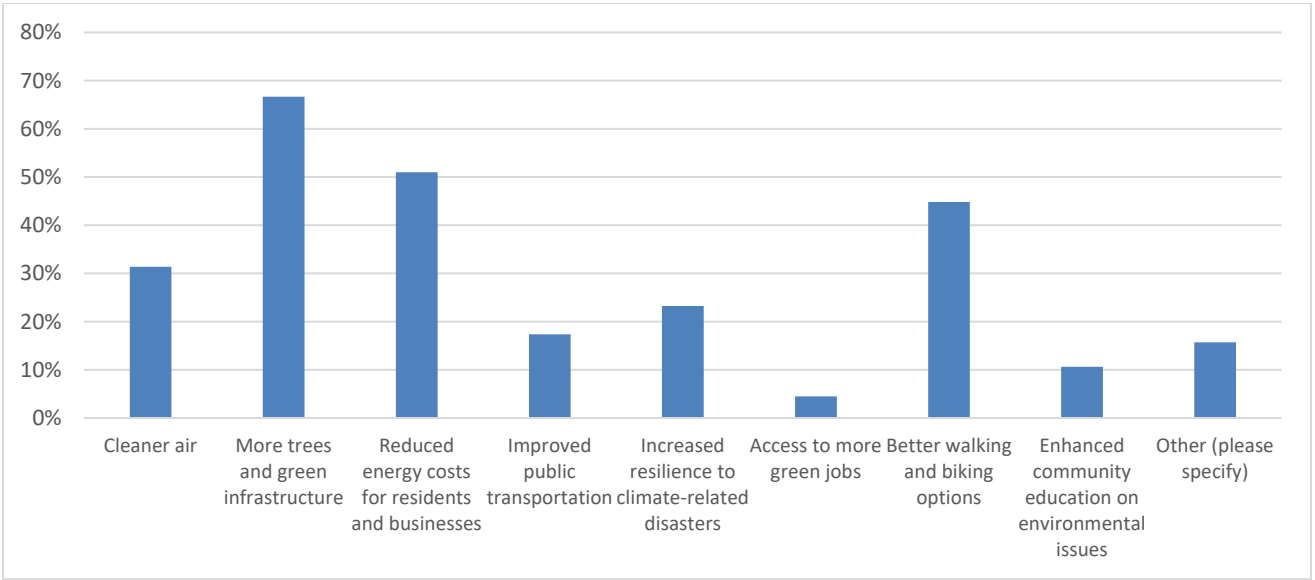


Wildfire (74%) and extreme heat (69%) emerged as the top climate concerns among respondents, with more than two-thirds selecting these impacts. Drought ranked third (57%), creating a clear top tier of concerns. Wildfire smoke (31%) was the only mid-tier concern, while flooding (10%), intense rainstorms (5%), and landslides (5%) received significantly less attention.

"Other" Responses (46):

- Lake health and water quality concerns
- Skepticism about climate change as a priority
- Infrastructure improvements, particularly street lighting
- Traffic and air pollution from vehicles
- Support for comprehensive approaches addressing multiple impacts

Question 3: Which outcomes would you most like to see from Lake Elsinore's Climate Plan? (Please select up to three options)

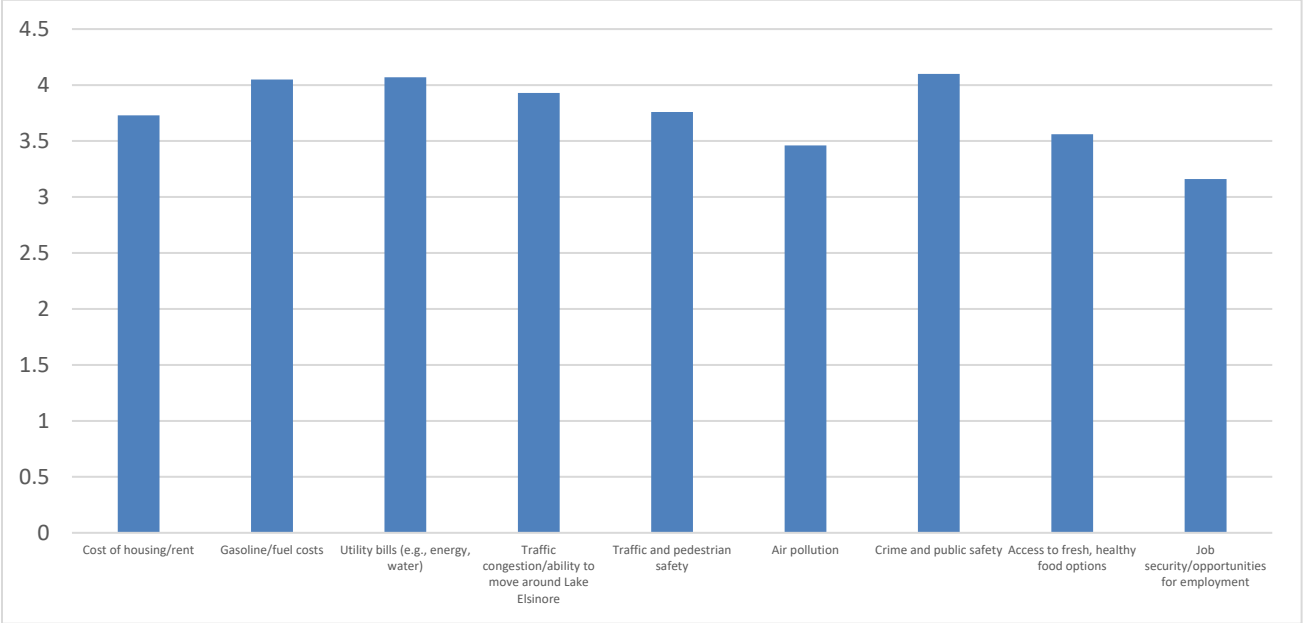


More trees and green infrastructure received the strongest support (67%), followed by reduced energy costs for residents and businesses (51%). Better walking and biking options ranked third (45%), with overall responses reflecting residents' desire for nature-based solutions, cost savings, and improved mobility. Cleaner air (31%) and increased resilience to climate impacts (23%) formed a middle tier of priorities. Improved public transportation (17%), enhanced community education on environmental issues (11%), and access to green jobs (4%) garnered the least amount of support among respondents.

"Other" responses (56):

- Lake protection and improvement (water quality, lake levels, and habitat preservation)
- Infrastructure concerns (street repairs, lighting, traffic congestion)
- Better recreational facilities (dog parks, extreme sports facilities, equestrian trails)
- Affordability concerns (avoiding financial burdens on residents and businesses)
- Improved accessibility (for disabled persons and public transportation)
- Skepticism about climate initiatives and preference for alternative priorities

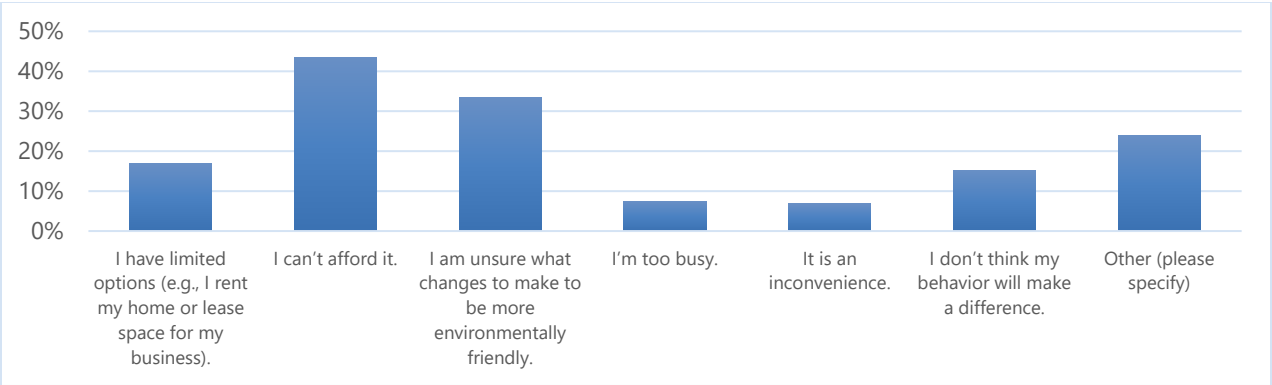
Question 4: Please identify your level of concern with the following.



The weighted average represents the mean level of concern on a scale from 1 to 5, where 1 = Not at all concerned and 5 = Extremely concerned.

Crime and public safety emerged as the top concern (4.10), closely followed by utility bills (4.07) and gasoline/fuel costs (4.05). These economic and safety-related issues received notably higher concern ratings than environmental factors. Traffic congestion (3.93), housing costs (3.73), and pedestrian safety (3.76) formed a middle tier of concerns. Air pollution (3.46) and job security (3.16) generated the lowest levels of concern—though all issues averaged above the midpoint on the 5-point scale.

Question 5: What barriers, if any, make it harder for you to adopt more environmentally friendly actions in your day-to-day life? (Select all that apply)

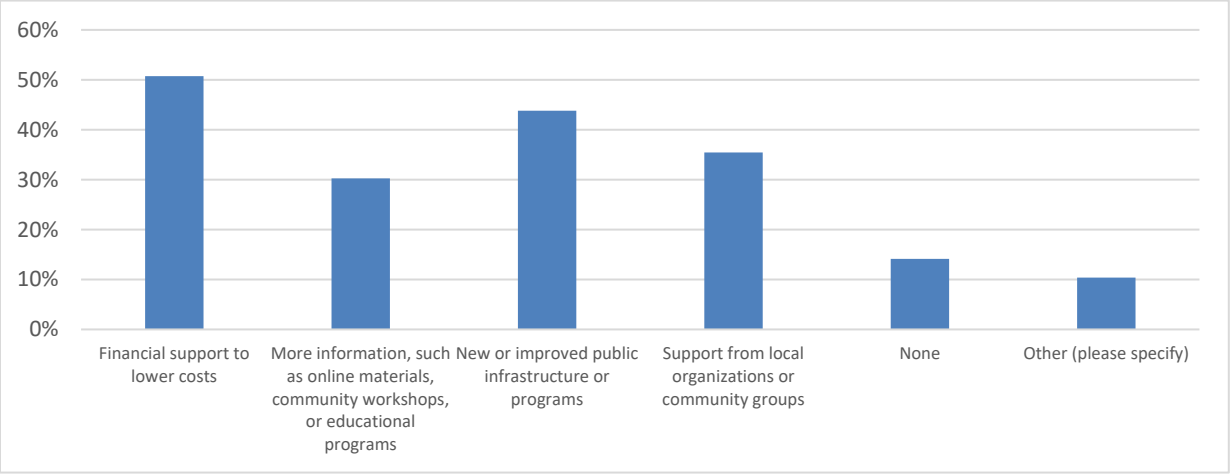


Financial constraints emerged as the primary barrier, with 44% of respondents indicating they "can't afford" to adopt more environmentally friendly actions. Approximately one-third (33%) reported being "unsure what changes to make," indicating an information gap. Nearly a quarter (24%) selected "Other" to specify unique barriers. Limited options due to renting or leasing (17%) and skepticism about individual impact (15%) formed a middle tier. Time constraints (7%) and inconvenience (7%) were cited least frequently as barriers.

"Other" Responses (83):

- Some respondents are already implementing environmental actions (solar, recycling, conservation)
- Skepticism about climate initiatives and government involvement
- Infrastructure limitations (poor public transportation, unsafe biking conditions, lack of recycling options)
- Physical barriers (medical/mobility issues, physical disabilities)
- Safety concerns (related to walking/biking in certain areas)
- HOA restrictions and lack of community resources
- Geographic challenges (stores being too far away for walking/biking)

Question 6: Which of the following would help you overcome barriers you identified in Question 5? (Select all that apply)

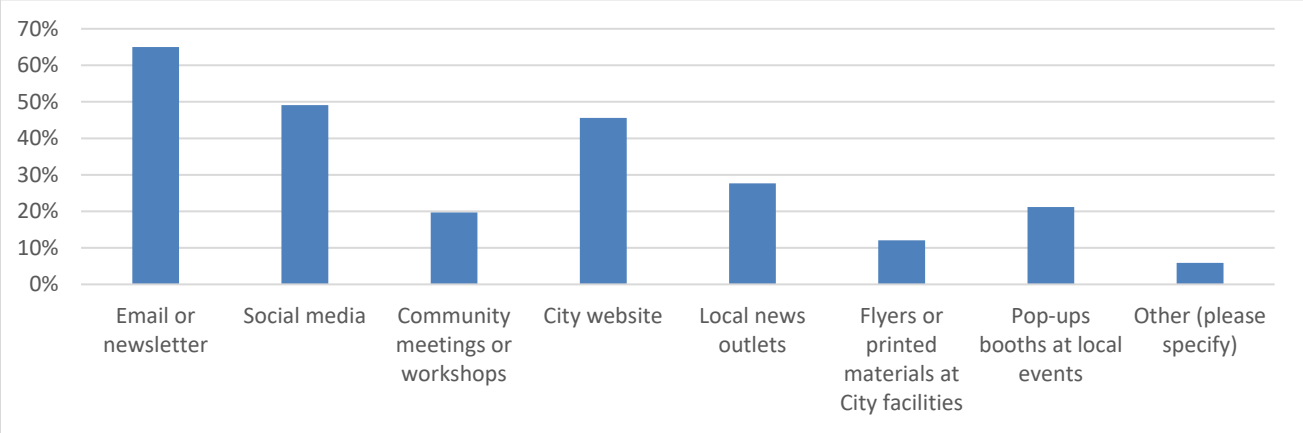


Financial support to lower costs was the most selected solution (51%), aligning with the top barrier of affordability identified in Question 5. New or improved public infrastructure ranked second (44%), followed by support from community organizations (35%) and more educational resources (30%). A notable proportion of respondents (14%) selected "None," suggesting some may be unwilling to adopt new environmental practices regardless of support, while 10% provided specific alternative solutions summarized below.

"Other" Responses (36):

- Improved public transportation (particularly bus service and Metrolink expansion)
- Financial assistance specifically for seniors and fixed-income residents
- Skepticism about climate initiatives and government involvement
- HOA policy reforms to allow for environmental improvements
- Enhanced community safety and security measures
- Physical assistance for seniors and disabled residents
- Desire for more affordable housing options
- Focus on municipal leadership addressing business-related environmental impacts

Question 7: How would you prefer to receive information? (Select all that apply)

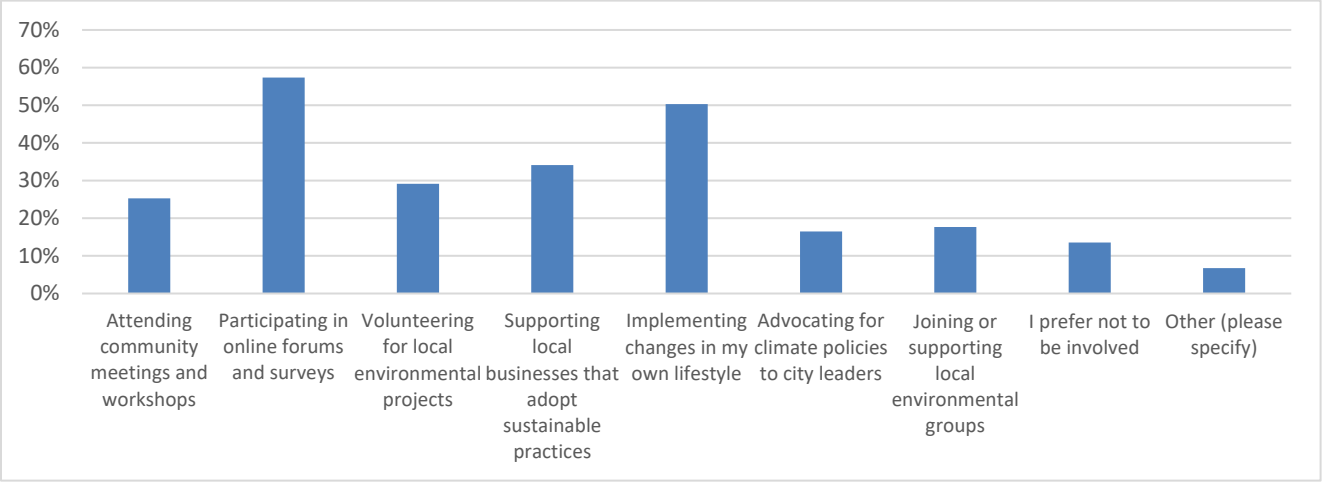


Email or newsletter emerged as the strongly preferred communication channel (65%), followed by social media (49%) and the City website (46%). Local news outlets (28%), pop-up booths at events (21%), and community meetings (20%) formed a middle tier of preference. Printed materials at City facilities received the lowest support (12%), suggesting a clear preference for digital over physical communication methods.

"Other" Responses (20):

- Direct mail to residential addresses
- Text message notifications
- Preference for multiple communication channels simultaneously
- Skepticism about the effectiveness of information campaigns

Question 8: How do you prefer to be involved in Lake Elsinore's climate action and adaptation efforts? (Select all that apply)

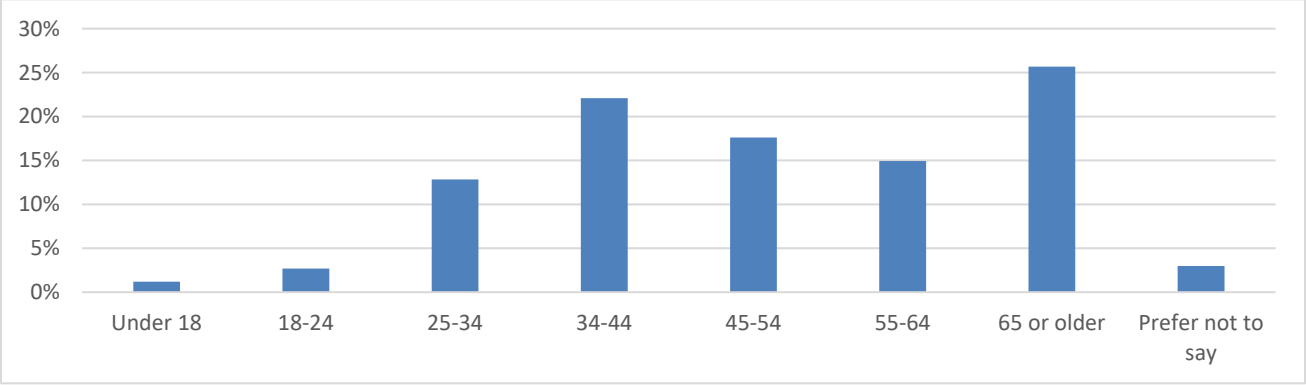


Online participation emerged as the clear preference (57%), followed closely by personal lifestyle changes (50%), indicating that many residents may prefer convenient, individual-level involvement. Supporting sustainable local businesses (34%) and volunteering for environmental projects (29%) formed a middle tier of engagement preferences. Attending in-person community meetings (25%) ranked fifth, while advocacy to City leaders (16%) and joining environmental groups (18%) received less support. Notably, 14% of respondents indicated they prefer not to be involved at all.

Other responses (23):

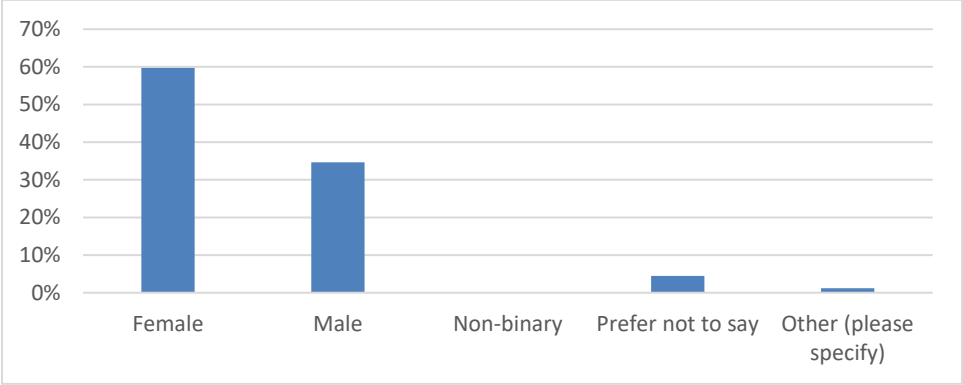
- Interest in online meetings and workshops rather than in-person events
- Participation limitations due to disability or mobility issues
- Skepticism about climate initiatives and participation value

Question 9: What is your age?



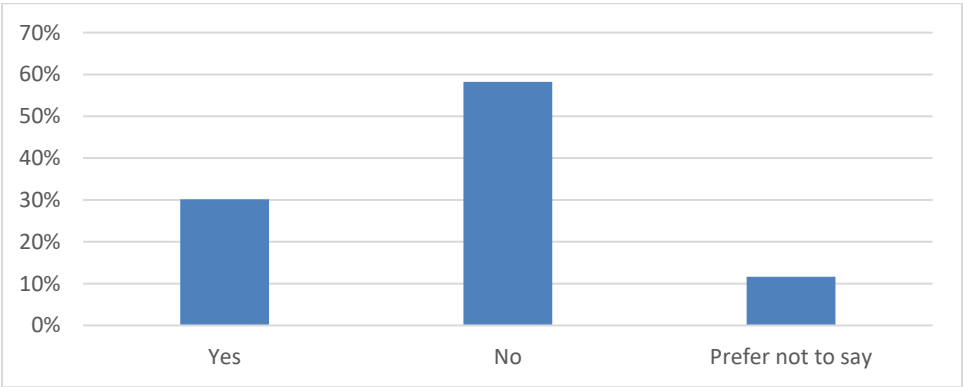
Over 65% of respondents were 35 or older. The limited participation from younger residents (under 35) may suggest a need for targeted outreach strategies to increase engagement from this demographic in future climate planning initiatives.

Question 10: What is your gender?



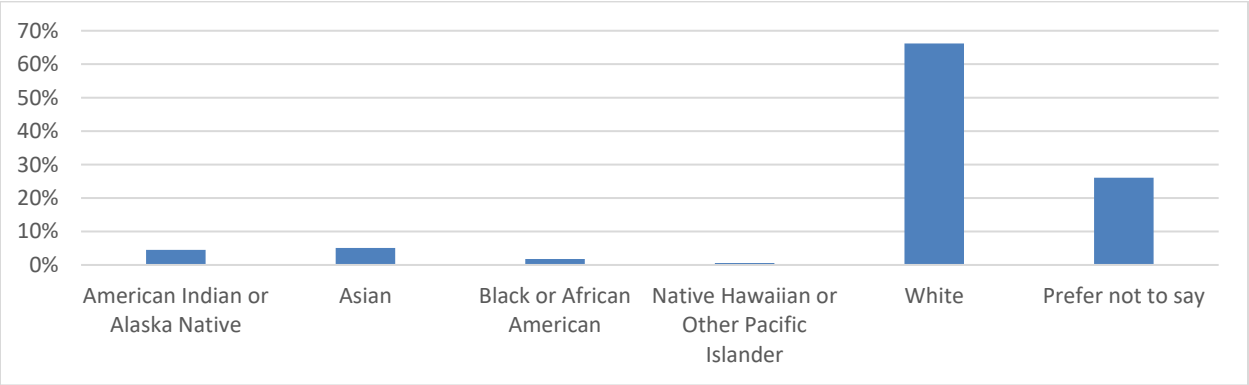
Female respondents represented nearly 60% of questionnaire participants, while male respondents accounted for approximately 35%, with the remaining 5% either preferring not to specify or selecting "Other."

Question 11: Are you of Hispanic/Latino/Spanish origin?



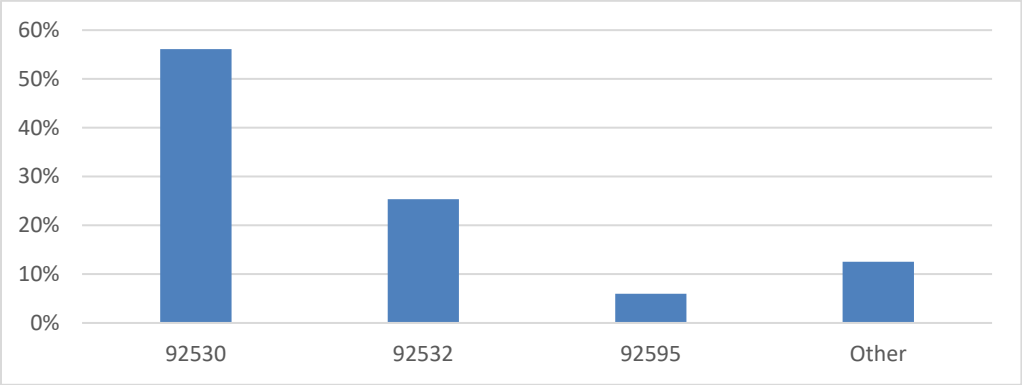
Most respondents (58%) identified as not being of Hispanic/Latino/Spanish origin, while 30% indicated they were of Hispanic/Latino/Spanish origin.

Question 12: How would you best describe yourself? (Select all that apply)



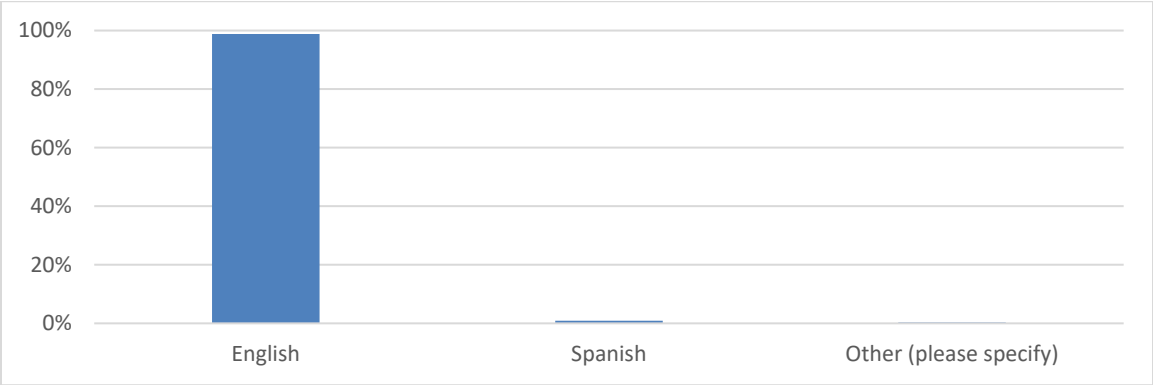
Most respondents (66%) identified as White, while other racial/ethnic groups had much lower representation, including Asian (5%), American Indian or Alaska Native (4%), and Black or African American (2%).

Question 13: What zip code do you live in?



This distribution confirms strong representation from Lake Elsinore's primary residential areas, with over 80% of responses coming from the city's two main zip codes.

Question 14: What language are you most comfortable using for communication?



Most respondents (99%) preferred to receive climate plan communications in English, with minimal preference for Spanish (1%) or other languages (<1%).

Question 15: What questions or comments do you have about climate change or the Lake Elsinore Climate Plan?

Question 15 received 154 unique comments. The feedback reflects a community with diverse perspectives on climate action, yet united by shared concerns about environmental quality, infrastructure, and overall quality of life. Many residents voiced support for practical environmental improvements, while also emphasizing the need to address immediate community priorities, protect recreational opportunities, and maintain affordability. The information is organized by common themes and includes a brief overview of the key takeaways from the collected input.

Traffic and Transportation Issues (42 mentions)

- Traffic congestion identified as a critical issue, particularly on Central, Collier, and Railroad Canyon
- Strong support for dedicated bike paths that connect destinations, not just painted lanes
- Calls for improved walkability with safer pedestrian crossings
- Requests for better public transportation, including Metrolink expansion
- Safety concerns for pedestrians and cyclists as barriers to using alternative transportation

Lake Health and Water Quality (35 mentions)

- Improving lake water quality emerged as the most mentioned specific environmental concern
- Some comments about reducing odor issues, particularly in the Summerly area
- Suggestions for maintaining higher lake levels to address drought and evaporation
- Recognition of the lake's importance for both environmental health and community identity
- Concerns about pollution entering the lake through runoff

Urban Greening and Trees (30 mentions)

- Strong support for expanded urban forest and tree canopy throughout the city
- Interest in native plant landscaping and shade structures in public spaces
- Requests for more parks and green spaces to improve air quality and reduce heat impacts
- Several mentions of community gardens and food forests as environmental solutions
- Suggestions for City code modifications to encourage native species

Climate Change Skepticism (28 mentions)

- Several respondents characterized climate change as a "hoax," "myth," or "scam"
- Concerns about financial motivations behind climate programs
- References to natural climate cycles rather than human-caused climate change
- Sentiment that climate initiatives were politically motivated
- Resistance to government mandates related to climate action

Economic Concerns (25 mentions)

- Worry about new fees, taxes, or compliance costs for residents and businesses
- Concerns about impacts on fixed-income residents
- Requests for financial assistance programs for environmental improvements
- Interest in developing local green businesses to reduce commuting
- Suggestions for volunteer programs as cost-effective environmental improvements

Alternative Priorities (22 mentions)

- Suggestions to focus on homelessness, safety, and business development
- Focus on lake cleanup rather than broader climate action
- Questions about the effectiveness of local climate action given global scale needed to make change
- Preference for immediate infrastructure improvements

Housing and Development (18 mentions)

- Concerns about continued residential sprawl and impacts on natural habitats
- Some advocacy for higher-density, mixed-use development
- HOA restrictions identified as barriers to implementing environmental improvements
- Emphasis on preserving open space from development

Air Quality and Pollution (16 mentions)

- Concerns about dust from construction, mining operations, and vehicle emissions
- Comments about fireplace smoke and industrial emissions affecting air quality
- References to the impact of warehouse development on local air quality

Recreation and Quality of Life (15 mentions)

- Interest in preserving "Extreme Sports" identity while improving environmental quality
- Requests for lake-centric recreation improvements and better parks
- Safety and accessibility concerns limiting outdoor activity for residents

Implementation and Process (12 mentions)

- Requests for information about funding sources, timelines, and agency collaboration
- Desire for regular progress updates, measurable outcomes, and citizen involvement

Attachment A

Spanish Translated Questionnaire

¡RESPONDA HOY MISMO EL CUESTIONARIO COMUNITARIO DEL PLAN CLIMÁTICO DE LAKE ELSINORE!

Necesitamos su opinión para contribuir al desarrollo del próximo Plan de acción y adaptación climática (Plan climático) de la ciudad de Lake Elsinore. Le pedimos que comparta sus ideas para ayudar a guiar el desarrollo del Plan climático. ¡Agradecemos mucho sus comentarios!

Responder el cuestionario le llevará unos 10 minutos.

PERCEPCIÓN DEL RIESGO CLIMÁTICO

Ayúdenos a conocer sus preocupaciones sobre los posibles riesgos relacionados con el clima en su comunidad.

1. **¿Qué probabilidad cree que existe de que el cambio climático afecte su salud y seguridad, la de sus amigos o la de sus seres queridos?**
   A. Muy probable
   B. Poco probable
   C. Neutral
   D. Poco improbable
   E. Muy improbable
   F. No estoy seguro(a)

2. **¿Qué tres consecuencias del cambio climático le preocupan más? (Seleccione hasta tres opciones)**
   A. Calor extremo
   B. Incendios forestales
   C. Humo de incendios forestales
   D. Lluvias intensas
   E. Inundaciones
   F. Deslizamientos de tierra
   G. Sequía
   H. Otros (especifique):

VALORES COMUNITARIOS

Ayúdenos a elaborar un Plan climático que refleje los valores y prioridades de su comunidad.

3. **¿Qué resultados le gustaría obtener del Plan climático de Lake Elsinore? (Elija hasta tres opciones.)**
   1. Aire más limpio
   2. Más árboles e infraestructuras verdes
   3. Reducción de los costos energéticos para habitantes y empresas
   4. Mejora del transporte público
   5. Mayor resistencia a las catástrofes relacionadas con el clima
   6. Acceso a más empleos verdes
   7. Mejores opciones para ir a pie y en bicicleta
   8. Mejora de la educación comunitaria en materia de medio ambiente
      Otros (especifique): _____

4. **Por favor, identifique su nivel de preocupación con lo siguiente. Valore cada punto utilizando la siguiente escala: 1 = No le preocupa para nada. 2 = Le preocupa un poco. 3 = Le preocupa moderadamente 4 = Le preocupa mucho. 5 = Le preocupa muchísimo.**

   A. Costo de la vivienda
   B. Costos de gasolina/combustible
   C. Facturas de servicios públicos (energía, agua, etc.)
   D. Congestión del tránsito/capacidad para moverse por Lake Elsinore
   E. Seguridad vial y peatonal
   F. Contaminación del aire
   G. Delincuencia y seguridad pública
   H. Acceso a alimentos frescos y saludables
   I. Seguridad laboral/oportunidades de empleo
   J. Otras preocupaciones (especifique):

BARRERAS COMUNITARIAS

Comprender sus retos y los recursos que necesita, nos ayudará a desarrollar un Plan climático más eficaz que apoye las opciones respetuosas con el medio ambiente en Lake Elsinore, como conservar la energía y el agua, reducir los residuos y usar opciones de transporte sostenibles.

5. **¿Qué barreras, si las hay, le dificultan adoptar acciones más respetuosas con el medio ambiente en su vida cotidiana? (Seleccione todas las que correspondan.)**
   A. Tengo opciones limitadas (por ejemplo, alquilo mi casa o alquilo un local para mi negocio).
   B. No puedo pagarlo.
   C. No sé qué cambios hacer para ser más respetuoso con el medio ambiente.
   D. Estoy demasiado ocupado(a).
   E. Es un inconveniente.
   F. No creo que mi comportamiento marque la diferencia.
   G. Otros (especifique):

6. **¿Cuál de las siguientes opciones le ayudaría a superar los obstáculos que ha identificado en la pregunta 5? (Seleccione todas las que correspondan.)**
   A. Apoyo financiero para reducir costos
   B. Más información, como material en línea, talleres comunitarios o programas educativos
   C. Infraestructuras o programas públicos nuevos o mejorados
   D. Apoyo de organizaciones locales o grupos comunitarios
   E. Otros (especifique): _____
   F. Ninguno

PREFERENCIA POR LA PROXIMIDAD A LA COMUNIDAD

Díganos cuál es la mejor manera de compartirle las actualizaciones y los logros del Plan climático.

7. **¿Cómo prefiere recibir la información? (Seleccione todos los que correspondan.)**
   A. Correo electrónico o boletín
   B. Redes sociales

C. Reuniones o talleres comunitarios
D. Sitio web de la municipalidad
E. Medios de comunicación locales
F. Folletos o material impreso en las instalaciones municipales
G. Casetas en eventos locales
H. Otros (especifique)

8. ¿Cómo prefiere participar en los esfuerzos de acción y adaptación climática de Lake Elsinore? (Seleccione todos los que correspondan.)

A. Asistencia a reuniones y talleres comunitarios
B. Participar en foros y encuestas en línea
C. Voluntariado en proyectos medioambientales locales
D. Apoyar a las empresas locales que adoptan prácticas sostenibles
E. Introducir cambios en mi estilo de vida
F. Defender las políticas climáticas ante los dirigentes municipales
G. Unirse o apoyar a grupos ecologistas locales
H. Prefiero no participar
I. Otros (especifique): _____

CUÉNTENOS SOBRE USTED

Ayúdenos a comprender quién realiza este cuestionario para garantizar que las respuestas reflejen las diversas perspectivas de la ciudad de Lake Elsinore.

9. ¿Cuál es su edad?

A. Menor de 18 años
B. 18-24
C. 25-34
D. 34-44
E. 45-54
F. 55-64
G. 65 años o más
H. Prefiero no decirlo

10. ¿Cuál es su sexo?

A. Mujer
B. Hombre
C. No binario
D. Prefiero no decirlo
E. Otros

11. ¿Es usted de origen hispano/latino/español?

A. Sí
B. No
C. Prefiero no decirlo

12. ¿Cómo se describiría mejor a sí mismo? (Seleccione todos los que correspondan.)

A. Indio(a) americano(a) o nativo(a) de Alaska
B. Asiático(a)
C. Negro(a) o afroamericano(a)
D. Nativo(a) de Hawai u otras islas del Pacífico
E. Blanco(a)
F. Prefiero no decirlo

13. ¿En qué código postal vive?
A. Abierto

14. ¿En qué idioma le resulta más cómodo comunicarse?
A. Inglés
B. Español
C. Tagalo (filipino)
D. Vietnamita
E. Chino (incluidos dialectos como el cantonés y el mandarín)
F. Otros (especifique):

Últimas reflexiones

Sus opiniones e ideas son valiosos para nosotros. Le pedimos que nos cuente sus puntos de vista, preocupaciones o sugerencias que considere importantes.

15. ¿Qué preguntas o comentarios tiene sobre el cambio climático o el Plan Climático de Lake Elsinore? (opcional)
A. Abierto

16. Para mantenerse al día sobre los próximos eventos y actualizaciones relacionados con el Plan climático de Lake Elsinore, introduzca su correo electrónico a continuación. (opcional)
A. Abierto

RESPUESTA DE ENVÍO

Gracias por dedicar parte de su tiempo para responder el cuestionario comunitario del Plan climático de Lake Elsinore. Su contribución es muy valiosa y ayudará a moldear el plan para servirle mejor a usted, a su comunidad y a todo Lake Elsinore. Esperamos seguir contando con su participación.

Si tiene preguntas sobre el cuestionario o al Plan de acción (CAAP siglas en inglés), comuníquese con planning@lake-elsinore.org.

2.2 VIRTUAL WORKSHOP (MARCH 19, 2025)

The City hosted a virtual community workshop for the CAAP on Wednesday, March 19, 2025, from 6:00 to 7:30 p.m. The event introduced the project and planning process and provided attendees with opportunities to engage with the project team and share feedback. Eight participants joined the virtual session, with live Spanish interpretation and translated materials available.

The workshop began with a presentation outlining the agenda, project schedule, and key details about the CAAP. It included an overview of climate change, the connection between climate mitigation and adaptation, and an assessment of climate stressors, hazards, and projected impacts in Lake Elsinore. Participants were also introduced to potential sustainable, economic, community, and resilience-focused opportunities to be integrated into the CAAP. Following the presentation, attendees engaged in small group discussions to identify the city's infrastructure, societal, and environmental vulnerabilities and strengths. The workshop concluded with an overview of next steps and further opportunities for community involvement.

This summary captures the key information shared and the feedback collected, which will help inform strategy development and ensure actions align with local priorities

2.2.1 Welcome and Introductions

Luis Montes, Ascent's Outreach Specialist, welcomed the group and provided instructions on using Zoom features. Tania Garcia, the Spanish interpreter, explained how participants could access interpretation services in both English and Spanish. The project team, including City staff, was introduced, and Damaris Abraham, the City's Director of Community Development, gave the opening remarks. Participants were encouraged to introduce themselves in the chat by sharing their name, affiliation, and favorite places in Lake Elsinore.

2.2.2 CAAP Overview Presentation

Luis provided an overview of the Lake Elsinore CAAP, highlighting its intended role in reducing emissions, enhancing resilience, and addressing climate challenges such as extreme heat, flooding, drought, and wildfire. The presentation provided details on the benefits the CAAP can provide such as improving economic growth, prioritizing local needs, ensuring equitable benefits, and engaging all community members. The presentation emphasized the link between climate mitigation and adaptation, showing how local actions can reduce climate pollutants and strengthen resilience. Interactive Slido polling revealed significant concern about climate change's impact on health and safety, underscoring the need for proactive planning to safeguard infrastructure, the economy, and the environment. While these results are based on a relatively small dataset from those who attended the virtual workshop, they align closely with responses from the questionnaire, reinforcing the trends and priorities identified in both engagement activities.

The results from the Slido questions asked during this section include:

Slido Question #1: How likely do you think it is that climate change will affect the health and safety of you, your household, and/or your loved ones?

Poll Option	Count	Percentage
Very likely	3	75%
Somewhat likely	1	25%
Neutral	0	0%
Somewhat unlikely	0	0%
Very unlikely	0	0%
Unsure	0	0%

Slido Question #2: Which of the following hazards do you find most concerning?

Poll Option	Count	Percentage
Wildfire and Smoke	3	75%
Drought	1	25%
Extreme Heat	0	0%
Flooding and Intense Storms	0	0%
Landslides, Mudflows and Debris Flow	0	0%

2.2.3 GHG Inventory

The workshop included a quick brief overview of the City's GHG inventory, which estimates emissions across key sectors to identify major sources and guide climate action planning. The 2022 inventory showed that on-road transportation is the largest contributor, followed by energy use in residential and nonresidential buildings. An understanding of these emission sources was highlighted as an essential step for developing strategies to reduce GHG emissions and strengthen sustainability efforts.

2.2.4 Community Visioning

To encourage feedback on priorities for the CAAP, Luis introduced visioning questions and provided examples of potential opportunities. The workshop highlighted opportunities for sustainability, economic growth, and climate resilience, offering examples of priorities attendees may want to see reflected in the plan. Participants were asked to envision a thriving city in 20 years and identify the outcomes they most wanted to see from the plan.

The results from the Slido questions asked during this section include:

Question 3: In 1-2 words, what is your vision for a thriving Lake Elsinore in 20 years?

- Responses included
- Rezoning for walkability
- Permaculture measures
- Medium-density housing
- Pathway around the lake
- Increased green infrastructure
- Incentives for green construction and solar
- Improved roads to reduce traffic
- Walkable areas
- Bicycle highways

Question 4: Which outcomes would you most like to see from Lake Elsinore's CAAP?

Poll Option	Count	Percentage
Cleaner air quality	3	75%
More trees and parks	3	75%
Enhanced transportation and mobility options	3	75%
Better preparation for extreme weather	2	50%
Improved walking and biking infrastructure	2	50%
Lower energy costs	0	0%
Increased job opportunities	0	0%
Other (Enter in the chat!)	0	0%

2.2.5 Q&A and Group Activity

Following the presentation, attendees had the opportunity to ask questions. No questions were asked during this segment of the workshop.

Participants engaged in a group activity to identify Lake Elsinore's vulnerabilities and strengths related to climate change, categorized into infrastructural (e.g., buildings, utilities), societal (e.g., healthcare, emergency response), and environmental (e.g., pollution, tree cover, recreation) areas. Using an online MURAL board, the activity was divided into two parts: vulnerabilities and strengths. For vulnerabilities, participants discussed areas most at risk from extreme heat, flooding, drought, and wildfire, while brainstorming strategies and resources to enhance resilience and recovery. The second part focused on community strengths, with participants reflecting on the aspects of Lake Elsinore they value most and wish to preserve, including unique features, places, and programs. Ideas were once again categorized into infrastructural, societal, and environmental elements. This collaborative exercise helped pinpoint both critical vulnerabilities to address and valuable strengths to leverage in climate action planning.

40 minutes was dedicated to this discussion. Results of the activity are summarized below:

Infrastructural Vulnerabilities

Feature	Impact/Vulnerability	Recommendations
Roads		▶ Develop bike and walkway infrastructure, including connections to other cities
Housing	▶ People are getting priced out ▶ Lack of small housing options for single or couple residents ▶ Housing insecurity during climate events ▶ Sprawl is bringing houses closer to fire-prone areas ▶ Wildfire loss of homes	▶ Provide more housing options for smaller households ▶ Increase housing density and walkability ▶ Densify Main Street and Diamond Drive city hubs ▶ Retrofit homes with gray water recirculation
Energy Grid/Energy Reliability	▶ EV charging stations still powered by fossil fuels	▶ Transition of the city's grid to renewable energy sources ▶ Incentivize companies to use solar ▶ Consider floating solar panels
Public Transit	▶ No reason to use it because of urban sprawl	

Feature	Impact/Vulnerability	Recommendations
Local Services (solid waste, water)	▶ Evaporation of potable water in reservoirs and lake	▶ Solid waste and water can be mitigated through required graywater systems and biomass systems for homes and businesses. ▶ Rainwater circulation and biogas units from human waste to generate energy.
Walkways and Sidewalks	▶ Riverwalk has limited access points	▶ Create native plant habitats to provide shade and cooler areas ▶ Expand and provide better access to walkways like the Riverwalk ▶ Improve connectivity to other cities ▶ Include more dog friendly walkways

Societal Vulnerabilities

Feature	Impact/Vulnerability	Recommendations
Tourism	▶ Automobile dependency and need to drive everywhere affecting accessibility	▶ Mixed-use development so there are tourist-centric areas and workers/persons to accommodate
Public Health/Health Care Facilities		▶ Natural air-cooling architecture applied to parks and public health buildings (Cool-R-beehive)
Food Access		▶ Provide organic food to people; make them more affordable ▶ Develop gardens and urban farming ▶ Recruit and give grants to veteran groups who do this nationwide
Small Businesses	▶ Few walkable areas for street shopping	

Environmental Vulnerabilities

Feature	Impact/Vulnerability	Recommendations
Food Access	▶ A need for access to more healthy food options	
Water infrastructure/Water Quality/Lake water quality	▶ Groundwater drying up ▶ Paved areas that force water away from areas instead of capturing it for later use ▶ Many water-hungry lawns; not conducive to environment; extremely high carbon footprint	▶ Permaculture afforestation ▶ Replenishment for aquifers ▶ Vegas-style incentives and water-monitoring for lawns; a carbon/excessive water tax ▶ City-sanctioned water capture zones ▶ Desalination and lake cleaning of water ▶ Incentives for removing lawn and planting drought-tolerant plants
Community Gardens and Urban Farming	▶ Gardens and urban farming require proper zoning leading to accessibility issues	▶ Fund garden projects ▶ Sanctioning food forests and community educational programs/engagement ▶ Zoning that allows for community gardens, increasing accessibility to urban farms ▶ Recruit and give grants to veteran groups who do this nationwide

Community Strengths

Feature	Impact/Vulnerability
Infrastructural	▶ Hazardous and electronic waste services are affordable and easy to use
Societal	▶ Great community outreach events ▶ People are friendly and more involved in local companies and organizations ▶ Appreciation for community programs and participation along Main St. ▶ Businesses that utilize the view of the lake ▶ The Dream Center for their efforts downtown and other areas ▶ Gratitude for Gray-urban-go-get companies/organizations
Environmental	▶ Utilizing innovative technologies such as the Nano Bubbler for the lake ▶ The lake itself is a great location for environmental groups/meetings/gatherings ▶ The new park (Rosewood Creek) is planted beautifully with native plants and drought-tolerant ones ▶ The amount of restoration efforts for the lake that the City has been doing ▶ Incentives for green energy/"going green" ▶ Wildlife and bird marshes

2.2.6 Next Steps

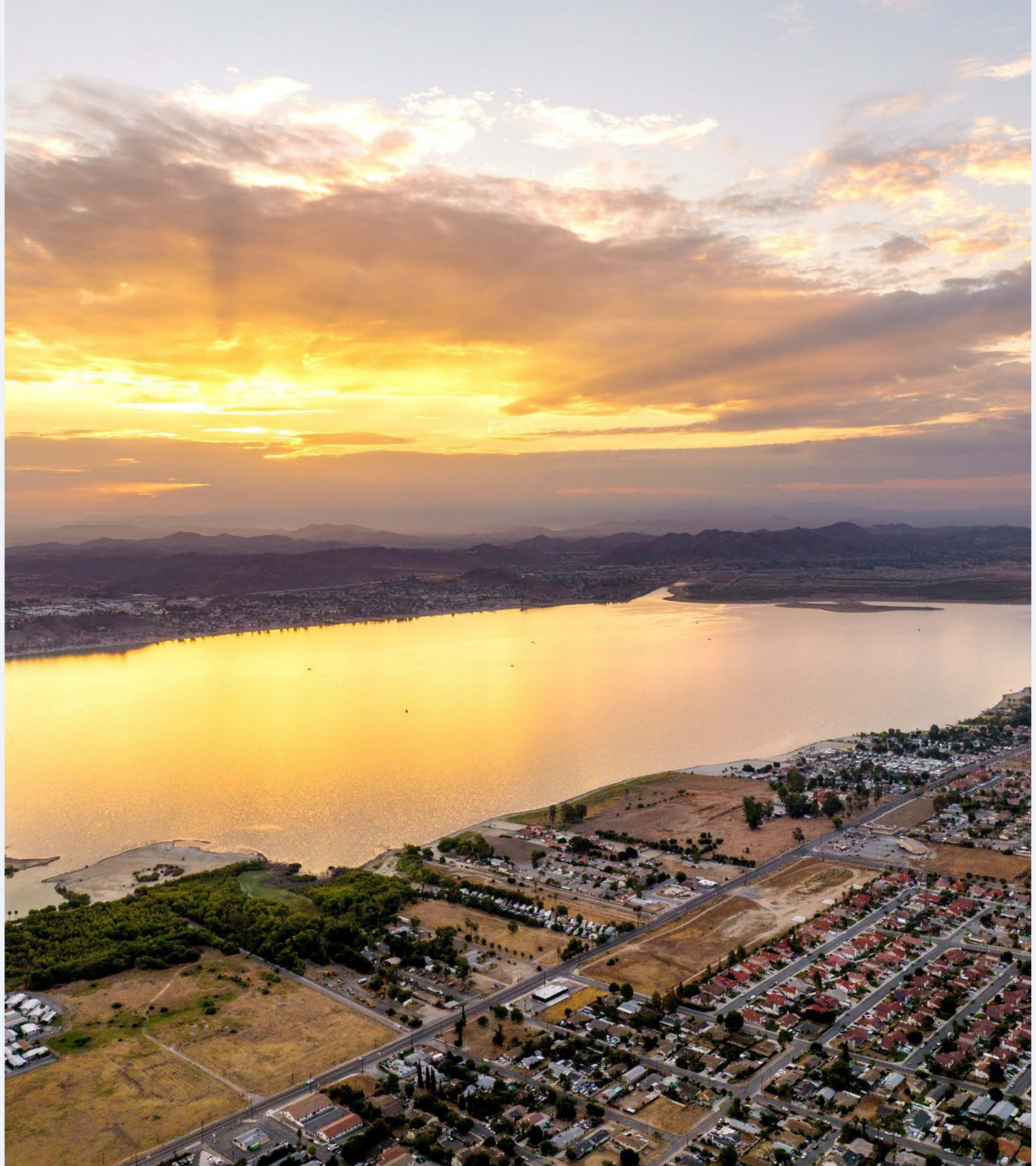
The workshop concluded with an overview of the next steps and ways participants could stay involved:

- Completing the CAAP questionnaire
- Signing up for the Listserv to receive project updates
- Staying tuned for future engagement opportunities

For any questions about the CAAP, participants were encouraged to contact planning@lake-elsinore.org. Workshop materials, including the presentation slides and recording, were shared with attendees who RSVP'd and were posted on the project webpage after the meeting.

Attachment B

Virtual Workshop Materials



LAKE ELSINORE
CLIMATE ACTION & ADAPTATION PLAN

City of Lake Elsinore

Climate Action and Adaptation Plan (CAAP)

Community Workshop #1

March 19th, 2025

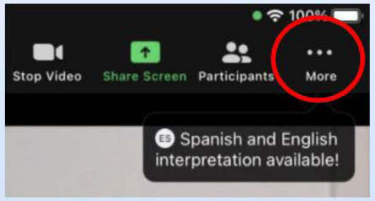
Taller comunitario #1

19 de marzo de 2025

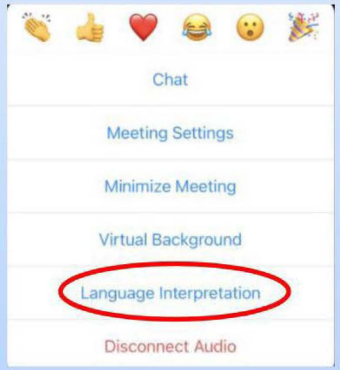
Interpretación / Interpretation

Tableta
IPAD

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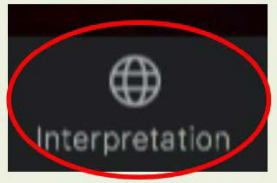


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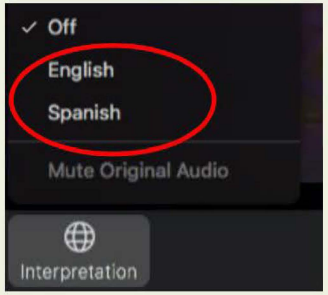


Computadora
Computer

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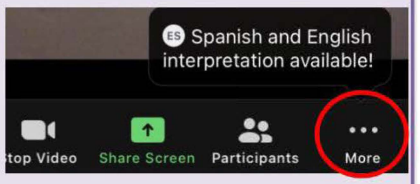


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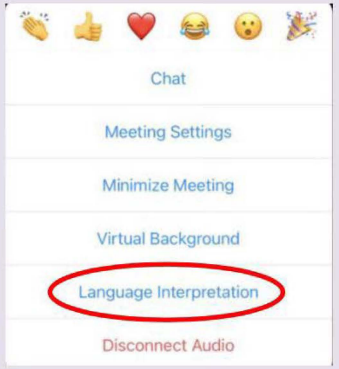


Teléfono Inteligente
Smart Phone

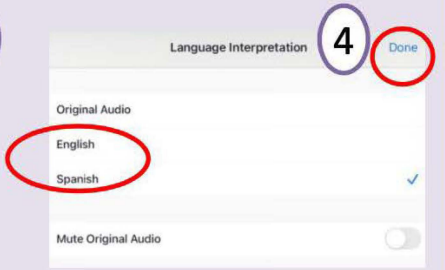
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Zoom

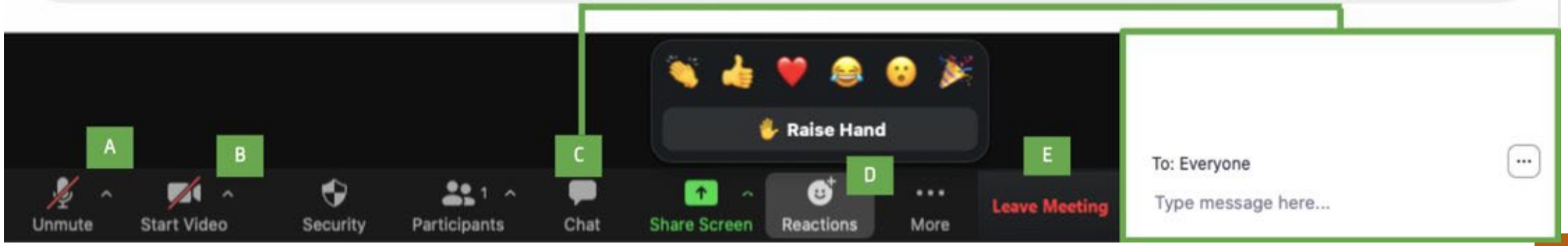
A **Mute / Unmute:** Mutes and unmutes your microphone. Please stay on mute unless you are invited to speak.

B **Start Video / Stop Video:** Turns your camera on and off.

C **Chat:** Opens and closes the chat box. You may leave questions and comments here. We may share notifications or instructions here.

D **Reactions:** Opens menu of non-verbal reactions. We ask that you use the "Raised Hand" feature to notify us when you would like to be called on to speak. can use reactions to provide a reaction to what someone else is saying.

E **Leave Meeting:** Click to leave the meeting while it continues for the other participants. Only the host can end the meeting.



Zoom

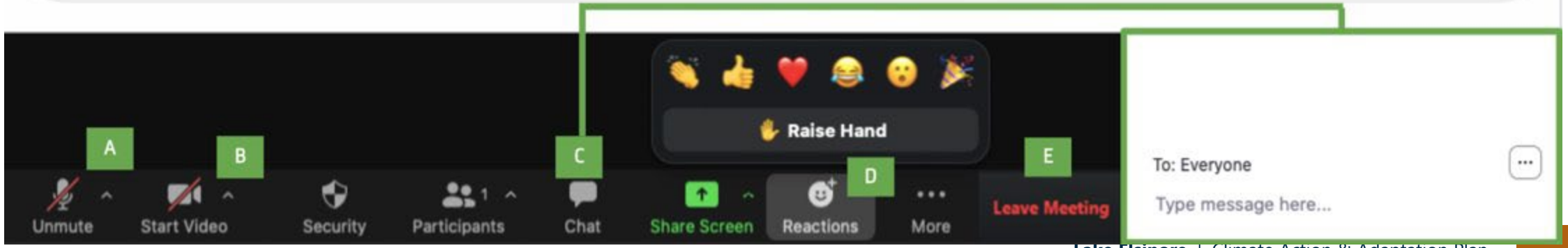
A **Mute (poner en silencio)/Unmute (reactivar sonido)**: desactiva y activa el micrófono de usted. Por favor, manténgase en silencio a menos que se le invite a hablar.

B **Start Video (iniciar video)/Stop Video (detener video)**: enciende y apaga la cámara de usted.

C **Chat**: abre y cierra el cuadro de chat. Usted puede dejar aquí sus preguntas y comentarios. Podemos compartir notificaciones o instrucciones aquí.

D **Reactions (reacciones)**: abre el menú de reacciones no verbales. Le pedimos que utilice la función 'Raised Hand' (levantar la mano) para notificarnos cuando desee que se le conceda la palabra. Puede utilizar 'Reactions' para reaccionar a lo que dice otra persona.

E **Leave Meeting (salir de la reunión)**: haga clic para abandonar la reunión mientras esta continúa para los demás participantes. Únicamente el anfitrión puede dar por terminada la reunión.



Welcome and Introductions
Bienvenida y presentaciones



Agenda

- Introductions
- CAAP Overview
  - Adaptation
  - Greenhouse Gas Inventory
  - Opportunities
- Questions and Answers
- Group Activity
- Next Steps and Closing Comments

Agenda

- Presentaciones
- Panorama del CAAP
  - Adaptación y resiliencia
  - Inventario de gases de efecto invernadero
  - Oportunidades
- Preguntas y respuestas
- Actividad en grupo
- Próximas etapas y cierre comentarios

In the chat, please share:

Name, affiliation, and favorite place in Lake Elsinore

Por favor, cuéntenos en el chat:

Su nombre, afiliación y su lugar favorito en Lake Elsinore

Project Team

City of Lake Elsinore

Damaris Abraham, Community Development Director

Carlos Serna, Associate Planner

Adam Gufarotti, Community Support Manager

Bailey MacLean, Management Analyst

Ascent

Poonam Boparai, Principal-in-Charge

Benjamin Fordham, Project Manager

Luis Montes, Assistant Project Manager

Natalie Kataoka, Climate Action Analyst

Adam Qian, Climate Adaptation Planner

Live Interpretation

Tania Garcia and Isabel Batres, Spanish Interpreter

In the chat, please share:

Name, affiliation, and favorite place in Lake Elsinore

Por favor, cuéntenos en el chat:

Su nombre, afiliación y su lugar favorito en Lake Elsinore

Equipo del Proyecto

Ciudad de Lake Elsinore

Damaris Abraham, Directora de Desarrollo Comunitario

Carlos Serna, Planificador Asociado

Adam Gufarotti, Gerente de Apoyo Comunitario

Bailey MacLean, Analista de Gestión

Ascent

Poonam Boparai, Directora Principal

Benjamin Fordham, Gerente de Proyecto

Luis Montes, Asistente de Gerente de Proyecto

Natalie Kataoka, Analista de Acción Climática

Adam Qian, Planificador de Adaptación Climática

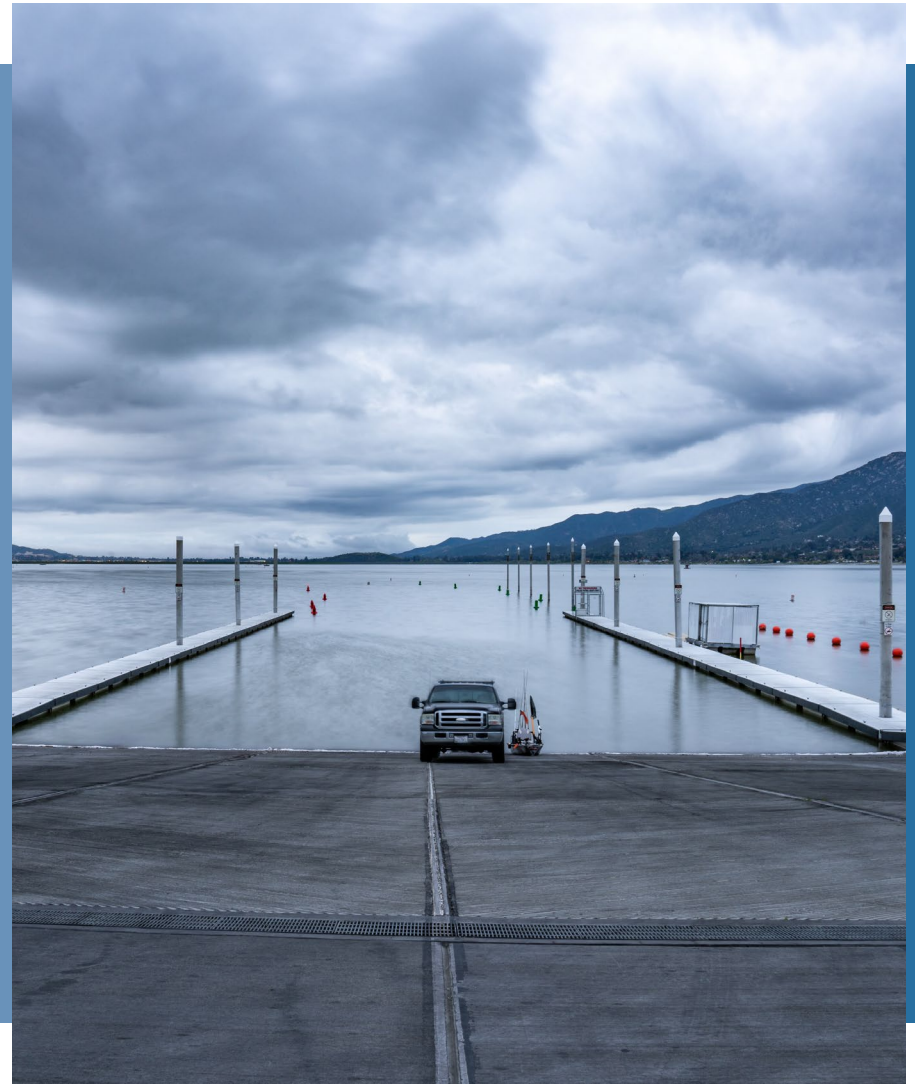
Live Interpretation

Tania Garcia y Isabel Batres, Intérprete de Español

Workshop Overview

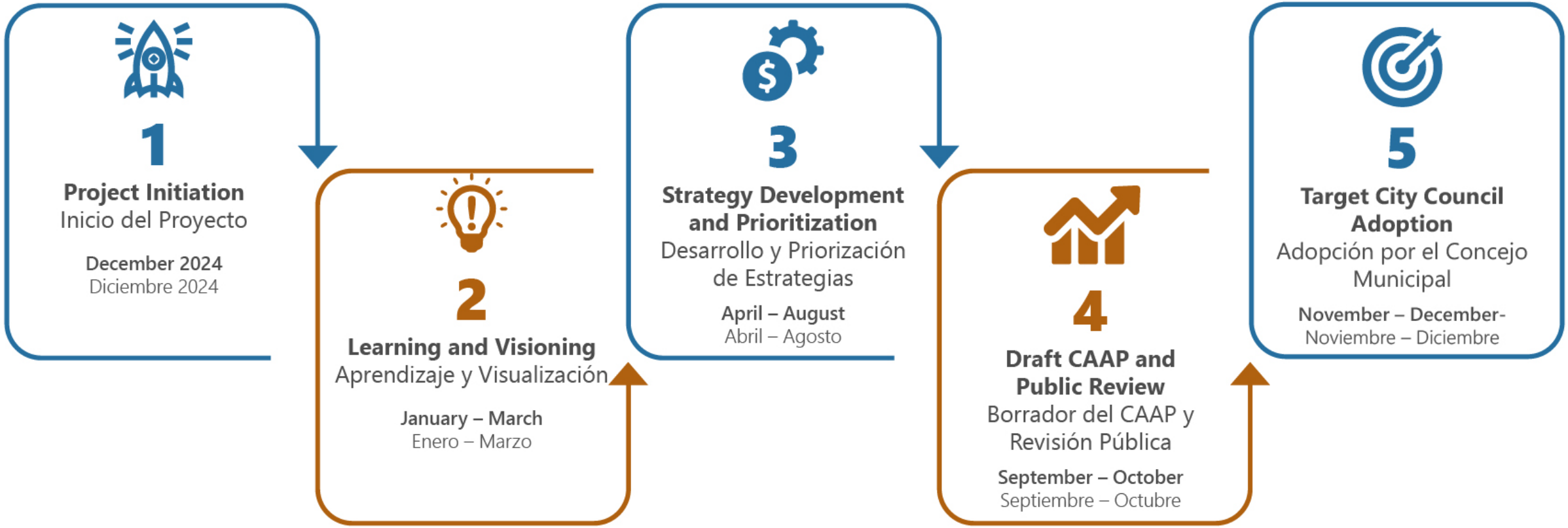
- Learn about Lake Elsinore's CAAP and its opportunities
- Share your ideas to build a stronger, more resilient community
- Discuss community strengths, challenges, and solutions
- Get project updates and stay involved

Panorama del taller



- Aprender sobre el CAAP de Lake Elsinore y sus oportunidades
- Compartir sus ideas para crear una comunidad más fuerte y resiliente
- Hablar sobre las fortalezas, retos y soluciones de la comunidad
- Obtener actualizaciones del proyecto e involucrarse

Project Schedule
Cronograma

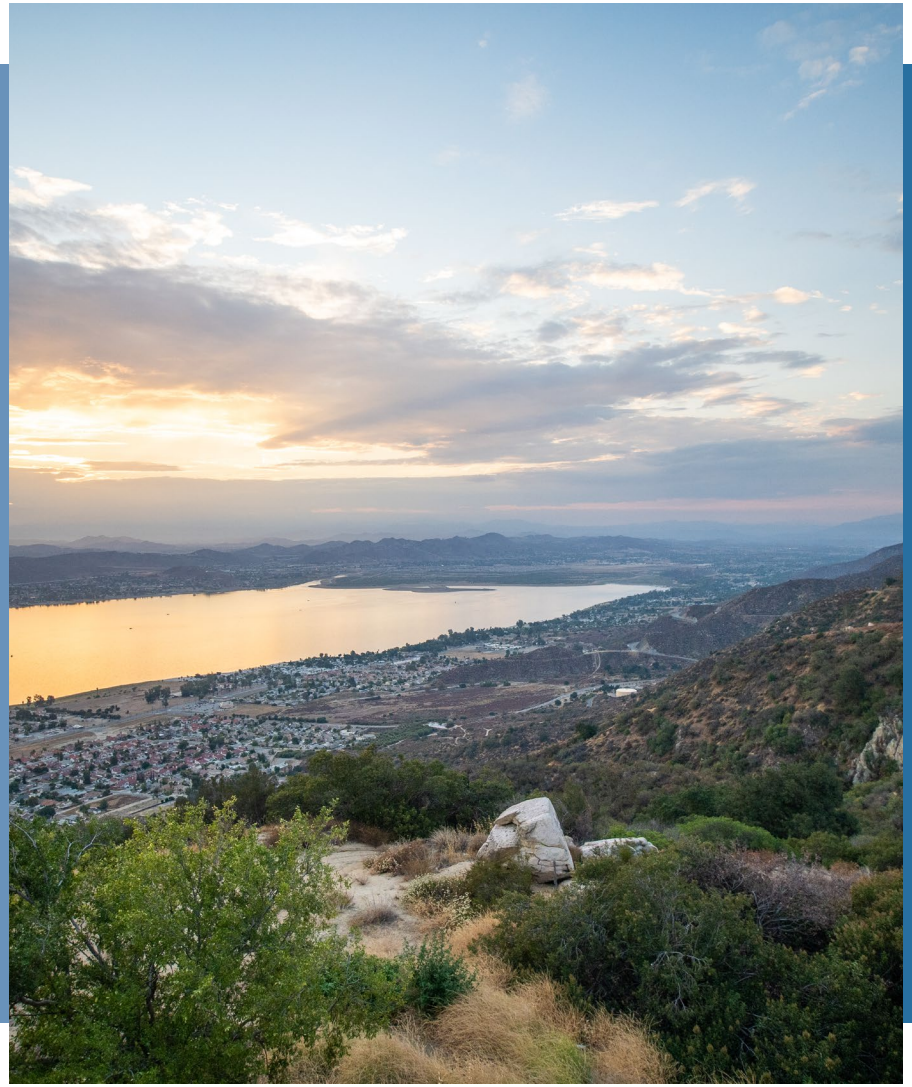


Climate Action and Adaptation Plan Overview

Descripción del plan de acción climática y adaptación

What is a CAAP?

- A **roadmap** to reduce emissions and increase community resilience
- Funded by the LCI's **Adaptation Planning Grant Program (APGP)**
- Helps plan for impacts like **extreme heat, flooding, drought, and wildfire**
- Identifies actions for **economic growth** and **cost savings**
- Prioritizes **local community needs**
- Engages all populations, **especially underserved communities**
- **Ensures equitable benefits for everyone**



¿Qué es el CAAP?

- Una **hoja de ruta** para reducir las emisiones y aumentar la resiliencia de la comunidad
- Fue fundado por el **Programa de subvenciones de LCI para planificar la adaptación (APGP)**
- Ayuda a planificar para efectos como **calor extremo, inundación e incendio forestal**
- Identifica acciones para **crecimiento económico** y **ahorro de costos**
- Prioriza **las necesidades y prioridades locales**
- Involucra a todas las poblaciones, **en especial a las comunidades desfavorecidas**
- **Garantiza beneficios equitativos para todos**

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How likely do you think it is that climate change will affect the health and safety of you, your household, and/or your loved ones?/En su opinion, ¿qué tan probable es que el cambio climático afecte su salud y seguridad, la de su familia o de sus seres queridos?

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Definitions

Greenhouse Gases - Gases that trap heat in the atmosphere

Adaptation: Actions taken to adjust systems and behaviors to better handle current and future hazards while maintaining essential functions.

Mitigation: Actions taken to reduce emissions or greenhouse gases to slow down climate change.



Source: TBD

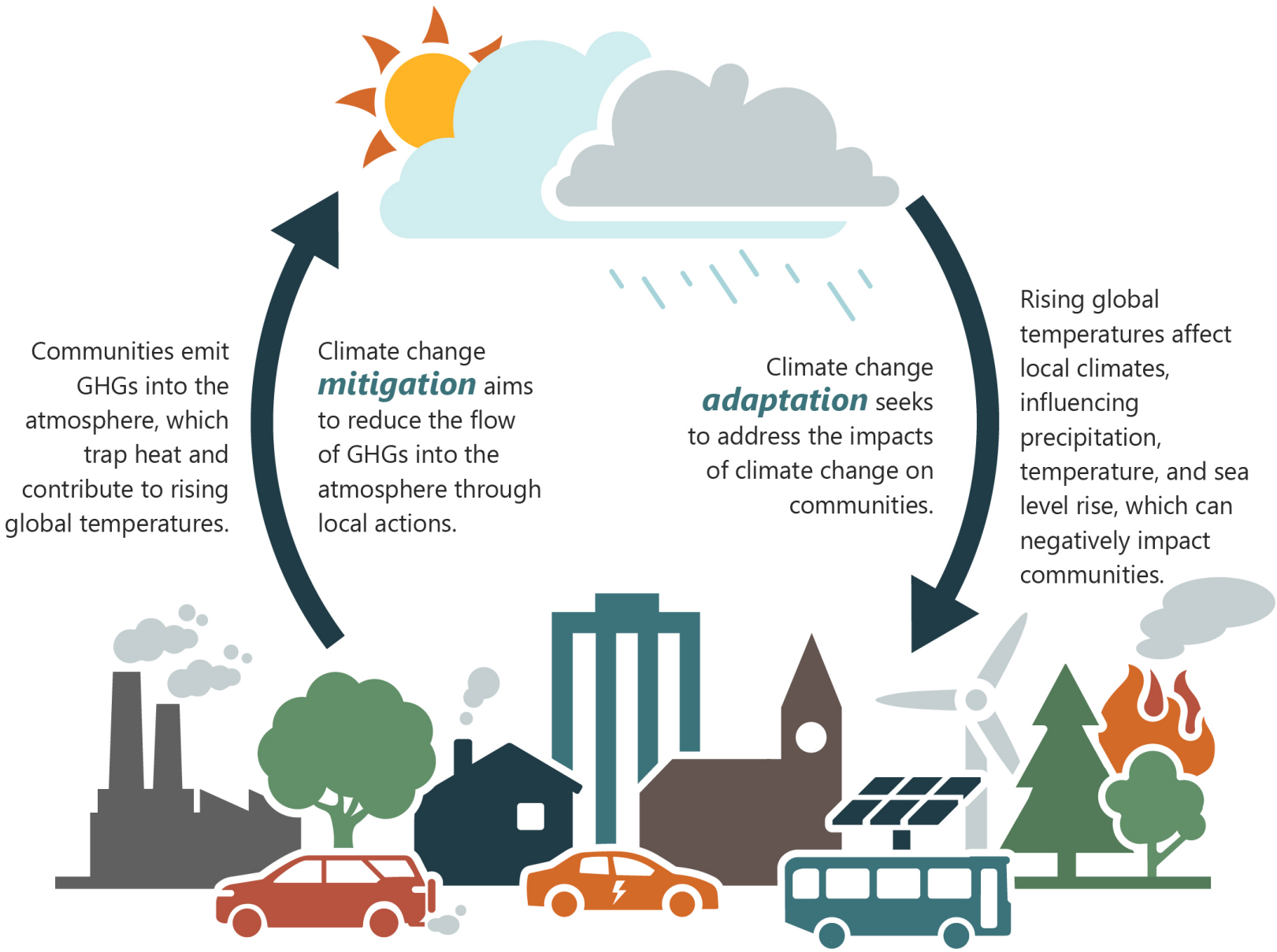
Definiciones

Gases de Efecto Invernadero - Gases que atrapan el calor en la atmósfera

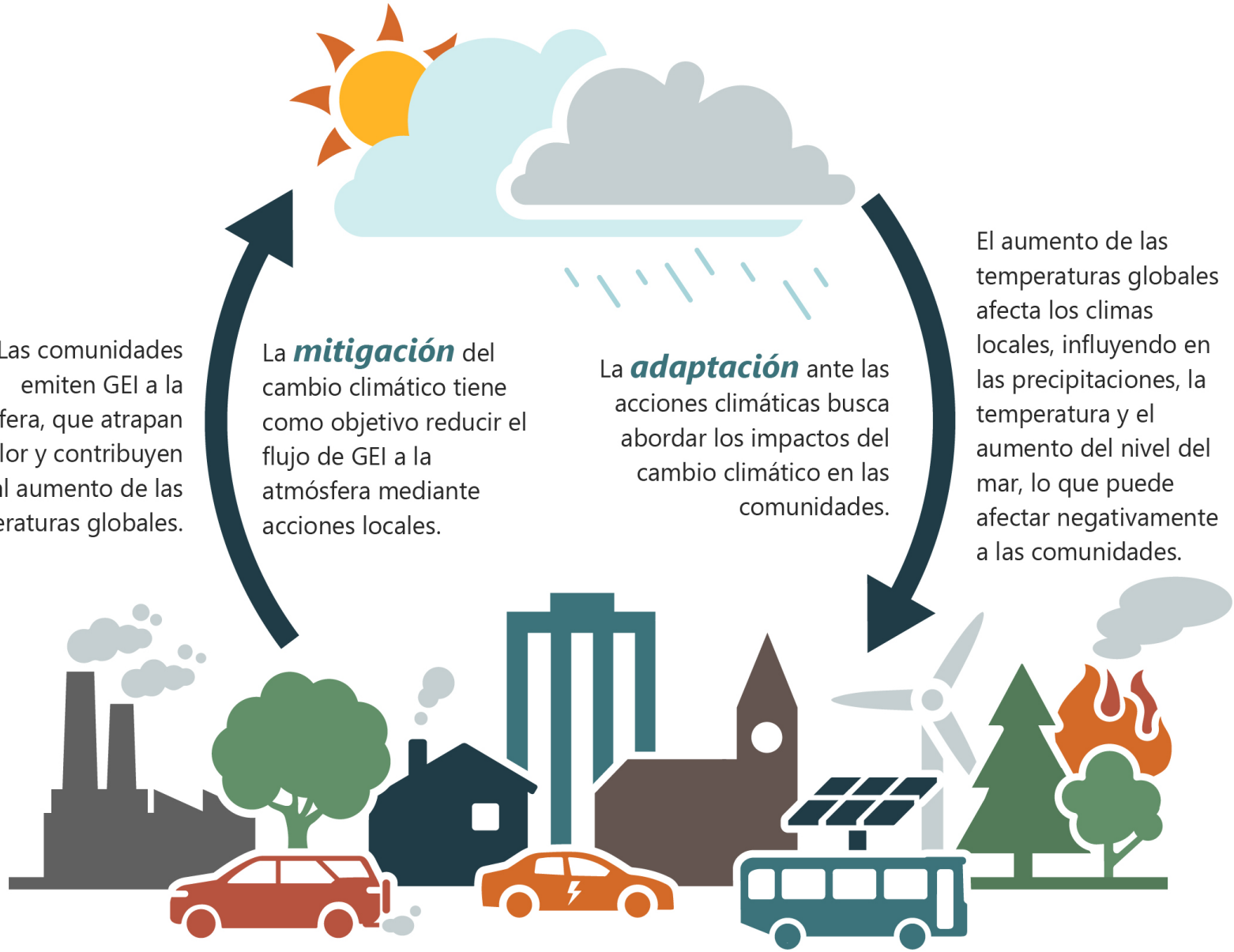
Adaptación: Son las acciones que se toman para ajustar los sistemas y comportamientos para manejar de mejor manera los riesgos actuales y futuros mientras mantienen las funciones esenciales.

Mitigación: Son las acciones que se toman para reducir las emisiones o contaminantes del clima para disminuir el cambio climático.

Mitigation vs. Adaptation

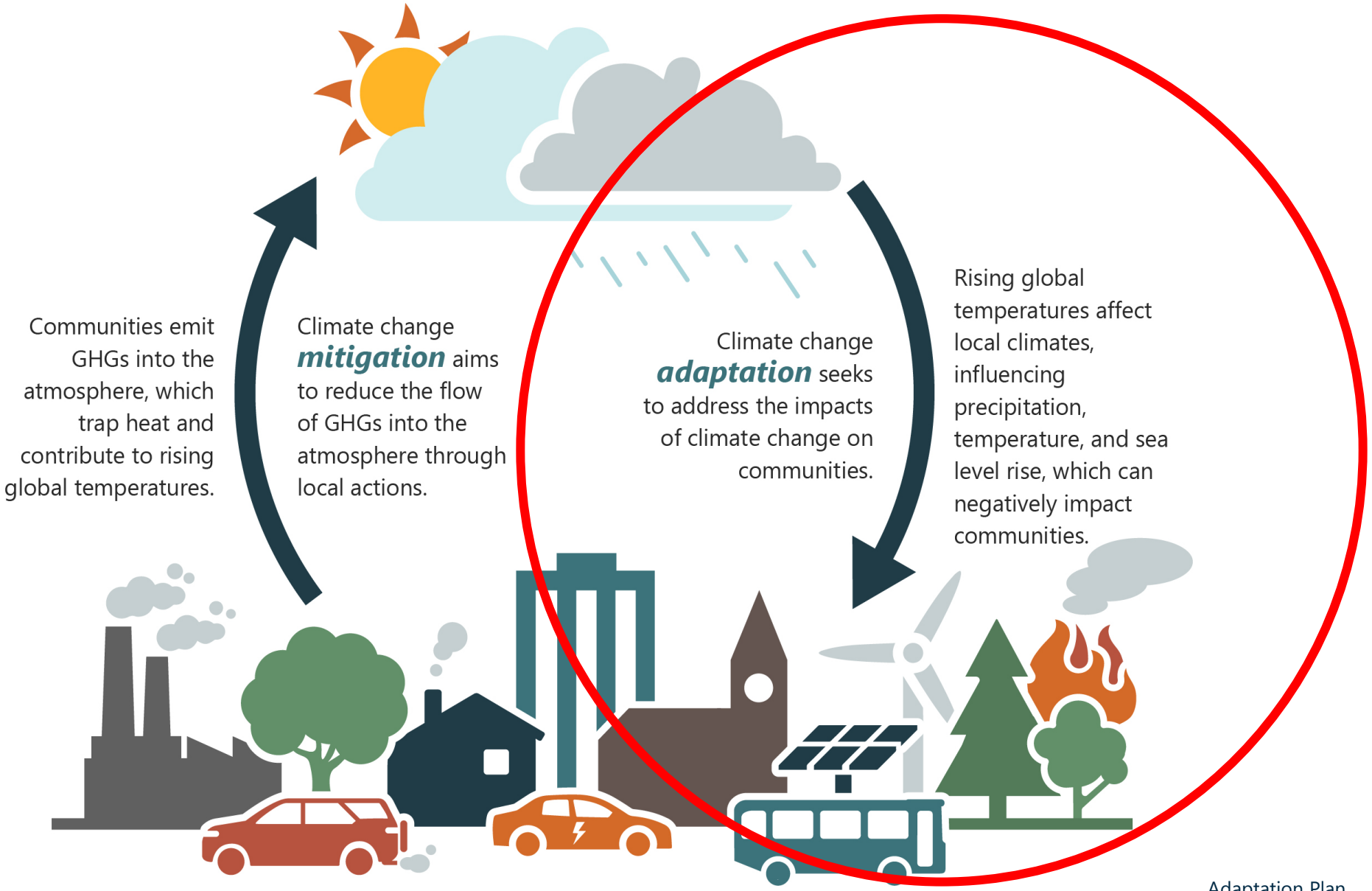


Mitigación vs. Adaptación



Adaptation
Adaptación

Adaptation


Communities emit GHGs into the atmosphere, which trap heat and contribute to rising global temperatures.
Climate change ***mitigation*** aims to reduce the flow of GHGs into the atmosphere through local actions.
Climate change ***adaptation*** seeks to address the impacts of climate change on communities.
Rising global temperatures affect local climates, influencing precipitation, temperature, and sea level rise, which can negatively impact communities.

Adaptación


Las comunidades emiten GEI a la atmósfera, que atrapan el calor y contribuyen al aumento de las temperaturas globales.
La mitigación del cambio climático tiene como objetivo reducir el flujo de GEI a la atmósfera mediante acciones locales.
La adaptación ante las acciones climáticas busca abordar los impactos del cambio climático en las comunidades.
El aumento de las temperaturas globales afecta los climas locales, influyendo en las precipitaciones, la temperatura y el aumento del nivel del mar, lo que puede afectar negativamente a las comunidades.

Definitions (continued)

Climate Hazard: A potentially damaging weather or climate-related event that can impact community health, safety, infrastructure, and economic stability.

Climate Impacts: The specific effects that climate hazards have on our community, such as property damage, health problems, or business disruptions.



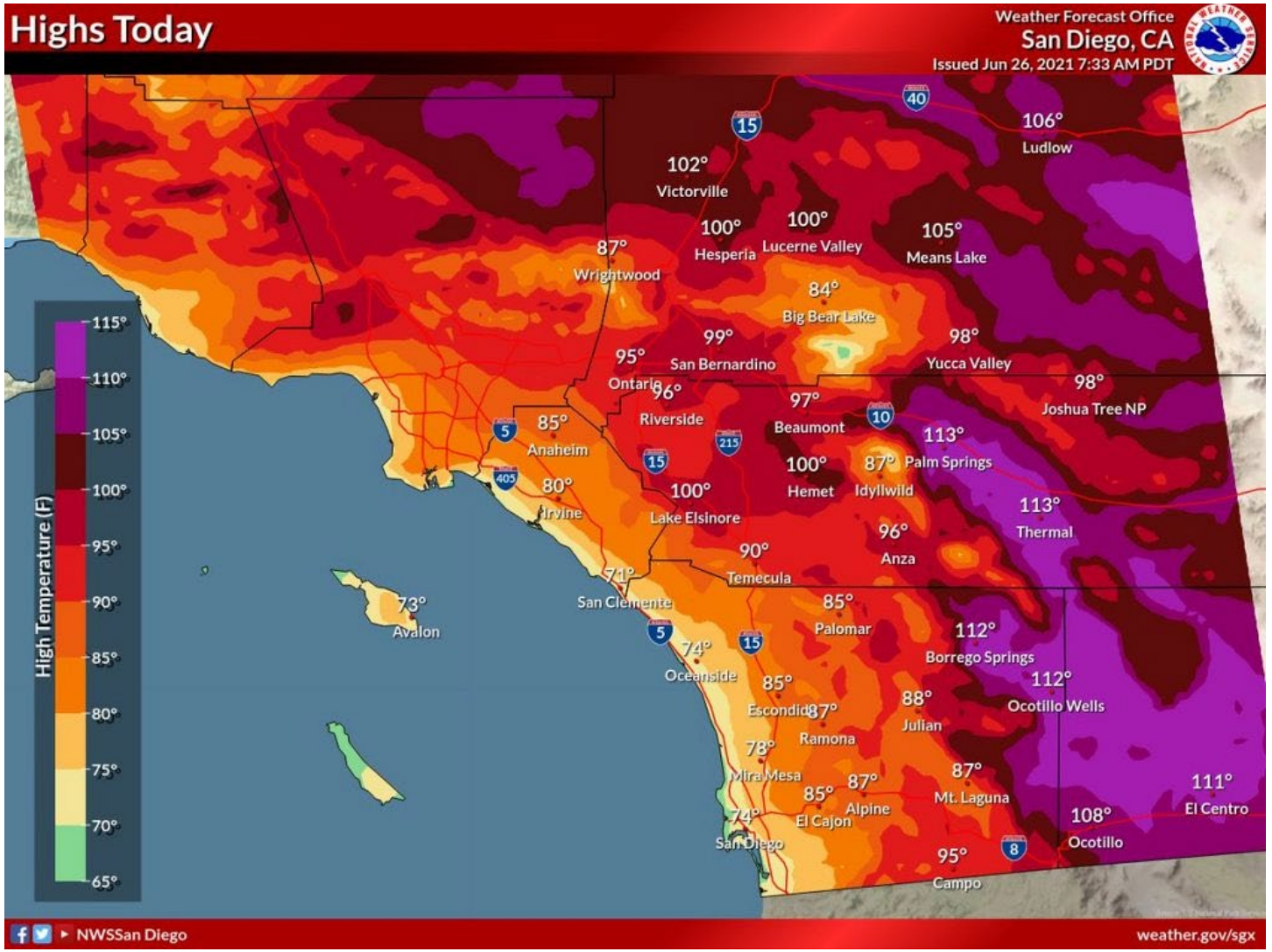
Source: City of Lake Elsinore

Definiciones (continuación)

Riesgo climático: Un fenómeno meteorológico o climático potencialmente dañino que puede afectar a la salud, la seguridad, las infraestructuras y la estabilidad económica de la comunidad.

Impactos climáticos: Los efectos concretos que los riesgos climáticos tienen en nuestra comunidad, como daños materiales, problemas de salud o interrupciones de la actividad comercial.

Extreme Heat
Calor extremo



Source: 2021, City News Service, Inc.

Drought
Sequía



Source: Annenberg Media

Flooding and Intense Storms
Inundaciones y tormentas intensas



Source: KTLA

Landslides, Mudflows and Debris Flow
Deslizamientos de tierra, flujos de lodo y flujos de escombros



Source: KTLA

Wildfire and Smoke
Incendio forestal y humo





Source: Inland Valley Daily Bulletin/SCNG

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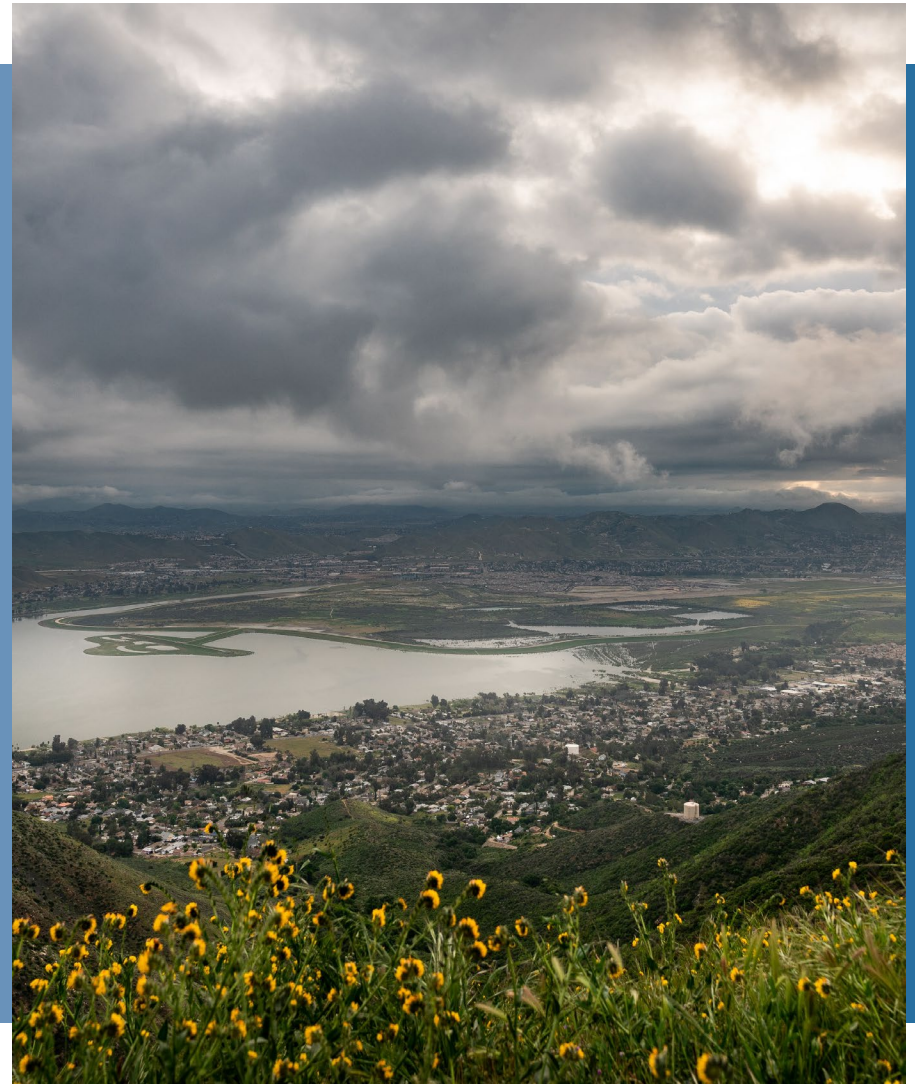
Which of the following hazards do you find most concerning?/¿Cuál de los siguientes riesgos le preocupa más a usted?

ⓘ Start presenting to display the poll results on this slide.

Climate Impacts

Climate Hazards can result in negative impacts to:

- Public Health and Safety
- Energy Demand and Reliability
- Infrastructure
- Local Economy
- Loss of Biodiversity
- Recreation
- Transportation
- Vulnerable Populations



Source: City of Lake Elsinore

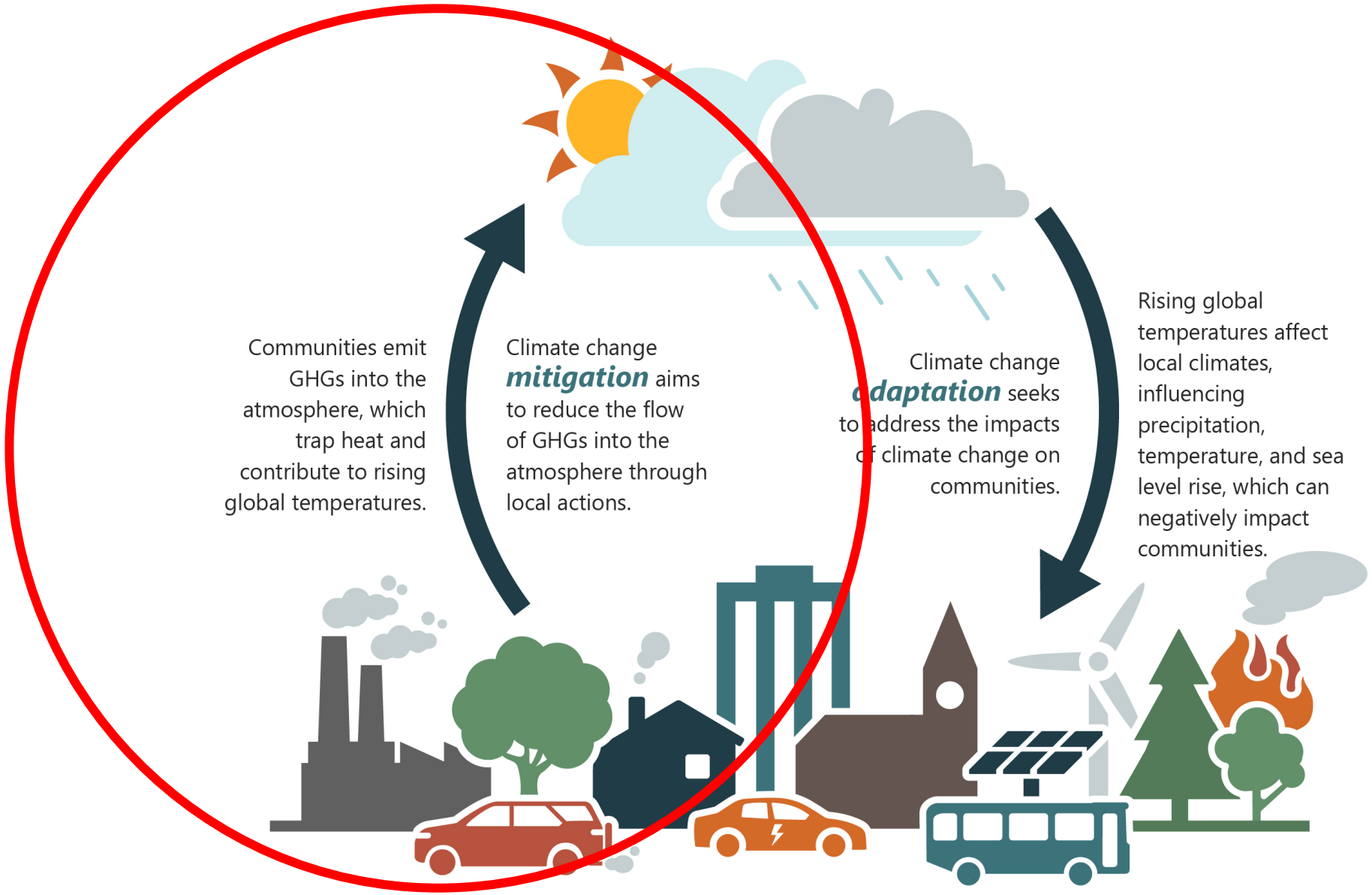
Impactos del clima

Los riesgos climáticos pueden resultar en impactos negativos para:

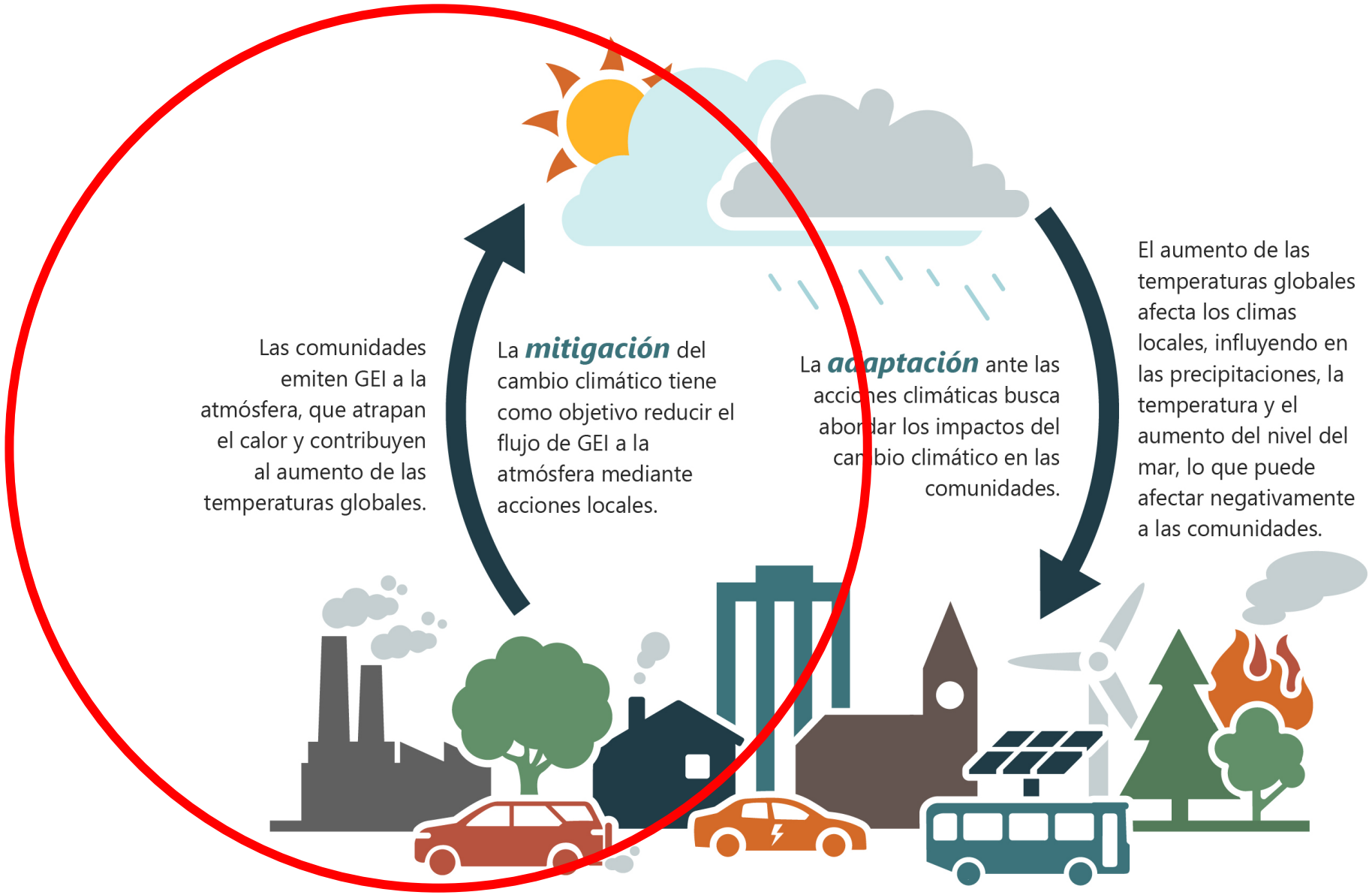
- La salud y seguridad públicas
- La demanda y eficiencia energéticas
- La infraestructura
- La economía local
- La pérdida de biodiversidad
- El esparcimiento
- El transporte
- Las poblaciones vulnerables

Greenhouse Gas Inventory
Inventario de gases de efecto invernadero

Mitigation


Communities emit GHGs into the atmosphere, which trap heat and contribute to rising global temperatures.
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Mitigation


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La *adaptación* ante las acciones climáticas busca abordar los impactos del cambio climático en las comunidades.
El aumento de las temperaturas globales afecta los climas locales, influyendo en las precipitaciones, la temperatura y el aumento del nivel del mar, lo que puede afectar negativamente a las comunidades.

Definitions

- **GHG Inventory -** A GHG inventory quantifies emissions over a set period
- **Sectors -** Categories of community activity that produce emissions (transportation, buildings, waste, etc.)



Source: TBD

Definiciones

- **Inventario GHG:** Un inventario GHG calcula las emisiones durante un período determinado
- **Sectores:** Categorías de actividad comunitaria que producen emisiones (transporte, edificios, desechos, etc.)

Sectors

- Residential and Nonresidential Building Energy
- On-road transportation
- Off-road transportation
- Solid Waste
- Water Supply
- Wastewater

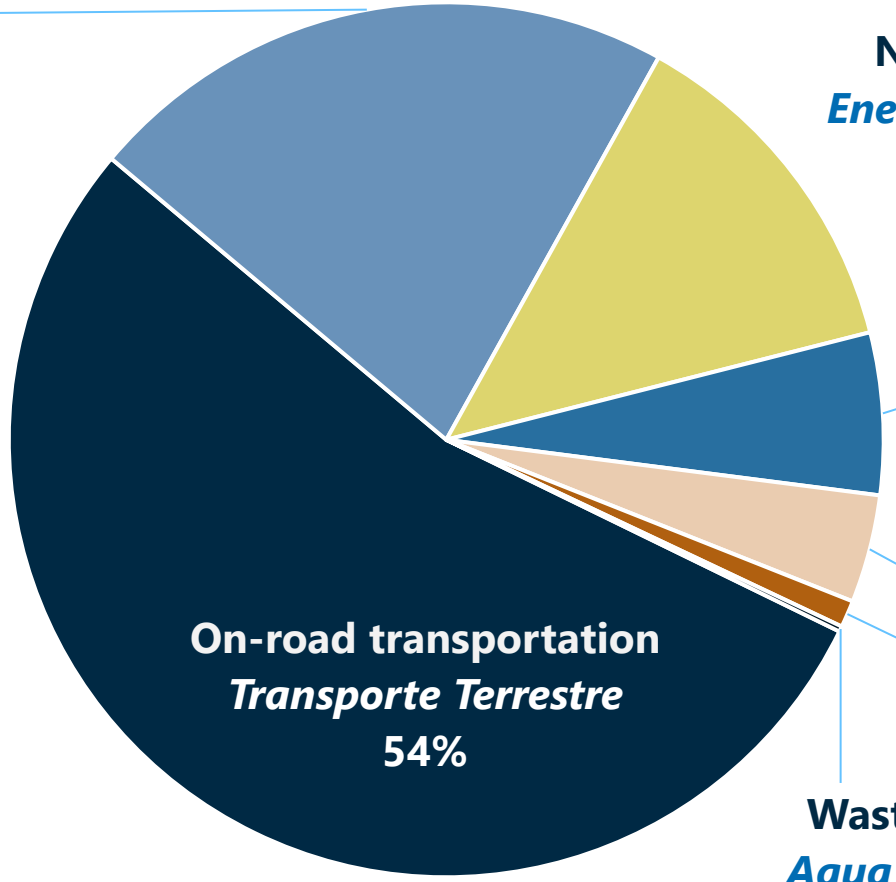


Source: TBD

Sectores

- Energía de edificios residenciales y no residenciales
- Transporte terrestre
- Transporte todo terreno
- Desechos sólidos
- Suministro de agua
- Agua residual

2022 Communitywide Inventory
Inventario a escala comunitaria 2022



Residential building energy
Energía de edificios residenciales
22%

Nonresidential building energy
Energía de edificios no residenciales
13%

Off-road equipment
Equipos todo terreno
6%

Solid waste
Desechos sólidos
4%

Water
Agua
1%

Wastewater
Agua residual
<1%

On-road transportation
Transporte Terrestre
54%

Community Visioning
Visión comunitaria

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In 1-2 words, what is your vision for a thriving Lake Elsinore in 20 years?/En 1 o 2 palabras cuéntenos ¿cómo se imagina un próspero Lake Elsionore en 20 años?

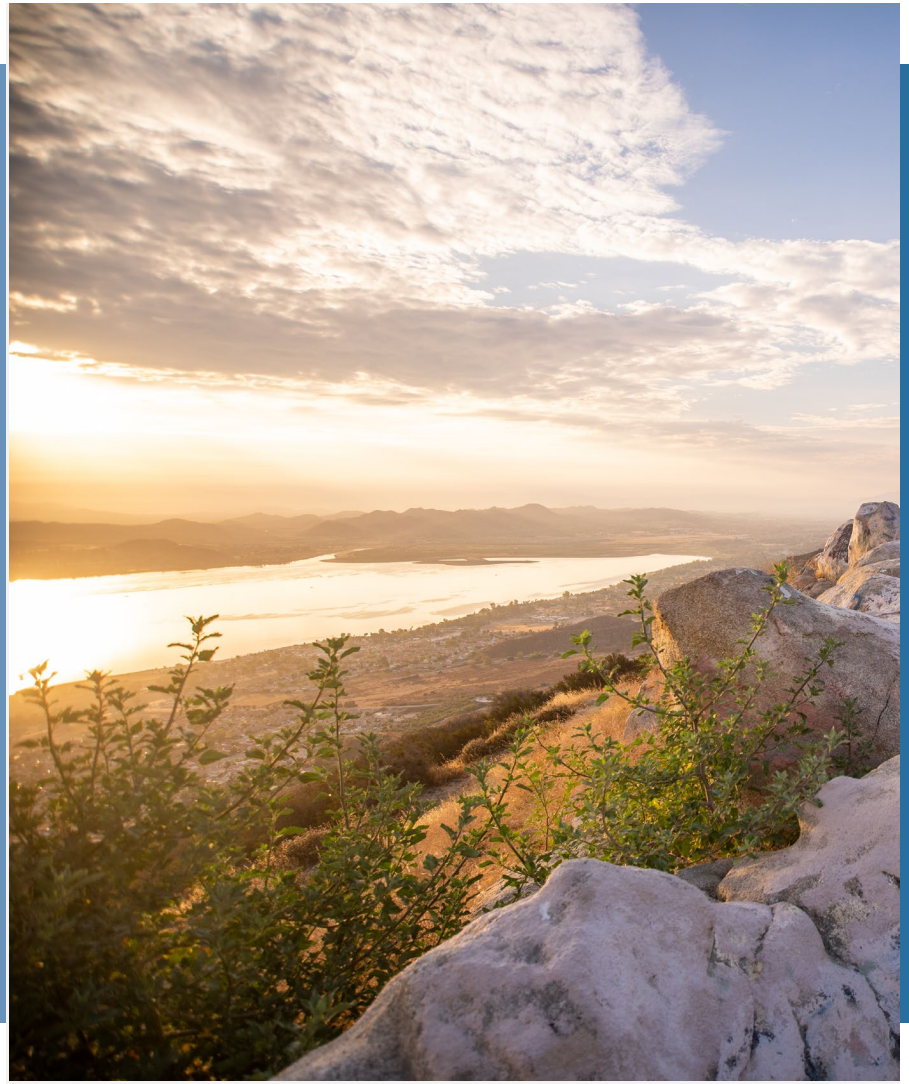
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Opportunities

(SP) Opportunities

Spanish side

The CAAP will outline climate mitigation and adaptation strategies tailored to local needs and priorities.



Source: City of Lake Elsinore

El CAAP destacará las estrategias de mitigación y adaptación climáticas, diseñadas en especial para las necesidades y prioridades locales.

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Which outcomes would you most like to see from Lake Elsinore's CAAP? (Please select up to three options)/¿Qué resultados le gustaría ver más en el CAAP de Lake Elsinore? (Seleccione hasta tres opciones)

ⓘ Start presenting to display the poll results on this slide.

Sustainable Opportunities

- Improved air quality
- Enhanced tree canopy and green spaces
- Protected water quality
- More transportation options and reduced congestion
- Increased clean energy production and energy independence
- Preserved natural habitats and biodiversity



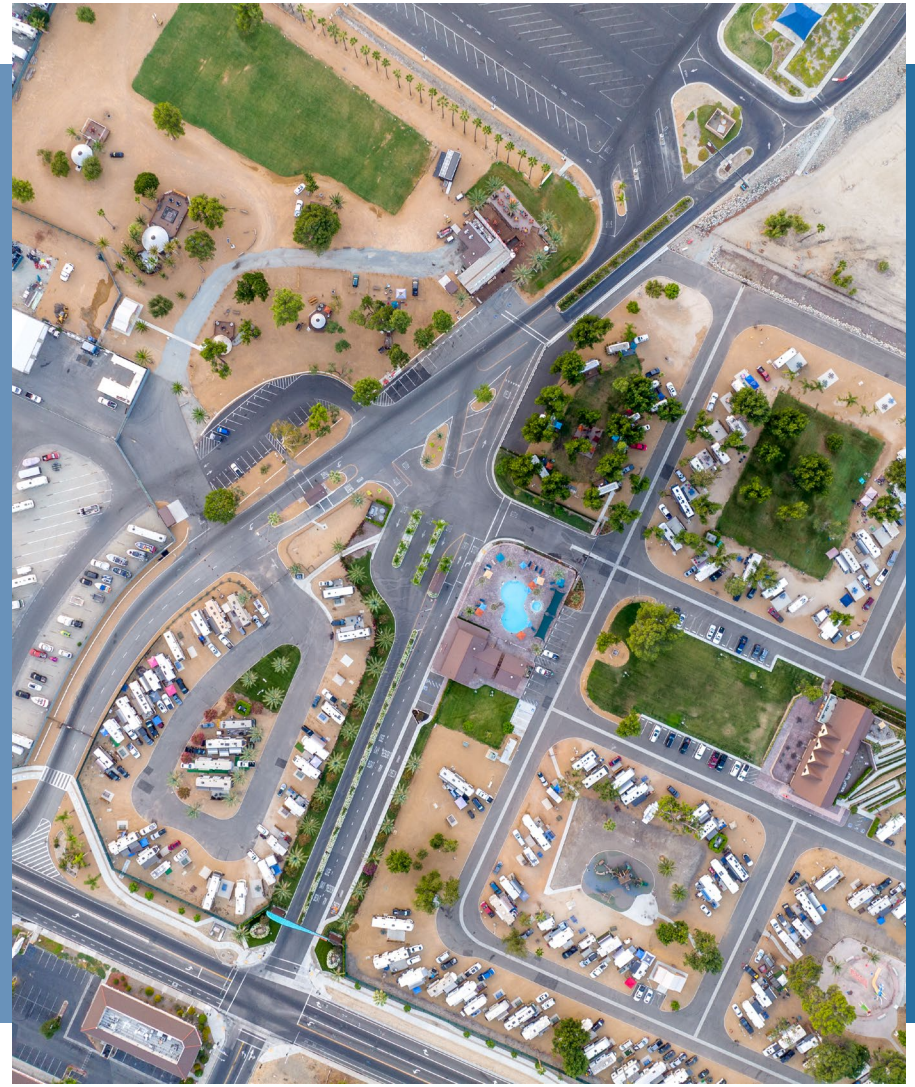
Source: City of Lake Elinore

Oportunidades sostenibles

- Calidad del aire mejorada
- Ampliar las copas de los árboles y áreas verdes
- Calidad de agua protegida
- Más opciones de transporte y menor congestion
- Mayor producción de energía limpia e independencia energética
- Espacios naturales y biodiversidad protegidos

Economic Opportunities

- Reduce energy and operational costs
- Support local businesses with energy-efficient upgrades
- Create green job training programs
- Boost tourism and outdoor recreation
- Expand emerging sectors while strengthening existing businesses



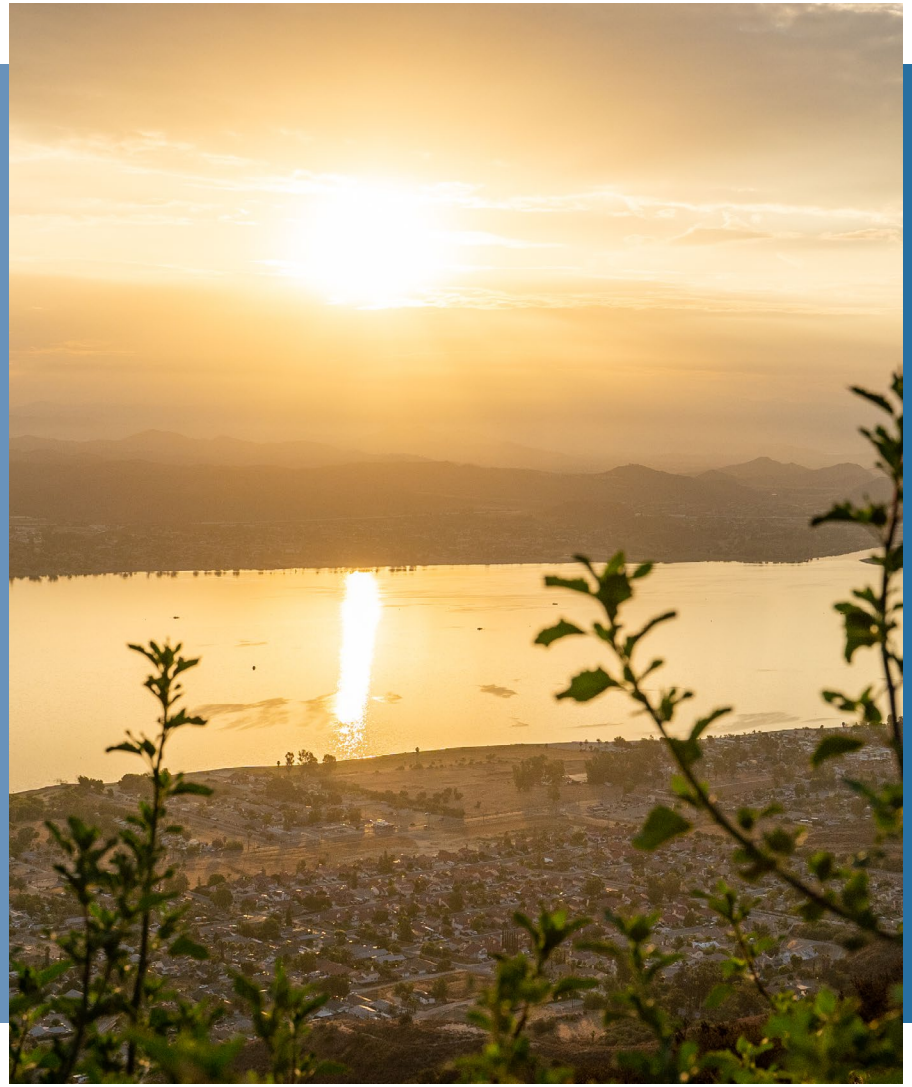
Source: City of Lake Elsinore

Oportunidades económicas

- Reducir costos energéticos y operacionales
- Apoyar negocios locales con mejoras de eficiencia energética
- Crear programas de capacitación de empleos verdes
- Impulsar el turismo y esparcimiento al aire libre
- Expandir los nuevos sectores mientras se fortalcen los negocios existentes

Climate Resilient Opportunities

- Improve emergency response systems
- Protect residents during heat waves
- Resilient infrastructure
- Improve recovery
- Build stronger local networks
- Support businesses with disaster preparedness



Source: City of Lake Elsinore

Oportunidades de resiliencia climática

- Mejora de sistemas de respuesta ante emergencias
- Proteger a los habitants durante las olas de calor
- Infraestructura resiliente
- Mejorar recuperación
- Construir redes locales más fuertes
- Apoyar negocios para preparación

Questions?
¿Preguntas?

Group Activity
Actividad en grupo

Community Vulnerabilities and Strengths
Puntos débiles y fortalezas de la comunidad

Prompt

Identify and discuss Lake Elsinore's infrastructure, societal, and environmental **vulnerabilities** and **strengths**

Examples

- **Infrastructural -** buildings, houses, bridges, utilities
- **Societal -** healthcare, food, emergency response
- **Environmental -** pollution, recreation, tree cover



Source: City of Lake Elsinore

Tema de diálogo

En salas de grupos con 5 a 7 personas, hablen e identifiquen la infraestructura y sociedad de Lake Elsinore, así como las **fortalezas** y **puntos débiles** de su entorno. **Ejemplos**

- **Infraestructura:** edificios, casas, puentes, servicios
- **Sociedad:** atención médica, comida y respuesta a emergencias
- **Ambiental** - contaminación, recreación, cobertura arbórea

Community Vulnerabilities
(30 minutes)

Key Questions to Consider:

- What features in Lake Elsinore are vulnerable to climate hazards?
- How are these features affected by extreme heat, flooding, drought, and wildfire?
- What resources or recommendations would improve resilience or recovery?



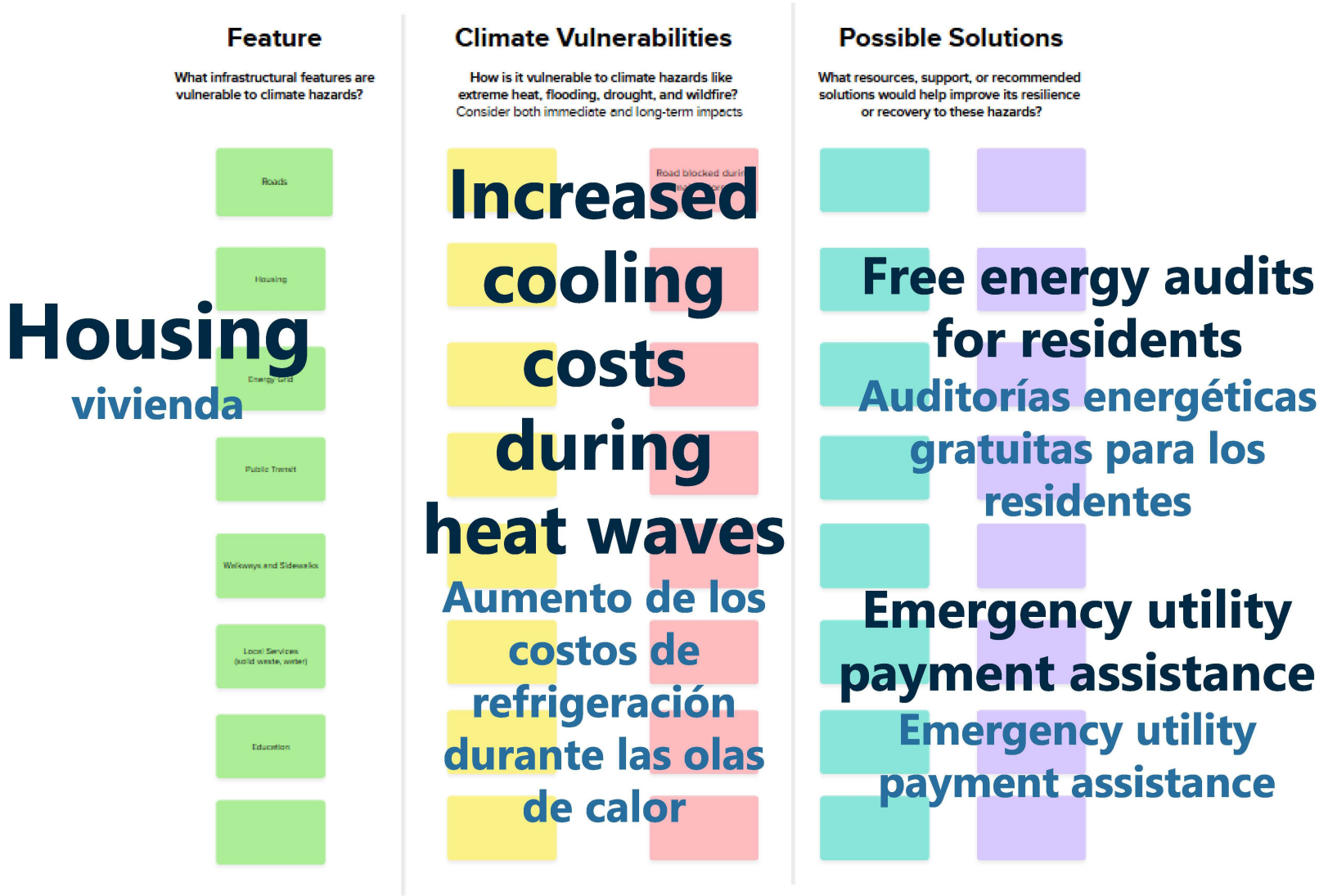
Source: City of Lake Elsinore

Puntos débiles de la comunidad
(30 minutos)

Preguntas clave que considerar:

- ¿Qué elementos de Lake Elsinore son vulnerables a los riesgos climáticos?
- ¿Cómo les afecta el calor extremo, las inundaciones, la sequía y los incendios forestales?
- ¿Qué soluciones mejorarían la resistencia o la recuperación?

Identify Infrastructural Vulnerabilities in the City of Lake Elsinore. Please be specific and provide as much detail as possible.
(i.e., buildings, houses, roads, bridges, utilities)



Community Strengths
(10 minutes)

Key Questions to Consider:

- What aspects of Lake Elsinore should be preserved for future generations?
- What makes Lake Elsinore special or unique?
- What local places, programs, or things do you value most about Lake Elsinore?



Source: City of Lake Elsinore

Fortalezas de la comunidad
(10 minutos)

Preguntas clave para considerar:

- ¿Qué aspectos de Lake Elsinore deberían presevarse para las futuras generaciones?
- ¿Qué hace a Lake Elsinore especial o único?
- ¿Qué lugares de la comunidad, programas o cosas valora usted?

Community Strengths



Infrastructural

Examples: *recycling centers, bike lanes, access to bike lanes and public transportation, local energy infrastructure, public facilities, and composting or recycling programs.*



Societal

Examples: *Community-based organizations, well-supported volunteer groups or local businesses, volunteer networks, favorite City events, farmers markets, and community resources.*



Environmental

Examples: *Successful preservation efforts, favorite parks, hiking trails, or natural habitats, preferred outdoor recreation activities, access to wildlife, scenic views around the lake, or clean air initiatives.*

Accessing MURAL

- Click link in chat to open the MURAL board
- Select “enter as a Visitor”
- Type a display name (optional)
- Select “enter as a visitor”



Source: City of Lake Elsinore

Acceso a MURAL

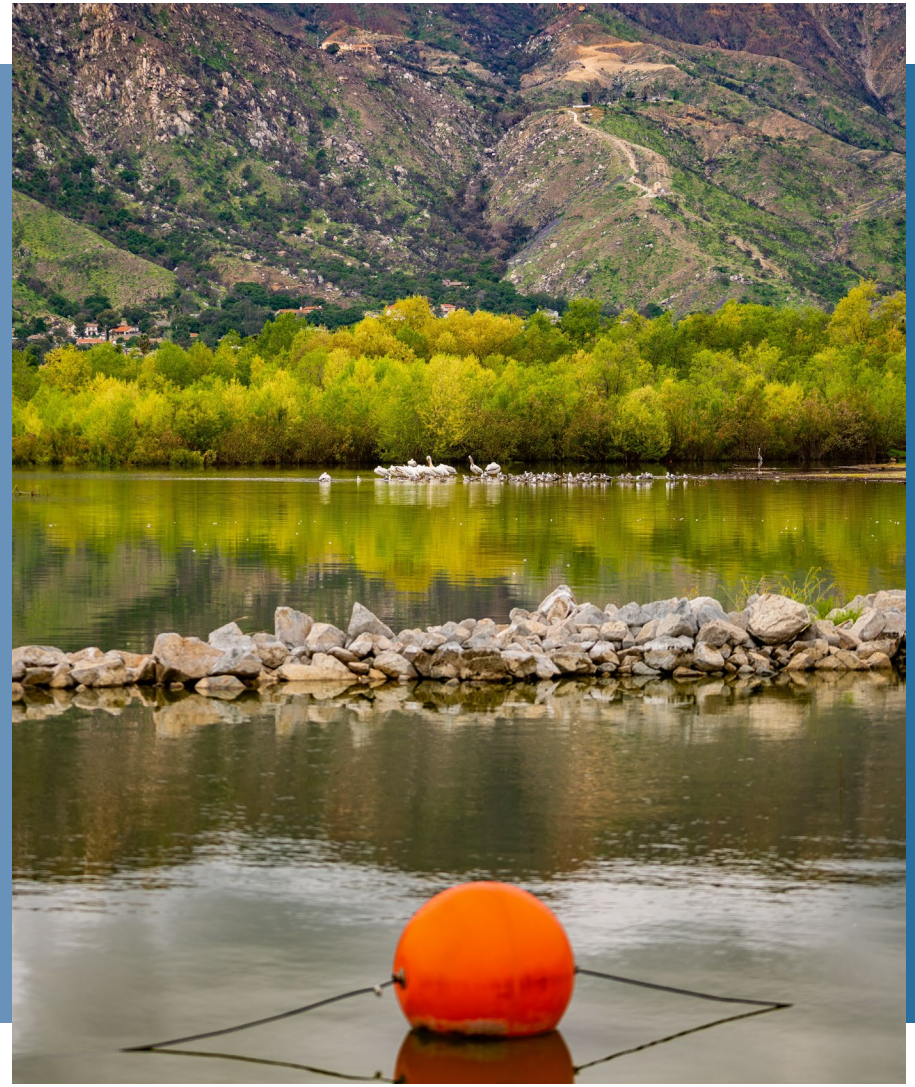
- Haga clic en el enlace para abrir el tablero de MURAL
- Elija “ingresar como visitante”
- Escriba un nombre para mostrar (opcional)
- Elija “entrar como visitante”

Breakout Room
Sala de grupos

Next Steps
Próximas etapas

Next Steps

- Take the Questionnaire!
- Sign up for the Listserv to stay informed
- Stay tuned for future engagement opportunities!
- Questions? Contact planning@lake-elsinore.org



Source: City of Lake Elsinore

Próximas etapas

- Responda el cuestionario!
- Inscríbase en Listserv para mantenerse informado
- ¡Manténgase al tanto para futuras oportunidades de participación!
- Preguntas? planning@lake-elsinore.org


Thank You
Gracias

CLIMATE ACTION & ADAPTATION COMMUNITY WORKSHOP



Help Shape Lake Elsinore's Future!

Help shape the city's future with the Lake Elsinore Climate Action and Adaptation Plan (CAAP)—a collaborative effort to explore local opportunities and solutions for a thriving, resilient city. This is the first in a series of workshops. Join us for a presentation about the plan, followed by an opportunity for questions and feedback.

REGISTER TODAY

DATE:

March 19, 2025

TIME:

6:00 PM - 7:30 PM

PLATFORM:

On Zoom

Why Participate?

- Help shape solutions to reduce energy costs, support the local economy, foster community collaboration, and improve transportation.
- Share your insights on how the CAAP can best support you.
- Engage in discussions and activities to identify community priorities.
- Build on existing strengths to create a better future.

Want to Learn More?

Visit: www.Lake-Elsinore.org/CAAP

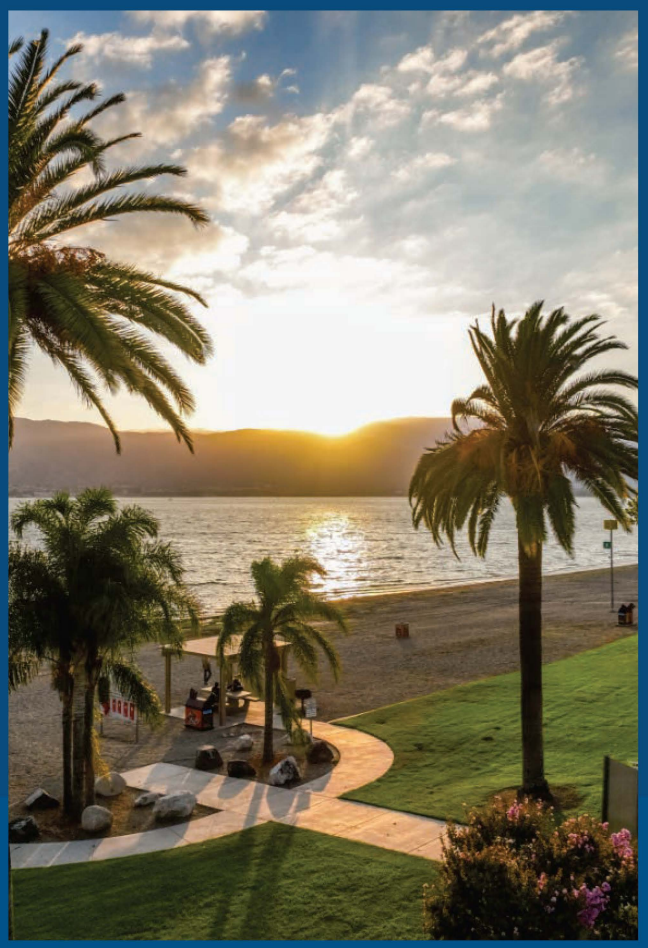
Email: Planning@lake-elsinore.org

LAKE ELSINORE
CLIMATE ACTION & ADAPTATION PLAN

HELP SHAPE LAKE ELSINORE'S CLIMATE READY FUTURE!



CLIMATE ACTION & ADAPTATION COMMUNITY WORKSHOP



Workshop Details:

- March 19, 2025
- 6:00 PM – 7:30 PM
- Virtual on Zoom

Join us to discuss opportunities to:

- Reduce energy costs
- Support our local economy
- Improve transportation options
- Build community resilience
- And more

Identify Infrastructural Vulnerabilities in the City of Lake Elsinore. Please be specific and provide as much detail as possible.
(i.e., buildings, houses, roads, bridges, utilities)

Feature **What infrastructural features are vulnerable to climate hazards?**	Climate Vulnerabilities **How is the feature vulnerable to climate hazards like extreme heat, flooding, drought, and wildfire?** Consider both immediate and long-term impacts			Possible Solutions **What resources, support, or recommended solutions would help improve its resilience or recovery to these hazards?**			
Roads	**Example:** Roads blocked during major storms			Bike and walk way including dogs with connectors to other cities			
Housing	People experiencing homelessness lack access to clean water/ cooling/heating	People are getting priced out	Lack of affordability; lack of small housing for single or couple people; too pricey; not sure what options these people have	More housing options for smaller	Have a bit more density; have more walkable spaces; more dense rezoning; medium density zoning; more apartment; more people in smaller areas; fewer cars needed to live	housing and retrofit homes built in last 5 years with gray water recirculation;	bio gas for home toilets; legally filings environmental objections to all construction that does not conform or provide for items in the foregoing
Energy Grid/Energy Reliability	**Example**: Grid vulnerable during extreme heat	For housing: Sprawl is bringing houses closer to wildfire-prone areas	Many electric vehicle charging stations still powered by fossil fuels	Example: Support for energy efficient upgrades to reduce cooling costs	For housing: Densify (slightly) Main Street and Diamond Drive (city hubs); look past NIMBY-ism for long-term outlook.	Transition the city's grid and incentivize companies to use solar on rooftops of commercial spaces (if/when applicable)	
Public Transit	**Example**: Stops lack shade on hot days	No reason to use it because of urban sprawl					
Walkways and Sidewalks	The riverwalk seems like a popular walking option for families and bicyclist but there's not too many access points			Creating native plant habitats to provide shade and cooler areas	Bike and walk way including dogs with connectors to other cities	Expanding and providing better access to walkways such as the Riverwalk	
Local Services (solid waste, water)	**Example:** Facilities located in flood or wildfire prone areas	Evaporation of potable water in reservoirs and lake			Floating solar panel arrays?		
Education Facilities (e.g., K-12, community college)	Wildfire loss of homes						
	Solid waste and water can be mitigated with required graywater systems plus biomass home and business systems	Tree and food forest within the city		rain water circulation; biogas unites from human waste that generates energy	Solid waste and water can be mitigated with required graywater systems plus biomass home and business systems	Desalination and lake cleaning of water	
	Tesla small homes						

Identify Societal Vulnerabilities in the City of Lake Elsinore. Please be specific and provide as much detail as possible.
(i.e., healthcare, food, emergency response)

Feature **What societal features are vulnerable to climate hazards?**	Climate Vulnerabilities **How is the feature vulnerable to climate impacts such as extreme heat, flooding, drought, and wildfire?** Consider both immediate and long-term impacts			Possible Solutions **What resources, support, or recommended solutions would help improve its resilience or recovery to these Hazards?**		
Emergency Response				Example: Alerts in multiple languages		
Tourism	Example: Lake algae bloom and poor air quality impact on tourism	Must drive everywhere! Basically no other choice!		cooling beehive	Mixed-use development so there are tourist-centric areas and workers/patrons to accommodate.	
Senior Housing						
Public Health/Health Care Facilties	Example: Air quality issues and health impacts from wildfire smoke and extreme heat			Natural air cooling architecture added to parks and public spaces such as the CoolAnt Beehive		
Food Access				Provide organic food to people; make them more affordable	gardens and urban farming	Recruite and give grants to veteran groups who do this natiowide
Economy						
Small Businesses	Loss of revenue and business due to damage from climate impacts	Few walkable areas for street shopping		Example: Preparedness and recovery support		

Identify Environmental Vulnerabilities in the City of Lake Elsinore. Please be specific and provide as much detail as possible.
(i.e., parks, tree canopy cover, recreation)

Feature **What specific infrastructural features are vulnerable to climate hazards?**	Climate Vulnerabilities **How is the feature vulnerable to climate impacts such as extreme heat, flooding, drought, and wildfire?** Consider both immediate and long-term impacts			Possible Solutions **What resources, support, or recommended solutions would help improve its resilience or recovery to these impacts?**			
Urban tree canopy	Example: Limited tree canopy for shade and cooling benefits in parts of the City			Example: Specific neighborhoods that could benefit from more treey cover			
Recreation							
Nature and wildlife	Example: Natural areas vulnerable to increased fire risk	Groundwater drying up		Example: Vegetation management and improved outreach on wildfire awareness and education	Permaculture infrastructure - natural water absorption basins and re-wilding/replanting rain runoff areas to maximize soil retention, creating a healthier soil microbiome and making the ground more conducive to absorb instead of flow to the next area (taking any nutrients with it)		
Water infrastructure/ Water Quality/Lake water quality	Gardens and Urban farming requires proper zoning? How do ppl get to the urban farms? Accessibility	Tons of water-hungry lawns. Not conducive to our environment. Extremely high carbon footprint.	Paved areas that force water away from areas instead of capturing it for later use.	replenishment for Aquifers	Vegas-style incentives and water monitoring for lawns. Basically a carbon/ excessive water tax.	City-sanctioned water capture zones? Or something? :D	Desalination and lake cleaning of water
Air Quality				Fund a harden project that good jRing preservation to replace / lesaon food give aways			
Community Gardens and Urban farming	Complete lack of community gardens and urban farming	Access to healthy food options		Incentives for removing lawn and planting drought-tolerant plants	Sanctioning food forests and community educational programs/ engagement	Zoning that allows for community gardens; increasing accessibility to urban farms	
				Recuirt and give grants to Veteran groups who do this nation.eide			

Community Strengths

Infrastructural

Examples: *recycling centers, bike lanes, access to bike lanes and public transportation, local energy infrastructure, public facilities, and composting or recycling programs.*

Hazardous and electronic waste service on the first Saturday of the month are efficient and easy.

Societal

Examples: *Community-based organizations, well-supported volunteer groups or local businesses, volunteer networks, favorite City events, farmers markets, and community resources.*

Community outreach events like this

The people of Lake Elsinore are definitely friendlier and more amenable to local connections and organization than other counties.

The community programs along main St and participations by organization. We need to maximize this

Businesses that utilize the view of the lake

Greywater/bio gas generation - organizations that do this. Would ike to see more activities from them

The Dream Center for their efforts downtown and other areas

Environmental

Examples: *Successful preservation efforts, favorite parks, hiking trails, or natural habitats, preferred outdoor recreation activities, access to wildlife, scenic views around the lake, or clean air initiatives.*

Utilizing innovative technologies such as the Nano Bubbler for the lake

The Lake itself is a great attractor for nature/ environmental groups/ meetings/gatherings

The new park (Stovepipe Creek) near me is planned beautifully with native plants and drought-tolerant trees.

The amount of restoration efforts for the Lake that the City has been doing

Incentives for green energy "going green"

The lake itself

Wildlife and bird marshes

2.3 POP-UP

The City hosted a series of pop-up events at existing community gatherings throughout the CAAP planning process. These events served dual purposes: informing residents about the CAAP and gathering feedback on climate priorities and strategies. By meeting residents where they already gather, the pop-ups provided accessible opportunities for participation and helped ensure that community input informed plan development.

2.3.1 Santa Dash 5K – December 21, 2024

The first pop-up event was held at the Santa Dash 5K on December 21, 2024. Project team members engaged with race participants to discuss climate-related topics and distributed flyers promoting the community questionnaire. Conversations primarily focused on climate hazards affecting Lake Elsinore, particularly extreme heat and wildfire impacts. This early engagement helped introduce the CAAP to the community and encouraged participation in the questionnaire.

2.3.2 Main Street Night Market – August 14, 2025, and Emergency Preparedness Fair – September 13, 2025

The second and third pop-up events occurred later, during the strategy and measure prioritization period of the planning process. At these events, high-level strategies and measures being considered for the CAAP were presented to gather feedback on outcomes attendees would like to see in the plan. The display materials prompted conversations with residents about their climate priorities and preferences.

The second pop-up event was held at the Main Street Night Market on August 14, 2025, where the project team set up alongside vendors and community organizations. The third pop-up event took place at the Emergency Preparedness Fair on September 13, 2025, an event that equipped attendees with tools and information to prepare for unexpected emergencies. Topics discussed at both events included concerns about extreme heat and traffic congestion, the importance of walkability and healthy communities, and the need for improved transportation options. Attendees also raised issues related to solar energy costs and accessibility, opportunities to partner with local groups, and the lack of incentives for landlords to improve the energy and water efficiency of rental properties.

Attachment C

Pop-up Boards

LAKE ELSINORE

CLIMATE ACTION & ADAPTATION PLAN

For Implementing Lake Elsinore's Climate, Sustainability, and Resiliency Goals

The City of Lake Elsinore is developing a Climate Action and Adaptation Plan (CAAP) to reduce greenhouse gas emissions and strengthen climate resilience.

The CAAP will serve as a roadmap with strategies to cut emissions from sectors like buildings, transportation, and waste, alongside efforts to prepare for climate impacts from extreme heat, wildfire smoke, and severe weather. These efforts will also deliver community benefits like cleaner air, healthier communities, and stronger connections, especially for those most affected by environmental and economic challenges.



The CAAP can support:

- Improved air quality and public health
- Resilience against extreme weather
- Lower energy costs
- Green jobs and economic growth
- More trees and shade
- Walkable communities



Scan the QR code to visit the project website, explore FAQs, get updates, and sign up for email alerts when the Draft CAAP is ready for review.

Have questions or comments? Email us at **planning@lake-elsinore.org**

PROJECT TIMELINE

1 — Community Outreach Launched
Winter 2024

2 — Learning and Visioning
Winter 2025 – Spring 2025

3 — Strategy Development and Prioritization
Spring 2025 – Summer 2025

4 — Draft CAAP and Public Review
Fall 2025 – Winter 2025/2026

5 — Target City Council Adoption
Spring 2026

Lake Elsinore's Climate Action and Adaptation Plan is supported by the Adaptation Planning Grant Program, implemented by the Governor's Office of Land Use and Climate Innovation.

CITY OF LAKE ELSINORE
DREAM EXTREME

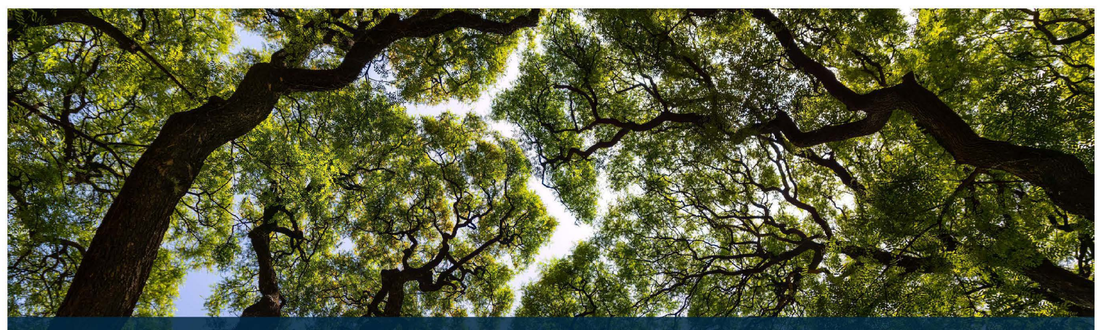
Which outcomes of the Climate Action and Adaptation Plan (CAAP) are most important to you?

Place your dot next to your top priority:



Improved Air Quality

Clean indoor and outdoor air for a healthier community



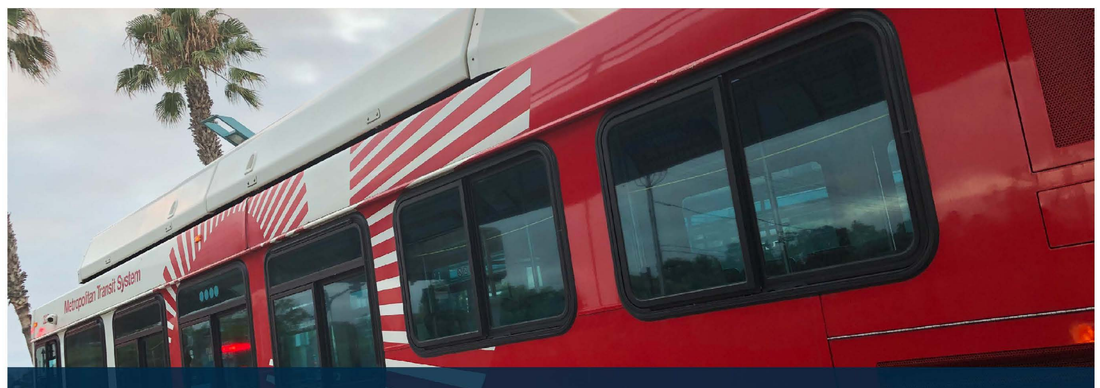
More Trees and Community Gardens

More trees and gardens in public spaces, along sidewalks, and in parks for shade and recreation.



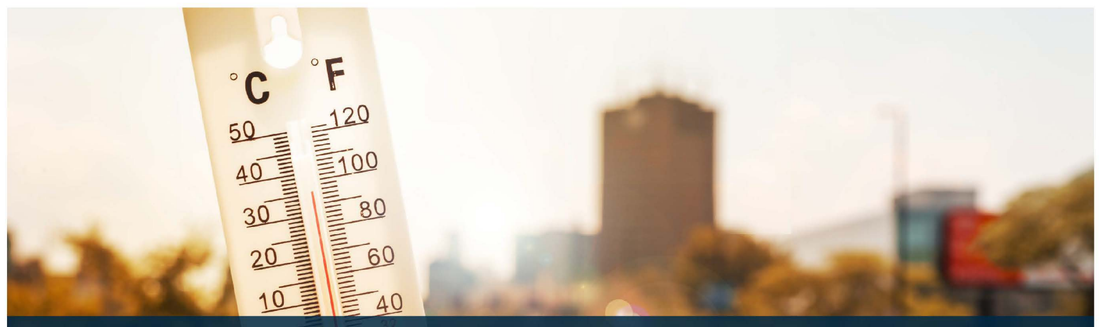
Lower Energy Costs

Reduced utility bills through efficiency and renewable energy use



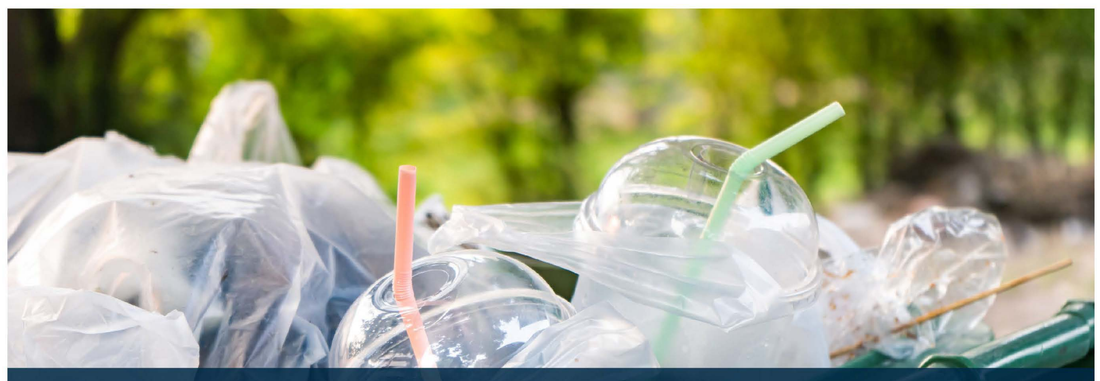
Better Public Transportation

Safe, accessible, and more frequent public transit options



Better Preparation for Extreme Weather

Protection from heat waves, floods, drought, and wildfire impacts



Improved Solid Waste Management

Better recycling, composting, and education on waste reduction programs



Increased Job Opportunities

More green jobs and economic development



Improved Walking and Biking Infrastructure

Safe and connected pathways throughout the City

HAVE OTHER IDEAS? SHARE THEM WITH US!

Lake Elsinore's Climate Action and Adaptation Plan is supported by the Adaptation Planning Grant Program, implemented by the Governor's Office of Land Use and Climate Innovation.

CITY OF LAKE ELSINORE
DREAM EXTREME

2.4 Collateral Materials

Throughout the CAAP planning process, the City also developed and distributed a variety of electronic and printed collateral materials to promote the project, share key updates, highlight engagement opportunities, and provide accessible information to the community.

2.4.1 Adaptation Planning Grant Recognition

To remain in compliance with the Office of Land Use and Climate Innovation Adaption Planning Grant Program (APGP) requirements, all public outreach materials and publication included a reference to the grant. Below is the language included for specific materials:

- Long-Form Materials: As communities in California experience more frequent, prolonged, and severe impacts from climate change, communities and governments at all scales are developing strategies and implementing actions to build a climate- resilient future. However, many jurisdictions, especially under-resourced communities in California, lack the capacity, tools, guidance, and resources to effectively prepare for climate impacts.

  The APGP addresses this capacity gap by providing funding to help fill planning needs, providing communities with the resources to identify climate resilience priorities, and supporting the development of climate resilience projects across the state. The APGP enables communities to climate risk and adaptation considerations into planning activities and prepare for climate readiness and resilience in the long term.

- Press Releases, Flyers, and Visual Materials: The Lake Elsinore Climate Action and Adaptation Plan (CAAP) is supported by the Adaptation Planning Grant Program implemented by the Governor's Office of Land Use and Climate Innovation

These materials were designed to reach diverse audiences across multiple communication channels. Collateral material included the following:

2.4.2 One-Page Fact Sheet

A one-page fact sheet was created to provide essential information about the CAAP, including an overview of climate action planning, the project timeline, and ways for community members to stay informed and to participate. The fact sheet was shared throughout the planning process via the project website, City email newsletters, and distribution at in-person pop-up events.

2.4.3 Flyers

Flyers were created to promote engagement with the community questionnaire and were distributed at the Santa Dash pop-up event on December 21, 2024. These quarter-sheet flyers included a QR code for easy access to the questionnaire and were simple to hand out to attendees. Their concise, accessible format made them effective for quick outreach in a busy event environment.

2.4.4 Social Media Graphics

A series of social media graphics were developed to promote engagement opportunities and project milestones. These graphics were used to advertise the community questionnaire, announce the virtual workshop, share key project updates, and notify the public about the Draft CAAP public review period. Content was posted across the City's social media platforms to maximize reach and visibility.

2.4.5 Newsletter Updates

Regular updates about the CAAP were included in the City's monthly email newsletter to keep subscribers informed throughout the planning process. The newsletter highlighted engagement opportunities, such as the community questionnaire and virtual workshop, provided updates on project milestones, and directed readers to additional resources on the project website. The newsletters served as a consistent communication tool during CAAP development.

2.4.6 Project Webpage

A dedicated project webpage served as the central hub for all CAAP-related information throughout the planning process. The webpage provided a high-level overview of climate action planning and how community members could get involved. The site included the project timeline, key milestones, and upcoming engagement opportunities. Materials such as the one-page fact sheet were posted on the webpage for easy access, and the site hosted the community questionnaire and virtual workshop. Translated content was included to ensure accessibility for Spanish-speaking residents. Additional features included project contact information and frequently asked questions.

Attachment D

Collateral Materials

CITY OF LAKE ELSINORE

CLIMATE ACTION & ADAPTATION PLAN

FOR IMPLEMENTING LAKE ELSINORE'S CLIMATE, SUSTAINABILITY, AND RESILIENCE GOALS



THE CITY OF LAKE ELSINORE IS DEVELOPING A CLIMATE ACTION AND ADAPTATION PLAN (CAAP) TO REDUCE GREENHOUSE GAS (GHG) EMISSIONS AND STRENGTHEN CLIMATE RESILIENCE.

The CAAP will seve as a roadmap for reducing GHGs through improvements in how we power buildings, move around the city, and manage waste, while also preparing for climate-related risks like extreme heat, wildfire smoke, and severe weather. The CAAP will also deliver community benefits such as cleaner air, healthier neighborhoods, and improved connectivity, with a strong focus on supporting residents most impacted by environmental and economic challenges.

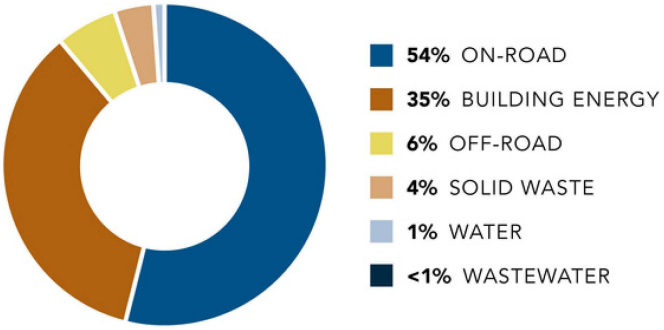
THE CAAP CAN SUPPORT:

- Improved air quality and public health
- Resilience against extreme weather
- Lower energy costs through efficiency and clean energy
- Green jobs and economic growth
- More trees and shade
- Walkable communities and better public transit

The CAAP will focus on both community-wide activities and City government operations. Planning for the CAAP began earlier this year, and there is still time for residents to get involved and help shape the plan to reflect community priorities.

2022 COMMUNITY GHG EMISSIONS INVENTORY

See where our local emissions come from



VISIT THE PROJECT WEBSITE

Scan the QR code to visit the project website for information and updates as they become available.

PROJECT TIMELINE

Phase 1 Community Outreach Launched: Introduce the CAAP and gathered initial community input.

Phase 2 Learning and Visioning: Conducted a workshop and administered a survey to understand climate action and adaptation community priorities and define the CAAP's vision.

Phase 3 Strategy Development and Prioritization: Develop draft strategies and actions informed by public and technical input.

Phase 4 Draft CAAP and Public Review: Release the Draft CAAP for public review and comment.

Phase 5 Target City Council Adoption: Present the Final Draft CAAP for City Council consideration. If adopted, implementation will begin in early 2026.



JOIN THE LISTSERV

Scan the QR code to join our email list and receive updates on CAAP progress, upcoming public meetings, and opportunities to participate.



LAKE ELSINORE
CLIMATE ACTION & ADAPTATION PLAN

Lake Elsinore's Climate Action and Adaptation Plan is funded through the Adaptation Planning Grant Program, administered by the Governor's Office of Land Use and Climate Innovation.

FOR MORE INFORMATION, EMAIL: PLANNING@LAKE-ELSINORE.ORG

CIUDAD DE LAKE ELSINORE

PLAN DE ACCIÓN Y ADAPTACIÓN CLIMÁTICA

PARA IMPLEMENTAR LOS OBJETIVOS DE CLIMA, SUSTENTABILIDAD Y RESILIENCIA DE LAKE ELSINORE



LA CIUDAD DE LAKE ELSINORE ESTÁ DESARROLLANDO UN PLAN DE ACCIÓN Y ADAPTACIÓN CLIMÁTICA (CAAP, por sus siglas en inglés) PARA REDUCIR LAS EMISIONES DE GASES DE EFECTO INVERNADERO (GEI) Y FORTALECER LA RESILIENCIA CLIMÁTICA.

El CAAP servirá como hoja de ruta para reducir los GEI mediante mejoras en la forma en que suministramos energía a los edificios, nos desplazamos por la ciudad y gestionamos los residuos, a la vez que nos preparamos para riesgos relacionados con el clima, como el calor extremo, el humo de los incendios forestales y las inclemencias del tiempo. El CAAP también brindará beneficios a la comunidad, como un aire más limpio, vecindarios más saludables y una mejor conectividad, con un robusto enfoque en apoyar a los residentes más afectados por los desafíos ambientales y económicos.

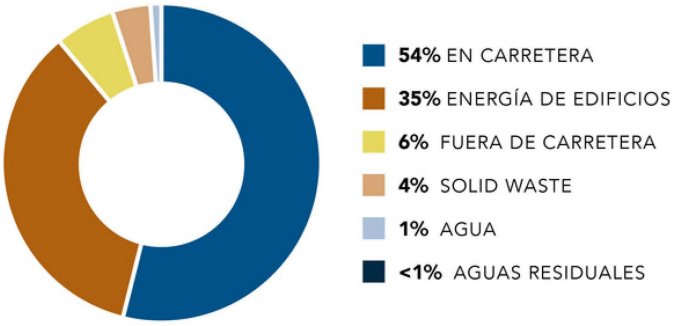
EL CAAP PUEDE APOYAR A:

- Mejorar la calidad del aire y la salud pública
- Crear resiliencia ante fenómenos meteorológicos extremos
- Reducir los costos energéticos mediante la eficiencia energética y la energía limpia
- Fomentar empleos verdes y crecimiento económico
- Más árboles y sombra
- Comunidades transitables y mejor transporte público

El CAAP se centrará tanto en actividades comunitarias como en las operaciones del gobierno municipal. La planificación del CAAP comenzó a principios de este año, y aún hay tiempo para que los residentes participen y ayuden a definir el plan para que refleje las prioridades de la comunidad.

INVENTARIO DE EMISIONES DE GEI DE LA COMUNIDAD 2022

Vea de dónde provienen nuestras emisiones locales



VISITE EL SITIO WEB DEL PROYECTO

Escanee el código QR para visitar el sitio web del proyecto, donde podrá acceder al borrador del CAAP, actualizaciones del proyecto y otros hitos importantes a medida que estén disponibles.

CRONOGRAMA DEL PROYECTO

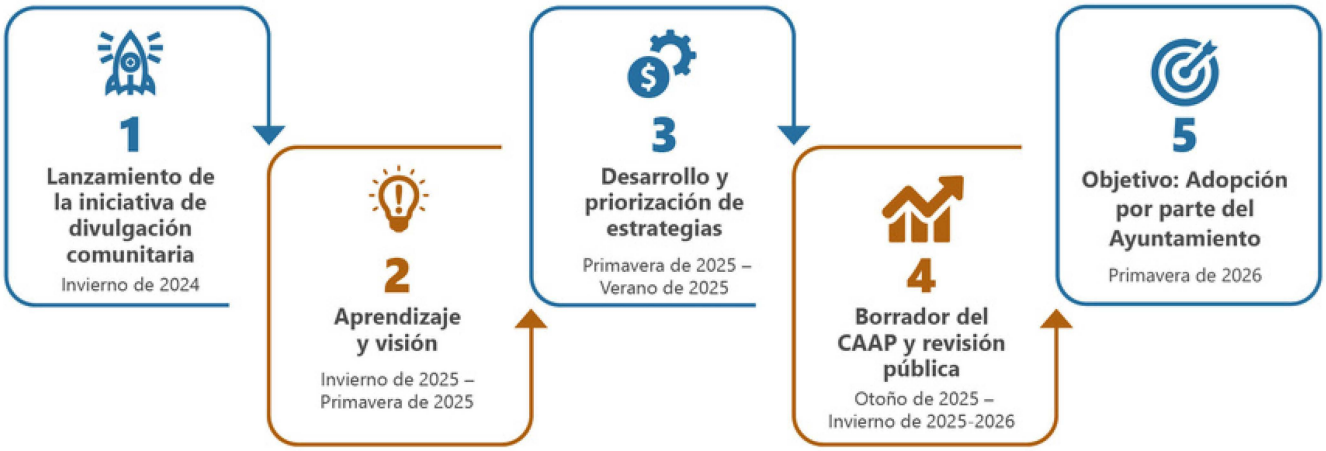
Fase 1: Lanzamiento de la Difusión Comunitaria: Presentación del CAAP y recopilación de las aportaciones iniciales de la comunidad.

Fase 2: Aprendizaje y Visión: Realización de un taller y aplicación de una encuesta para comprender las prioridades comunitarias de acción y adaptación climática y definir la visión del CAAP.

Fase 3: Desarrollo y Priorización de Estrategias: Elaboración de borradores de estrategias y acciones con base en las aportaciones públicas y técnicas.

Fase 4: Borrador del CAAP y Revisión Pública: Publicación del Borrador del CAAP para revisión y comentarios públicos.

Fase 5: Objetivo: Adopción por parte del Ayuntamiento: Presentación del Borrador Final del CAAP para su consideración por parte del Ayuntamiento. De ser adoptado, su implementación comenzará a principios de 2026.



ÚNASE A LA LISTA

Escanee el código QR para unirse a nuestra lista de correo electrónico y recibir actualizaciones sobre el progreso de CAAP, las próximas reuniones públicas y las oportunidades de participación.



LAKE ELSINORE
CLIMATE ACTION & ADAPTATION PLAN

El Plan de Acción y Adaptación Climática de Lake Elsinore se financia a través del Programa de Subvenciones para la Planificación de la Adaptación, administrado por la Oficina del Gobernador para el Uso del Suelo y la Innovación Climática.

PARA MÁS INFORMACIÓN, ENVÍE UN CORREO ELECTRÓNICO A: PLANNING@LAKE-ELSINORE.ORG

HELP SHAPE LAKE ELSINORE'S CLIMATE READY FUTURE!

The City of Lake Elsinore is developing a Climate Action and Adaptation Plan (Climate Plan) to identify actions for reducing climate-warming emissions and protecting people and property from climate impacts.

Why is it important? The Climate Plan aims to benefit all of Lake Elsinore by promoting cleaner air, improved public health, more comfortable homes, greater access to green jobs, and increased resilience to climate change.





We need your input! Your input can help the City understand how the Climate Plan can deliver benefits to you, your community, and all of Lake Elsinore.

Scan to take the questionnaire today and shape the Climate Plan!

¡AYÚDENOS A MOLDEAR EL FUTURO DE LAKE ELSINORE PREPARADO PARA EL CLIMA!

La municipalidad de Lake Elsinore está desarrollando un Plan de acción y adaptación climática (Plan climático) para identificar las acciones que reduzcan las emisiones de calentamiento climático y protejan a las personas y a las propiedades del impacto climático.

¿Por qué es importante? El Plan climático busca beneficiar a todo Lake Elsinore al promover aire más limpio, salud pública mejorada, viviendas más cómodas, mayor acceso a empleos ecológicos y mayor resiliencia al cambio climático.





¡Necesitamos su opinión! Sus comentarios pueden ayudar a la municipalidad a comprender los beneficios que el Plan climático le puede aportar a usted, a la comunidad y a todo Lake Elsinore.

¡Escanee el código para responder el cuestionario hoy mismo y moldear el Plan climático!

CITY OF LAKE ELSINORE
DREAM EXTREME

CLIMATE ACTION AND ADAPTATION PLAN

In response to climate change, the City of Lake Elsinore is developing a Climate Action and Adaptation Plan. This initiative aims to Reduce emissions that contribute to climate change and protect residents and property from climate impacts.

The plan focuses on community-wide actions and City operations, ensuring that benefits reach all residents.

Key Benefits:

- Cleaner air and improved public health
- More comfortable homes
- Increased access to green job opportunities
- Enhanced climate resilience
- Streamlined environmental reviews for new developments



CLIMATE ACTION & ADAPTATION PLAN

Implementing Lake Elsinore's Climate Sustainability & Resilience Goals

In response to climate change, the City of Lake Elsinore is preparing a Climate Action and Adaptation Plan (Climate Plan) to reduce climate-warming emissions and protect people and property from climate impacts. The plan will address both community-wide activities and City government operations.



The Climate Plan aims to benefit all of Lake Elsinore, focusing on historically underserved communities most vulnerable to climate change. Community benefits may include cleaner air, improved public health, more comfortable homes, increased access to green jobs, and greater climate resilience. Additionally, the plan may streamline environmental reviews for new developments.

JOIN THE VIRTUAL WORKSHOP



Join the City of Lake Elsinore for the first virtual community workshop to learn about and help shape the Climate Action and Adaptation Plan!

This workshop is a chance to highlight community strengths and identify key vulnerabilities and concerns to address within the plan. Together, we'll explore how this project can create a sustainable future and tackle challenges like extreme heat

waves, drought, and wildfire smoke that impact our daily lives.



Date: March 19, 2025

Time: 6:00 pm

Register for the Workshop Here



The City welcomes everyone to participate in the development of the Climate Plan. This one-year planning process will offer multiple opportunities for public engagement and input, ensuring the plan responds effectively to the Lake Elsinore community's needs.



TAKE THE QUESTIONNAIRE

Your input can help the City understand how the Climate Plan can deliver benefits to you, your community, and all of Lake Elsinore. Follow the link below to share your thoughts.

Click Here for the Questionnaire

Lake Elsinore's Climate Adaptation and Action Plan is supported by the Adaptation Planning Grant Program at the Governor's Office of Planning and Research (OPR). The Adaptation Planning Grant Program is an initiative of OPR's Integrated Climate Adaptation and Resiliency Program (ICARP). ICARP advances climate adaptation and resilience in California by coordinating investments, partnerships, and climate science to ensure people, natural systems, and the built environment are protected, prepared, and thrive in the face of climate change.

For More Project Information Click Here

City of Lake Elsinore | 130 S. Main St. | Lake Elsinore, CA 92530 US

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Appendix B

GHG Emissions Inventory Methodology

Memo

2550 Fifth Avenue, Suite 640
San Diego, CA 92103
619.219.8000

Date: November 21, 2025

To: Adam Gufarotti, Carlos Serna, Damaris Abraham, Bailey MacLean (City of Lake Elsinore)

From: Andrew Beecher, Natalie Kataoka, Poonam Boparai

Subject: Final Greenhouse Gas Emissions Inventory Memorandum for the City of Lake Elsinore Climate Action and Adaptation Plan

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INTRODUCTION

The City of Lake Elsinore (City) is currently in the process of developing its Climate Action and Adaptation Plan (CAAP) to provide a programmatic framework to reduce its greenhouse gas (GHG) emissions and adapt to the impacts of climate change. The first step in the City's climate action planning process is to develop a GHG emissions inventory, which is a snapshot of the GHG emissions associated with its jurisdiction in a given year. The purpose of an emissions inventory is to:

- establish a baseline against which future emissions levels and future reduction targets can be measured,
- understand the sources of GHG emissions, and
- monitor progress toward achievement of GHG reduction targets.

This memorandum (memo) summarizes the results of the City's GHG emissions inventory and includes a detailed description of the data and methods used to develop the inventory. It consists of two sections.

- **Section 1: Greenhouse Gas Emissions Inventory Summary** summarizes the analytical approach used to develop the City's 2022 community GHG emissions inventory and provides total emissions results by sector.
- **Section 2: Emissions Calculation by Sector** provides details on the calculation of each sector's emissions, including data on emissions-causing *activity* (i.e., the drivers of emissions, such as the quantity of therms of natural gas used in homes and businesses) and *emissions factors* (i.e., the amount of emissions per unit of activity, such as metric tons of carbon dioxide equivalent [$MTCO_2e$] per therm of natural gas used). Activity data and emissions factors are multiplied to calculate total emissions.

1 GREENHOUSE GAS EMISSIONS INVENTORY SUMMARY

Lake Elsinore's emissions inventory is a "production-based" inventory, which estimates GHG emissions caused by activities occurring within a defined boundary during a single year. This method accounts for emissions that are *caused* by activity within the boundary, even if the emissions themselves may physically occur outside the boundary. For example, if a natural gas–fired power plant generates a kilowatt-hour to serve electricity demand in the Lake Elsinore, the emissions associated with that kilowatt-hour would be attributed to the city, regardless of where the power plant is physically located.

The CAAP is being developed within the context of the City's General Plan Update (GPU) and its associated Draft Environmental Impact Report (DEIR), which considers the environmental effects of growth within the Lake Elsinore city limits and its Sphere of Influence (SOI). As such, the GHG emissions analysis for the CAAP, including the GHG emissions inventory, was prepared to maintain consistency with the boundary of the GPU and includes estimates of GHG emissions for both the city limits and SOI. The GHG emissions estimates for the city limits are based on available data on emissions generating activities within the City of Lake Elsinore boundary, including energy use, vehicle travel, off-road vehicle fuel use, water consumption, waste generation, and wastewater generation. Data on vehicle travel was available for the SOI, however since these areas are not within the city limits, other data on emissions generating activity were not available and were estimated based on the existing population and employment data. This memorandum presents the results of emissions for both the city limits and SOI, separately and combined, so that the City can effectively track GHG emissions over time as areas of the SOI may be annexed into the city limits.

The Lake Elsinore inventory includes six sectors of emissions:

- **Building energy** includes electricity and natural gas usage in residential and nonresidential buildings, as well as gasoline and diesel fuel usage in backup generators.
- **On-road transportation** includes emissions from vehicles that generally travel over roads, such as passenger cars, trucks, and buses. Activity for this sector is measured in terms of vehicle miles traveled (VMT).
- **Off-road equipment** includes emissions from equipment that generally does not travel on roads, such as construction equipment, waterborne vessels, and lawn and garden equipment.
- **Solid waste** includes methane emissions from landfilled solid waste.
- **Water** includes emissions from electricity used for pumping, conveying, treating, and distributing water in the city.
- **Wastewater** includes methane and nitrous oxide emissions from the treatment of wastewater generated in the city, as well as methane emissions from septic tanks.

This inventory does not include emissions from agriculture, though there has historically been a nominal amount of land designated for agricultural use in the city (less than 1 percent of total land use acreage in the city was considered agricultural in 2005 [City of Lake Elsinore 2011: 2]–more recent data is not available). The City does not currently have agricultural designated areas and does not plan to include any in the future General Plan Update or SOI (Serna, pers. comm., 2024). Therefore, it was assumed that there is not a significant amount of agriculture-driven emissions in the city limits or SOI.

Table 1 and Figure 1 below present emissions results by sector for calendar year 2022, for the Lake Elsinore city limits and SOI. The year 2022 was selected as the inventory year because it is the most recent year with complete data available. It also excludes data anomalies that arose due to the COVID-19 pandemic (such as reduced transportation emissions from increased telecommuting in 2020 and 2021). Results are presented in units of metric tons of carbon dioxide equivalent ($MTCO_2e$), which includes the global warming effects of carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). These gases are assumed to have 100-year global warming potentials (GWPs) of 1, 27, and 273, respectively, from the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment (Greenhouse Gas

Protocol 2024). GWP is a measure of "radiative forcing," or the amount of heat a GHG absorbs over a given timeframe relative to CO_2. For example, over a 100-year period, one molecule of CH_4 has 27 times the ability to absorb heat as a molecule of CO_2 and thus is counted as equivalent to the emission of 27 molecules of CO_2.

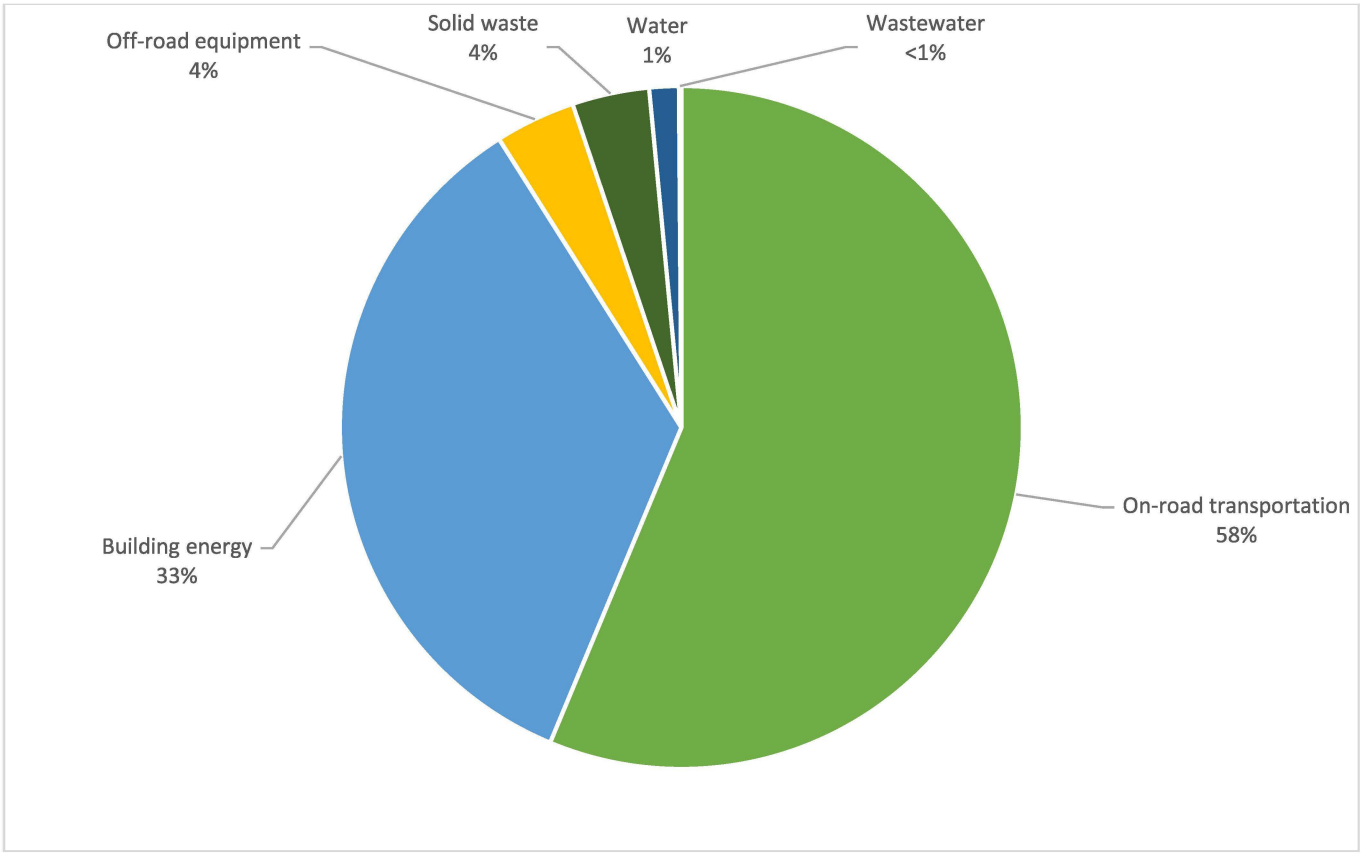
Table 1 2022 Community GHG Emissions Inventory Results ($MTCO_2e$)

Sector	City Limits	SOI	City Limits + SOI	Percent of Total
On-road transportation	218,322	62,463	280,784	58%
Building energy	126,475	36,051	162,526	33%
Off-road equipment	14,843	4,413	18,995	4%
Solid waste	13,810	4,152	18,224	4%
Water	5,291	1,691	6,982	1%
Wastewater	362	125	487	<1%
Total	**379,103**	**108,894**	**487,998**	**100%**

Notes: GHG = greenhouse gases; $MTCO_2e$ = metric tons of carbon dioxide equivalent; SOI = sphere of influence.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.



Note: Totals are rounded to the nearest percent.

Data Source: Modeled by Ascent in 2025.

Figure 1 2022 Community GHG Emissions Inventory Results (City Limits + SOI)

2 EMISSIONS CALCULATION BY SECTOR

This section describes the details of each sector's emissions calculation, including the derivation of activity levels and emissions factors. Under each sector, the methods for estimating GHG emissions for both the city limits and SOI are provided separately. Generally, estimates of activity data and GHG emissions for the SOI are based on scaling of data applicable to the city limits based on demographic data including population, employment, or service population. The notable exception is the on-road transportation sector where modeled data was available for vehicle travel for both the city limits and SOI. The demographic data used for scaling are consistent with the expected growth in both the city limits and SOI between 2018 and 2045, as provided in Table 2, with values for 2022 interpolated between the years 2018 and 2025.

Table 2 Population, Employment, and Service Population for City Limits and Sphere of Influence

Demographic Factor	2018	2022	2025	2045
Lake Elsinore City Limits				
Population	58,684	64,915	69,588	113,240
Employment	14,067	15,863	17,210	30,617
Service Population	72,751	80,789	86,817	143,857
Lake Elsinore Sphere of Influence (SOI)				
Population	20,985	23,043	24,586	38,652
Employment	1,999	2,598	3,048	10,178
Service Population	22,984	25,818	27,943	48,830
Lake Elsinore City Limits + SOI				
Population	79,669	87,958	94,174	151,892
Employment	16,066	18,461	20,258	40,795
Service Population	95,735	106,607	114,760	192,687
Scaling Factor for Estimating SOI Activity from City Limits Activity[1]				
Population	0.3576	**0.3550**	0.3533	0.3413
Employment	0.1421	**0.1638**	0.1771	0.3324
Service Population	0.3159	**0.3196**	0.3219	0.3394

Notes: service population = population + employment. SOI = sphere of influence.

[1] Scaling factors for estimating SOI activity from city limits activity is the percentage of each demographic factor in the SOI as compared to the city limits. This factor is used in calculations where only city limits data are known, and SOI data is estimated based on population, employment, or service population. Only scaling factors for the year 2022 are used in calculations in the GHG inventory.

Data Source: Hermann, pers. comm., 2025a.

On-road transportation

City Limits and Sphere of Influence

Activity Data. Daily VMT output from the Riverside County Transportation Model (RIVCOM) was used to calculate emissions from on-road transportation. Daily VMT data was provided for four distinct trip types, listed below and converted to annual VMT assuming 353 travel days per year (Poss, pers. comm., 2024).

1) external-internal (the trip starts outside the boundaries of the city and ends inside the boundaries),
2) internal-external (the trip starts inside the boundaries of the city and ends outside the boundaries),
3) internal-internal (the trip both starts and ends inside the boundaries of the city), and

4) external-external (the trip both starts and ends outside the boundaries of the city).

To apportion VMT from the trips to Lake Elsinore, the VMT values for each of the trip types described above were assigned weights of 50, 50, 100, and 0 percent, respectively. This approach follows guidance from the Regional Targets Advisory Committee (RTAC). RTAC was formed by the California Air Resources Board (CARB) pursuant to SB 375 (Sustainable Communities and Climate Protection Act). SB 375 mandates that CARB work in consultation with the metropolitan planning organizations to set targets for vehicle emissions reductions, and that RTAC recommend methodologies for setting those targets. Details on the VMT estimates for the Lake Elsinore city limits are available in Attachment A, and VMT for the city limits and SOI combined are available in Attachment B.

Emissions Factors. Emissions factors (in grams of CO_2e per vehicle mile traveled, or gCO_2e per VMT) were calculated using VMT and fuel consumption data from CARB's EMissions FACtor 2025 (EMFAC2025) model (CARB 2025). EMFAC provides VMT and fuel consumption data for 54 different vehicle types, ranging from passenger cars to heavy trucks. These data were aggregated to the four vehicle categories in the RIVCOM model (Autos, Light Trucks, Medium Trucks, and Heavy Trucks) in order to calculate an emissions factor for each vehicle category. Table 3 below shows the results of this analysis.

Table 3 Calculation of 2022 On-Road Vehicle Emissions

RIVCOM Vehicle Category	RTAC VMT per Year	Vehicle Category Emissions Factor (gCO_2e/VMT)	Emissions ($MTCO_2e$)
City Limits			
Autos	502,686,120	377	189,699
Light Trucks	3,898,330	445	1,735
Medium Trucks	4,878,258	1,361	6,639
Heavy Trucks	11,292,773	1,793	20,249
City Limits Total	*522,755,481*	*NA*	*218,322*
Sphere of Influence (SOI)			
Autos	160,852,771	377	60,701
Light Trucks	1,106,705	445	302
Medium Trucks	1,230,558	1,361	548
Heavy Trucks	2,743,869	1,793	912
SOI Total	*165,933,903*	*NA*	*62,463*
City Limits + SOI			
Autos	663,538,891	377	250,400
Light Trucks	5,005,035	445	2,037
Medium Trucks	6,108,816	1,361	7,187
Heavy Trucks	14,036,642	1,793	21,161
City Limits + SOI Total	*688,689,384*	*NA*	*280,785*

Notes: g = grams; $MTCO_2e$ = metric tons of carbon dioxide equivalent; NA = not applicable; RIVCOM = Riverside County Transportation Model; RTAC = Regional Targets Advisory Committee; SOI = Sphere of Influence; VMT = vehicle miles traveled.

Totals may not sum exactly due to rounding.

Data Source: VMT analysis by Fehr and Peers in 2025 (see Attachment A and Attachment B). GHG emissions modeled by Ascent in 2025.

Building energy

City Limits

Activity Data. Electricity usage data for 2022 was provided by Southern California Edison (SCE) (Brenner, pers. comm., 2024); natural gas usage data by Southern California Gas Company (SoCalGas) (Mejia, pers. comm., 2024); and backup generator data by the South Coast Air Quality Management District (SCAQMD) (Trapp, pers. comm., 2024).

Emissions Factors. Emissions factors for electricity were sourced from SCE's 2022 Power Content Label (SCE 2022). Emissions factors for natural gas, diesel, and gasoline were sourced from the U.S. Environmental Protection Agency (EPA) (2024a). These emissions factors were applied to their respective fuels to calculate emissions, as shown in Table 4 below.

Table 4 Calculation of 2022 Building Energy Emissions — City Limits

Fuel Type	Sector	Sub-Sector	Total Activity	Activity Units	Pounds CO_2e Per Unit of Activity	Emissions ($MTCO_2e$)
Electricity	Nonresidential	NA	151,104	MWh	552.0	37,834
Electricity	Residential	NA	176,681	MWh	552.0	44,238
Natural gas	Nonresidential	Commercial	1,532,304	therms	11.7	8,139
Natural gas	Nonresidential	Industrial	8,447	therms	11.7	45
Natural gas	Residential	Single-family residential	5,904,990	therms	11.7	31,364
Natural gas	Residential	Multi-family residential	875,316	therms	11.7	4,649
Diesel	Nonresidential	Backup generation	23,123	gallons	22.6	237
Gasoline	Nonresidential	Backup generation	1,786	gallons	19.4	16
Subtotal: Residential Building Energy Emissions ($MTCO_2e$)						*80,251*
Subtotal: Nonresidential Building Energy Emissions ($MTCO_2e$)						*46,270*
Total Building Energy Emissions — City Limits ($MTCO_2e$)						126,521

Notes: g = grams; $MTCO_2e$ = metric tons of carbon dioxide equivalent; MWh = megawatt-hours; NA = not applicable.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.

Table 4 does not include emissions from natural gas burning at Pacific Clay Products, even though this facility is located within the boundaries of the city. Pacific Clay Products is a brick manufacturer that uses natural gas to heat brickmaking kilns (Trapp, pers. comm., 2024). In 2022, natural gas consumption at Pacific Clay Products produced approximately 13,000 $MTCO_2e$ (emissions data for this facility is publicly available from CARB's Mandatory Reporting of Greenhouse Gas Emissions database [see CARB 2024a]).

Pacific Clay Products is excluded from this emissions inventory because it is regulated under the California Greenhouse Gas Cap-and-Trade Program (Cap-and-Trade). Cap-and-Trade establishes an aggregate GHG allowance budget for covered entities (generally facilities with high levels of GHG emissions, including Pacific Clay Products) and provides a trading mechanism for compliance instruments (allowance or offset credit). Facilities regulated under Cap-and-Trade may purchase allowances to emit GHG emissions from facilities that reduce GHG emissions (e.g., solar farms) or sell emission-offset credits to other facilities that need to reduce their emissions to meet CARB's industry-wide emissions cap. As a facility that is covered under the Cap-and-Trade program, the City does not have the regulatory authority to implement policies or programs that would affect the GHG emissions of Pacific Clay Products. Therefore, emissions associated with Pacific Clay Products are excluded from this inventory.

Sphere of Influence

Activity Data. Activity data for the SOI was estimated based on electricity, natural gas, and diesel fuel consumption activity estimates for the city limits, which was scaled to cover the SOI based on population and employment. Energy consumption for residential buildings was scaled based on population, and energy consumption from nonresidential buildings was scaled based on employment.

Emissions Factors. Emissions factors used for city limits GHG emissions calculations were also used for the SOI.

Tabe 5 provides an overview of the scaling factors used to estimate activity data for the SOI, resulting activity data for the SOI, and resulting emissions estimates for building energy in the SOI.

Table 5 Calculation of 2022 Building Energy Emissions — Sphere of Influence

Fuel Type	Sector	Sub-Sector	Scaling Factor	SOI Activity Estimate	Activity Units	Emissions ($MTCO_2e$)
Electricity	Nonresidential	NA	Employment	24,751	MWh	6,197
Electricity	Residential	NA	Population	62,716	MWh	15,703
Natural gas	Nonresidential	Commercial	Employment	250,998	therms	1,332
Natural gas	Nonresidential	Industrial	Employment	1,384	therms	7
Natural gas	Residential	Single-family residential	Population	2,096,084	therms	11,122
Natural gas	Residential	Multi-family residential	Population	310,709	therms	1,649
Diesel	Nonresidential	Backup generation	Employment	3,788	gallons	39
Gasoline	Nonresidential	Backup generation	Employment	293	gallons	3
Subtotal: Residential Building Energy Emissions ($MTCO_2e$)						*28,473*
Subtotal: Nonresidential Building Energy Emissions ($MTCO_2e$)						*7,578*
Total Building Energy Emissions — SOI ($MTCO_2e$)						**36,051**

Notes: g = grams; $MTCO_2e$ = metric tons of carbon dioxide equivalent; MWh = megawatt-hours; NA = not applicable; SOI = Sphere of Influence.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.

Off-road Equipment

City Limits and Sphere of Influence

Activity Data. The CARB OFFROAD2021 model was used to obtain data on the quantity of fuel used by off-road equipment for the entire Riverside County (including all cities and unincorporated areas) for the relevant off-road equipment categories (CARB 2024b). These fuel quantities were then downscaled to the city limits and SOI only based on each equipment category's relevant scaling factor (employment, population, or service population [the sum of employment and population] expressed as a percentage of Riverside County). Employment data was sourced from the California Employment Development Department (2024) and population data from the California Department of Finance (2024).

Emissions Factors. Emissions factors for gasoline, diesel, and natural gas from The Climate Registry (2022) were applied to each equipment category's fuel usage, as appropriate. Table 6 below shows the results of this calculation.

Table 6 Calculation of 2022 Off-Road Equipment Emissions

			Gallons of Off-Road Fuel Used in Lake Elsinore			$kgCO_2e$/Gallon			
Off-Road Sector	County-to-city Scaler	Scaler Amount	Diesel	Gasoline	Natural Gas	Diesel	Gasoline	Natural Gas	Total Emissions ($MTCO_2e$)
City Limits									
Industrial	Employment	1.45%	8,409	21,467	48,875	10.38	9.274	6.819	620
Light commercial equipment	Employment	1.45%	8,051	92,516	6,671	10.38	9.274	6.819	987
Portable equipment	Employment	1.45%	265,913	0	0	10.24	NA	NA	2,724
Lawn and garden equipment	Population	2.67%	2,852	149,135	0	10.36	9.391	NA	1,430
Recreational equipment	Population	2.67%	0	36,608	0	NA	9.267	NA	339
Pleasure craft	Population	2.67%	0	63,895	0	NA	8.860	NA	566
Construction and mining	Service population	2.29%	632,860	10,169	0	10.39	9.261	NA	6,668
Transport refrigeration units	Service population	2.29%	147,321	0	0	10.24	NA	NA	1,509
City Limits Total	*NA*	*NA*	*1,065,406*	*373,791*	*55,546*	*NA*	*NA*	*NA*	*14,843*
SOI									
Industrial	Employment	0.24%	1,377	3,516	8,006	10.38	9.274	6.819	102
Light commercial equipment	Employment	0.24%	1,319	15,155	1,093	10.38	9.274	6.819	162
Portable equipment	Employment	0.24%	43,558	0	0	10.24	NA	NA	446
Lawn and garden equipment	Population	0.95%	1,013	52,938	0	10.36	9.391	NA	508
Recreational equipment	Population	0.95%	0	12,995	0	NA	9.267	NA	120
Pleasure craft	Population	0.95%	0	22,681	0	NA	8.860	NA	201
Construction and mining	Service population	0.73%	202,243	3,250	0	10.39	9.261	NA	2,131
Transport refrigeration units	Service population	0.73%	47,079	0	0	10.24	NA	NA	482
SOI Total	*NA*	*NA*	*296,589*	*110,534*	*9,099*	*NA*	*NA*	*NA*	*4,152*
City Limits + SOI Total	*NA*	*NA*	*1,361,995*	*484,325*	*64,644*	*NA*	*NA*	*NA*	*18,995*

Notes: CO_2e = kilograms of carbon dioxide equivalent; kg = kilograms; MT = metric tons; NA = not applicable; SOI = Sphere of Influence.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.

Solid waste

City Limits

Activity Data. Disposal tonnage data for the city was obtained from CalRecycle (2024). These data contain total short tons of solid waste sent to landfills, by destination landfill. These data were then matched with the EPA's Landfill Methane Outreach Program (LMOP) database (EPA 2024b) to determine, for each landfill, whether the methane gas emitted by decomposing solid waste was captured (capturing and flaring landfill gas reduces emissions by preventing the release of fugitive methane). According to LMOP, all of the city's destination landfills use methane flaring.

Emissions Factors. These data were then input into International Council for Local Environmental Initiatives (ICLEI) Equation SW.4.1., which estimates methane emissions based on tonnage of landfilled waste (ICLEI 2019). Table 7 below shows the results of this analysis.

Table 7 Calculation of 2022 Solid Waste Emissions — City Limits

Landfill	Short Tons of Waste Sent to Landfill	Emission Factor ($MTCH_4$ per Short Ton)	Emissions ($MTCH_4$)	Emissions ($MTCO_2e$)
El Sobrante Landfill	54,464	0.0081	439.8	11,874
Badlands Landfill	6,104	0.0081	49.3	1,331
Prima Deshecha Sanitary Landfill	1,994	0.0081	16.1	435
Frank R. Bowerman Sanitary LF	508	0.0081	4.1	111
Olinda Alpha Sanitary Landfill	100	0.0081	0.8	22
Lamb Canyon Landfill	69	0.0081	0.6	15
County of San Bernardino Solid Waste Management Division	50	0.0081	0.4	11
Chiquita Canyon, Inc.	47	0.0081	0.4	10
Azusa Land Reclamation, Inc.	11	0.0081	0.1	2
City Limits Total	**63,347**	**NA**	**511.5**	**13,810**

Notes: $MTCH_4$ = metric tons of methane; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2024.

Sphere of Influence

Activity Data. Activity data for the SOI was estimated based on the tonnage of landfilled waste for the city limits, which was scaled to cover the SOI based on service population.

Emissions Factors. Emissions factors used for city limits GHG emissions calculations were also used for the SOI.

Tabe 8 provides an overview of the scaling factors used to estimate activity data for the SOI, resulting activity data for the SOI, and resulting emissions estimates for solid waste disposal in the SOI.

Table 8 Calculation of 2022 Solid Waste Emissions — Sphere of Influence

Landfill	Scaling Factor	SOI Short Tons of Waste Sent to Landfill Estimate	Emissions ($MTCH_4$)	Emissions ($MTCO_2e$)
El Sobrante Landfill	Service Population	17,405	141	3,795
Badlands Landfill	Service Population	1,951	16	425
Prima Deshecha Sanitary Landfill	Service Population	637	5.1	139
Frank R. Bowerman Sanitary LF	Service Population	162	1.3	35
Olinda Alpha Sanitary Landfill	Service Population	32	0.3	7
Lamb Canyon Landfill	Service Population	22	0.2	5
County of San Bernardino Solid Waste Management Division	Service Population	16	0.1	3
Chiquita Canyon, Inc.	Service Population	15	0.1	3
Azusa Land Reclamation, Inc.	Service Population	3	0.03	1
SOI Total	**NA**	**20,244**	**163**	**4,413**

Notes: $MTCH_4$ = metric tons of methane; $MTCO_2e$ = metric tons of carbon dioxide equivalent; SOI = Sphere of Influence.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.

Water

City Limits

Activity Data. Emissions from water usage in the city limits are a result of the electricity used to pump, treat, and deliver water to end users. Data on total water usage within the city limits for the year 2022 was obtained from Elsinore Valley Municipal Water District (EVMWD) (Zaleski, pers. comm, 2024a). For the purposes of calculating emissions, this water usage was divided into four categories:

1) groundwater,
2) surface water from Canyon Lake,
3) imported water from the State Water Project (SWP), and
4) imported water from the Colorado River Aqueduct (CRA).

The proportion of the city's water supply from each of the four categories was estimated based on information from EVMWD (2024a) and Western Municipal Water District (2023: 6), which is the supplemental water supplier for EVMWD. Once the quantity of water usage was calculated, the energy required to deliver this water to the city limits was calculated (in terms of kilowatt-hours (kWh) per acre-foot of water). There are four distinct components of energy usage:

1) extraction (pumping groundwater to the surface using wells);
2) conveyance (transport of untreated water from source to treatment facility, via aqueducts, pipelines, or canals over long distances);
3) treatment (making the water potable), assumed to occur at the Canyon Lake Water Treatment Plant (located outside the boundaries of the city [EVMWD 2016: 13]); and
4) distribution (transporting the treated water from the Canyon Lake Water Treatment Plant to the end user).

Data on the energy intensity of these four categories (in kWh per acre-foot of water) was derived from the Next10 report *The Future of California's Water-Energy-Climate Nexus* (Next10 2021: 12 and 18).

Emissions Factors. SCE electricity emissions factors were applied to electricity associated with groundwater and local deliveries, as pumps used to deliver groundwater and Canyon Lake surface water were assumed to be powered by electricity from SCE. It is not known which utilities provided power to deliver imported water (both SWP and CRA), so an aggregated emissions factor for the entirety of California was used for these sources (eGRID 2024).

Table 9 shows the results of this calculation.

Table 9 Calculation of 2022 Water Emissions — City Limits

Water Source	Acre-Feet per Year	Electric Utility	Electric Emissions Factor ($MTCO_2e$/MWh)	Extraction Energy Intensity (kWh/AF)	Conveyance Energy Intensity (kWh/AF)	Treatment Energy Intensity (kWh/AF)	Distribution Energy Intensity (kWh/AF)	Total Electricity Usage (MWh)	Total Emissions ($MTCO_2e$)
Groundwater	2,089	SCE	0.2512	146[1]	NA[2]	227	501	1,827	457
Local deliveries (Canyon Lake Surface Water)	836	SCE	0.2512	NA[2]	128	227	501	715	179
Imported (SWP)	4,346	CAMX	0.2269	NA[2]	3,280	227	501	17,419	3,952
Imported (CRA)	1,087	CAMX	0.2269	NA[2]	2,115	227	501	3,089	701
City Limits Total	**8,358**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	**23,050**	**5,281**

Notes: AF = Acre-feet; CRA = Colorado River Aqueduct; CAMX = Western Electric Coordination Council's California subregion; kWh = kilowatt-hour; MWh = megawatt-hour; $MTCO_2e$ = metric tons of carbon dioxide equivalent; NA = not applicable; SWP = State Water Project.

[1] Extraction energy intensity for groundwater was prorated to 23 percent of its initial value—this represents energy usage from wells that are located in the city of Wildomar, outside the boundaries of the city of Lake Elsinore (based on well location data from Zaleski, pers. comm, 2024b). The other 77 percent of energy usage is due to pumping from wells located in the boundaries of the city of Lake Elsinore—these are already included in the building energy sector and are thus not included in the water sector to prevent double counting.

[2] A value of "NA" here indicates that this stage in the water delivery process does not occur in significant quantities for that water source. Groundwater is generally extracted close to where it is used and does not require transport over long distances. Canyon Lake water and imported water do not require extraction from the ground using wells.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.

Sphere of Influence

Activity Data. Activity data for the SOI was estimated based on the water usage for the city limits, which was scaled to cover the SOI based on service population. Electricity consumption from the various water supply categories and components were calculated for the SOI using the same factors as used for the city limits calculations.

Emissions Factors. Emissions factors used for city limits GHG emissions calculations were also used for the SOI.

Tabe 10 provides an overview of the scaling factors used to estimate activity data for the SOI, resulting activity data for the SOI, and resulting emissions estimates for water usage in the SOI.

Table 10 Calculation of 2022 Water Emissions — Sphere of Influence

Water Source	Electric Utility	Scaling Factor	SOI Acre-Feet per Year Estimate	SOI Total Electricity Usage (MWh)	Total Emissions ($MTCO_2e$)
Groundwater	SCE	Service population	668	584	147
Local deliveries (Canyon Lake Surface Water)	SCE	Service population	267	229	57
Imported (SWP)	CAMX	Service population	1,389	5,567	1,263
Imported (CRA)	CAMX	Service population	347	987	224
SOI Total	**NA**	**NA**	**2,671**	**7,366**	**1,691**

Notes: AF = Acre-feet; CRA = Colorado River Aqueduct; CAMX = Western Electric Coordination Council's California subregion; MWh = megawatt-hour; $MTCO_2e$ = metric tons of carbon dioxide equivalent; NA = not applicable; SOI = Sphere of Influence; SWP = State Water Project.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.

Wastewater

City Limits

Activity Data. EVMWD operates three wastewater reclamation facilities (WRFs): Regional WRF, Railroad Canyon WRF, and Horsethief Canyon WRF. These facilities serve the city of Lake Elsinore, as well as several other cities (including Wildomar, Murrieta, and Canyon Lake, as well as portions of unincorporated Riverside County). EVMWD provided data for these WRFs, including total population served, effluent nitrogen, and electricity usage (Zaleski, pers. comm, 2024c). It was assumed that 42 percent of the wastewater emissions from these WRFs would be apportioned to the Lake Elsinore city limits (Lake Elsinore contained approximately this amount of EVMWD population served in 2022 in the city limits, based on population data for the city of Lake Elsinore from the California Department of Finance [2024]), and that wastewater treatment utilized organisms that aerobically digest waste (EVMWD 2024b). In addition, residents' septic systems were counted as a driver of methane emissions, assuming 136 septic systems serving a population of 464 residents (based on septic system counts from the County of Riverside Department of Environmental Health [pers. comm., 2024] and persons per household data from the Environmental Systems Research Institute [2024]).

Emissions Factors. The wastewater activity data described above was used to calculate emissions, using methods from ICLEI (2019). ICLEI publishes a guidance document with equations for calculating emissions from wastewater treatment plants and septic tanks. Table 11 below shows how these equations were used to calculate wastewater emissions.

Table 11 Calculation of Wastewater Emissions — City Limits

Emissions Source	ICLEI Equation Used	Emissions Driver	Quantity of Emissions Driver in City of Lake Elsinore	Emissions ($MTCO_2e$)
Nitrous oxide emissions from WWTP with nitrification/denitrification	WW.7	Population served	64,915 people	155
Electricity usage at WWTP[1]	WW.15	kWh used at WWTP	482,235 kWh/year	109
Fugitive nitrous oxide emissions from effluent discharge	WW.12	Nitrogen load	63 kg N/day	44
Fugitive methane emissions from septic systems	WW.11 (Alt)[2]	Number of septic systems	136 septic systems	54
City Limits Total	**NA**	**NA**	**NA**	**362**

Notes: Alt = alternative method; ICLEI = International Council For Local Environmental Initiatives; kg = kilogram; kWh = kilowatt-hour; $MTCO_2e$ = metric tons of carbon dioxide equivalent; N = nitrogen; WW= wastewater; WWTP = wastewater treatment plant. Totals may not sum exactly due to rounding.

[1] Electricity consumed by the Regional Wastewater Reclamation Facility (Regional WRF) is already counted in the building energy sector because the Regional WRF is physically located in Lake Elsinore. Thus, it is not included in the wastewater sector to avoid double counting. However, Railroad Canyon WRF and Horsethief Canyon WRF are located outside the boundaries of the city of Lake Elsinore (in the cities of Lake City and Corona, respectively). The kWh/year value presented in this table includes only the electricity from these facilities that was used to serve customers in the city of Lake Elsinore.

[2] "Alt," or alternative method, refers to an ICLEI equation that is used to estimate emissions when certain data is not available. In this case, WW.11 (alt) is used because biological oxygen demand by the microorganisms in the septic tank is not available. Only the population served by septic systems is available.

Data Source: Modeled by Ascent in 2025.

Sphere of Influence

GHG emissions for wastewater treatment in the SOI are estimated by scaling the GHG emissions from each wastewater emissions source by population. Since wastewater calculations are primarily population based, and the sewer service providers and wastewater treatment facilities are the same in the SOI as the city limits, activity data and emissions factors for wastewater are not necessary to differentiate for the SOI.

Tabe 12 provides an overview of the scaling factors used to estimate GHG emissions for wastewater treatment, and resulting GHG emissions for the SOI.

Table 12 Calculation of Wastewater Emissions — Sphere of Influence

Emissions Source	Scaling Factor	Emissions ($MTCO_2e$)
Nitrous oxide emissions from WWTP with nitrification/denitrification	Population	55
Electricity usage at WWTP	Population	35
Fugitive nitrous oxide emissions from effluent discharge	Population	16
Fugitive methane emissions from septic systems	Population	19
SOI Total	**NA**	**125**

Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent; SOI = sphere of influence; WWTP = wastewater treatment plant.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.

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Attachment A

VMT Analysis for Lake Elsinore City Limits

Fehr & Peers

Memo

Date: October 17, 2025

To: Poonam Boparai, Ascent

From: Paul Herrmann, TE
Trevor Lien
Lorraine Liao

Subject: Lake Elsinore Climate Action & Adaptation Plan (CAAP) Vehicle Miles Traveled (VMT) Methodology and Inventory Summary

---

Fehr & Peers prepared an inventory of the Vehicle Miles Traveled (VMT) data for the City of Lake Elsinore in support of the Climate Action & Adaptation Plan (CAAP). The inventory utilizes VMT data from the travel demand forecasting model adopted by the County of Riverside, the Riverside County Model (RIVCOM). This memorandum presents a summary of the data sources used to develop the inventory and details related to the modeling methods.

Background

VMT estimates for large urban areas and associated sub-areas are commonly developed using regional travel demand models. These models are developed and periodically updated, calibrated, and validated for use in long range infrastructure planning, environmental impact assessments, and air quality conformity analyses by local and regional agencies. Regional travel demand models output daily vehicle trips for each Traffic Analysis Zone (TAZ) across various trip purposes based on inputs such as the transportation network and socioeconomic data such as population, households, and employment.

The latest version of the RIVCOM model was used to estimate VMT for the City. This updated RIVCOM model is the most appropriate travel demand model for forecasting traffic volumes and VMT in the City as it reflects updated land use assumptions and is consistent with the latest City of Lake Elsinore 2045 general plan update and the 2020 Southern California Association of Governments Regional Transportation Plan and Sustainable Communities Strategy (SCAG RTP/SCS). **Table 1** shows the socioeconomic data assumptions for model base year 2018, existing year 2025, interim year 2030, and model horizon year 2045.

Table 1: Lake Elsinore RIVCOM Socioeconomic Data Summary

Category	2018 (Base Year)	2025	2030	2045
Population	58,684	69,588	78,596	113,240
Households	16,857	20,335	23,251	34,755
Total Employment	14,069	17,211	19,877	30,617
Service Population	72,753	86,819	98,501	253,187

Note: Data for years 2025 and 2030 are interpolated between base year and horizon year model data.
Source: RIVCOM Travel Demand Model; Fehr & Peers, 2025.

Methodology

There are a variety of methods that can be used to model data that capture different relationships between the length of the trip, where the trip starts and ends, and how that mileage is captured and assigned to Lake Elsinore for the purpose of analyzing VMT. For both methods described below, VMT was calculated at the local level by TAZ or roadway link and aggregated to the city level. Land use and transportation system inputs were found to be consistent between the City's General Plan update and the 2020 SCAG RTP/SCS. These findings were confirmed by the City prior to analysis.

Fehr & Peers utilized the Regional Transportation Advisory Committee (RTAC) VMT calculation methodology, also referred to as the half-accounting method, to prepare VMT forecasts. Using this methodology, 100% of the VMT with two trip ends within the City of Lake Elsinore is attributed to the City (**ii**), 50% of the VMT with only one trip end located in Lake Elsinore is attributed to the City (**ixxi**) – the other 50% is allocated to the jurisdiction where the other trip end is located, and 0% of the VMT for trips that pass-through the City (**xx**) is included in the half-accounting methodology. This method is considered state-of-the-practice for use in CAAPs as it allocates the VMT that specific agencies can influence as part of the inventory.

The Boundary Method is another way to measure VMT that estimates all the travel that takes place within Lake Elsinore and truncates the mileage of each trip to only the distance traveled within the border of Lake Elsinore. Under this method, the VMT is estimated for Lake Elsinore and captures all VMT occurring on city roadways, including all through trips that neither start nor end in the city. This is done by selecting the roadway links within the RIVCOM model by City. VMT is then calculated based on the link volumes and link lengths within Lake Elsinore.

The Boundary Method was utilized to provide an estimate of all VMT occurring within Lake Elsinore, including cut-through traffic. Since emissions vary by type of vehicle and by speed of travel, VMT was calculated separately for vehicle classification and then categorized by speed bins (in 5 MPH increments). Typically, if there is an increase in land use, then trips would increase and subsequently boundary VMT would also increase.

For both sets of data, VMT estimates were provided for the years 2018, 2025, 2030, and 2045. The RIVCOM model reflecting the base year of 2018 and horizon year of 2045 were

used to develop a straight-line interpolation to provide VMT forecasts for the years 2025 and 2030.

VMT Results

Daily average citywide origin-destination VMT, VMT for different vehicle classification, and VMT per service population are summarized in **Table 2** for years 2018, 2025, 2030, and 2045. The daily VMT by speed bin and mode classification is provided in **Table 3** for years 2018, 2025, 2030, and 2045.

Table 2: Daily Average Origin-Destination (OD) VMT Estimates

	Total (Full-Accounting) VMT			RTAC VMT						Service Population	RTAC VMT/SP					
Year		i	x	Total	Auto	Light Trucks	Medium Trucks	Heavy Trucks	Truck		Total	Auto	Light Trucks	Medium Trucks	Heavy Trucks	Truck
2018	i	133,412	1,190,651	1,302,672	1,251,652	9,912	12,364	28,744	51,020	72,753	17.91	17.20	0.14	0.17	0.40	0.70
	x	1,147,868	-													
2025	i	183,831	1,451,927	1,614,560	1,553,331	11,892	14,911	34,426	61,229	91,187	17.71	17.03	0.13	0.16	0.38	0.67
	x	1,409,532	-													
2030	i	219,844	1,638,552	1,837,337	1,768,815	13,307	16,731	38,485	68,522	104,355	17.61	16.95	0.13	0.16	0.37	0.66
	x	1,596,434	-													
2045	i	327,884	2,198,428	2,505,668	2,415,268	17,550	22,189	50,660	90,400	143,857	17.42	16.79	0.12	0.15	0.35	0.63
	x	2,157,141	-													

Source: RIVCOM Model; Fehr & Peers, 2025.
1. RTAC VMT = 100% internal-internal + 50% internal-external + 50% external-internal
2. Service Population = Population + Total Employment

Table 3: Lake Elsinore Daily Average VMT (Boundary) by Speed

Speed Bin	2018 (Base)	2025 (Interpolation)	2030 (Interpolation)	2045 (Horizon)
0 MPH to 5 MPH	-	-	-	-
5 MPH to 10 MPH	743	551	413	-
10 MPH to 15 MPH	59,132	71,746	80,756	107,787
15 MPH to 20 MPH	14,840	16,221	17,207	20,166
20 MPH to 25 MPH	39,320	46,684	51,944	67,725
25 MPH to 30 MPH	103,457	110,007	114,685	128,719
30 MPH to 35 MPH	90,268	119,581	140,519	203,333
35 MPH to 40 MPH	148,188	227,486	284,127	454,051
40 MPH to 45 MPH	174,305	192,718	205,871	245,328
45 MPH to 50 MPH	92,280	104,959	114,015	141,185
50 MPH to 55 MPH	32,391	49,536	61,783	98,522
55 MPH to 60 MPH	93,523	85,665	80,052	63,212
60 MPH to 65 MPH	28,122	54,082	72,625	128,253
65 MPH +	831,246	907,828	962,529	1,126,633
TOTAL	1,707,816	1,987,064	2,186,527	2,784,915

Source: RIVCOM Model; Fehr & Peers, 2025

Attachment B

VMT Analysis for Lake Elsinore City Limits and Sphere of Influence

Fehr & Peers

Memo

Date: October 31, 2025

To: Poonam Boparai – Ascent

From: Paul Herrmann, T.E., Trevor Lien, and Lorraine Liao – Fehr & Peers

Subject: Lake Elsinore Climate Action & Adaptation Plan (CAAP) Vehicle Miles Traveled (VMT) Methodology and Inventory Summary

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Fehr & Peers prepared an inventory of the Vehicle Miles Traveled (VMT) data for the City of Lake Elsinore, including the SOI, (City) in support of the Climate Action & Adaptation Plan (CAAP). The inventory utilizes VMT data from the travel demand forecasting model adopted by the County of Riverside, the Riverside County Model (RIVCOM). This memorandum presents a summary of the data sources used to develop the inventory and details related to the modeling methods.

Background

VMT estimates for large urban areas and associated sub-areas are commonly developed using regional travel demand models. These models are developed and periodically updated, calibrated, and validated for use in long range infrastructure planning, environmental impact assessments, and air quality conformity analyses by local and regional agencies. Regional travel demand models output daily vehicle trips for each Traffic Analysis Zone (TAZ) across various trip purposes based on inputs such as the transportation network and socioeconomic data such as population, households, and employment.

The latest version of the RIVCOM model was used to estimate VMT for the City. This updated RIVCOM model is the most appropriate travel demand model for forecasting traffic volumes and VMT in the City as it reflects updated land use assumptions and is consistent with the latest City of Lake Elsinore 2045 general plan update and the 2020 Southern California Association of Governments Regional Transportation Plan and Sustainable Communities Strategy (SCAG RTP/SCS). **Table 1** shows the socioeconomic data assumptions for model base year 2018, existing year 2025, interim year 2030, and model horizon year 2045.

Table 1: Lake Elsinore and SOI RIVCOM Socioeconomic Data Summary

Category	2018 (Base Year)	2025	2030	2045
Population	79,669	94,177	106,131	151,892
Households	23,377	27,957	31,768	46,610
Total Employment	16,066	20,456	24,309	40,795
Service Population	95,735	114,770	130,643	192,687

Note: Data for years 2025 and 2030 are interpolated between base year and horizon year model data.
Source: RIVCOM Travel Demand Model; Fehr & Peers, 2025.

Methodology

There are a variety of methods that can be used to model data that capture different relationships between the length of the trip, where the trip starts and ends, and how that mileage is captured and assigned to Lake Elsinore for the purpose of analyzing VMT. For both methods described below, VMT was calculated at the local level by TAZ or roadway link and aggregated to the city level. Land use and transportation system inputs were found to be consistent between the City's General Plan update and the 2020 SCAG RTP/SCS. These findings were confirmed by the City prior to analysis.

Fehr & Peers utilized the Regional Transportation Advisory Committee (RTAC) VMT calculation methodology, also referred to as the half-accounting method, to prepare VMT forecasts. Using this methodology, 100% of the VMT with two trip ends within the City of Lake Elsinore is attributed to the City (**ii**), 50% of the VMT with only one trip end located in Lake Elsinore is attributed to the City (**ixxi**) – the other 50% is allocated to the jurisdiction where the other trip end is located, and 0% of the VMT for trips that pass-through the City (**xx**) is included in the half-accounting methodology. This method is considered state-of-the-practice for use in CAAPs as it allocates the VMT that specific agencies can influence as part of the inventory.

The Boundary Method is another way to measure VMT that estimates all the travel that takes place within Lake Elsinore and truncates the mileage of each trip to only the distance traveled within the border of Lake Elsinore. Under this method, the VMT is estimated for Lake Elsinore and captures all VMT occurring on city roadways, including all through trips that neither start nor end in the city. This is done by selecting the roadway links within the RIVCOM model by City. VMT is then calculated based on the link volumes and link lengths within Lake Elsinore.

The Boundary Method was utilized to provide an estimate of all VMT occurring within Lake Elsinore, including cut-through traffic. Since emissions vary by type of vehicle and by speed of travel, VMT was calculated separately for vehicle classification and then categorized by speed bins (in 5 MPH increments). Typically, if there is an increase in land use, then trips would increase and subsequently boundary VMT would also increase.

For both sets of data, VMT estimates were provided for the years 2018, 2025, 2030, and 2045. The RIVCOM model reflecting the base year of 2018 and horizon year of 2045 were used to develop a straight-line interpolation to provide VMT forecasts for the years 2025 and 2030.

VMT Results

Daily average citywide origin-destination VMT, VMT for different vehicle classification, and VMT per service population are summarized in **Table 2** for years 2018, 2025, 2030, and 2045. The daily VMT by speed bin and mode classification is provided in **Table 3** for years 2018, 2025, 2030, and 2045.

Table 2: Lake Elsinore and SOI Daily Average Origin-Destination (OD) VMT Estimates

	Total (Full-Accounting) VMT			RTAC VMT						Service Population	RTAC VMT/SP					
Year		i	x	Total	Auto	Light Trucks	Medium Trucks	Heavy Trucks	Truck		Total	Auto	Light Trucks	Medium Trucks	Heavy Trucks	Truck
2018	i	215,033	1,566,607	1,736,082	1,673,969	12,510	15,054	34,549	62,113	95,735	18.13	17.49	0.13	0.16	0.36	0.65
	x	1,475,491	-													
2025	i	287,755	1,866,012	2,112,121	2,034,022	15,430	18,994	43,675	78,099	120,871	17.47	16.83	0.13	0.16	0.36	0.65
	x	1,782,721	-													
2030	i	339,699	2,079,872	2,380,720	2,291,203	17,516	21,807	50,193	89,517	138,825	17.15	16.50	0.13	0.16	0.36	0.64
	x	2,002,170	-													
2045	i	495,532	2,721,453	3,186,518	3,062,746	23,774	30,249	69,748	123,771	192,687	16.54	15.89	0.12	0.16	0.36	0.64
	x	2,660,519	-													

Source: RIVCOM Model; Fehr & Peers, 2025.
1. RTAC VMT = 100% internal-internal + 50% internal-external + 50% external-internal
2. Service Population = Population + Total Employment

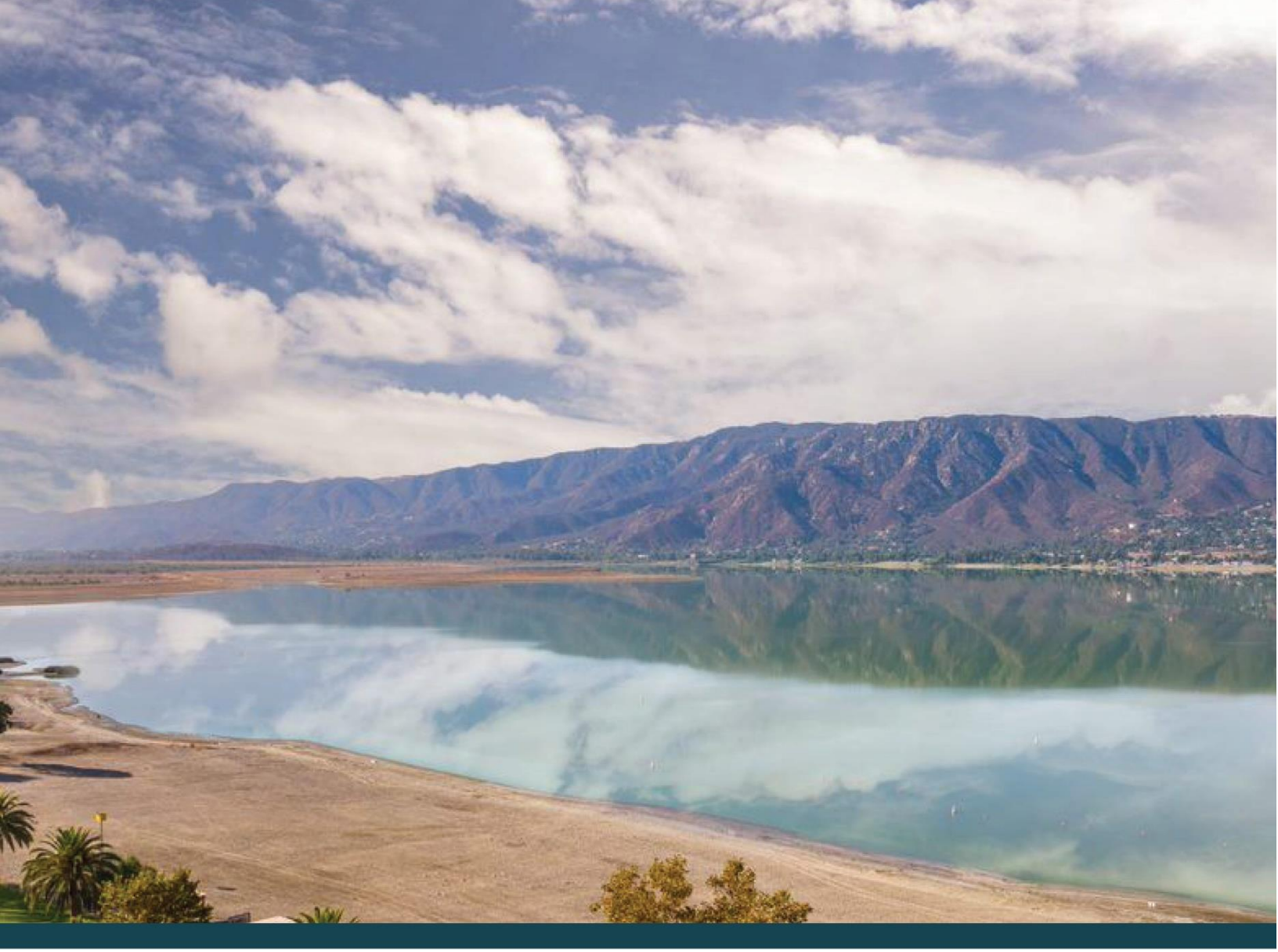
Table 3: Lake Elsinore and SOI Daily Average VMT (Boundary) by Speed

Speed Bin	2018 (Base)	2025 (Interpolation)	2030 (Interpolation)	2045 (Horizon)
0 MPH to 5 MPH	-	-	-	-
5 MPH to 10 MPH	743	551	413	-
10 MPH to 15 MPH	65,336	81,433	92,931	127,424
15 MPH to 20 MPH	15,573	16,764	17,615	20,166
20 MPH to 25 MPH	43,633	50,713	55,771	70,943
25 MPH to 30 MPH	123,956	126,952	129,092	135,513
30 MPH to 35 MPH	94,592	126,878	149,940	219,124
35 MPH to 40 MPH	184,638	261,085	315,690	479,505
40 MPH to 45 MPH	267,341	289,844	305,918	354,138
45 MPH to 50 MPH	75,691	96,562	111,470	156,192
50 MPH to 55 MPH	38,106	59,339	74,506	120,006
55 MPH to 60 MPH	156,408	132,246	114,988	63,212
60 MPH to 65 MPH	28,122	53,649	71,883	126,584
65 MPH +	957,897	1,032,203	1,085,280	1,244,508
TOTAL	2,052,037	2,328,220	2,525,494	3,117,316

Source: RIVCOM Model; Fehr & Peers, 2025

Appendix C

Climate Resiliency Vulnerability Assessment



CLIMATE RESILIENCY VULNERABILITY ASSESSMENT

Lake Elsinore General Plan Update

FINAL
APRIL 2024

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Appendix A: Vulnerability Assessment Scoring Matrices

ACRONYMS AND ABBREVIATIONS

AB: Assembly Bill

APG: Adaptation Planning Guide

CAL FIRE: California Department of Forestry and Fire Protection

CAP: Climate Action Plan

CalOES: California Office of Emergency Services

CEC: California Energy Commission

City: City of Lake Elsinore

CNRA: California Natural Resources Agency

EVMWD: Elsinore Valley Municipal Water District

FEMA: Federal Emergency Management Agency

FHSZ: Fire Hazard Severity Zone

FRA: Federal Responsibility Area (CAL FIRE)

GHG: Greenhouse Gas

ICS: California Incident Command System

IPCC: Intergovernmental Panel on Climate Change

LEUSD: Lake Elsinore Unified School District

LHMP: Lake Elsinore Local Hazard Mitigation Plan

LRA: Local Responsibility Area (CAL FIRE)

MJLHMP: Riverside County Multijurisdictional Local Hazard Mitigation Plan

OPR: California Office of Planning and Research

RPCs: Representative Concentration Pathways

RTA: Riverside Transit Agency

SB: Senate Bill

SRA: State Responsibility Area (CAL FIRE)

Executive Summary

PURPOSE

The City of Lake Elsinore is updating its Safety Element as part of the Lake Elsinore General Plan Update. A recent State of California law requires Safety Elements to assess climate change vulnerability and address climate change adaptation and resilience, as well as new information relating to flood and fire hazards. The goal of the State requirements is to increase Lake Elsinore's resiliency and enable the community to prepare for, respond to, withstand, and recover from disruptions created or worsened by climate change. The Climate Resiliency Vulnerability Assessment (Vulnerability Assessment) is the first step in updating the Safety Element to further include climate adaptation and resiliency planning and supports compliance with State laws.

REPORT STRUCTURE

The Vulnerability Assessment follows the process outlined in the California Adaptation Planning Guide 2.0 (APG) (released in 2020) to identify climate change related risks and hazards, assess community vulnerability, and discuss implications for the General Plan Update. The APG recommends that vulnerability assessments follow a four-step process: (1) characterizing the community's exposure to current and projected climate hazards; (2) identifying potential sensitivities and potential impacts to City populations and assets; (3) evaluating adaptive capacity; and (4) identifying priority vulnerabilities based on systematic vulnerability scoring. The report is structured around the APG's recommended four-step process.

KEY FINDINGS

Climate Change

In Lake Elsinore, climate change is expected to intensify existing hazards, such as flooding, wildfire, and drought, and create new hazards such as extreme weather.

Wet seasons will become wetter and dry seasons will become drier

According to the California Fourth Climate Change Assessment, Inland Deserts Region Report, precipitation in the Inland Empire will increase by 50 percent of current baseline climate models during the winter season, and summer monsoonal precipitation is expected to decrease by up to 40 percent.[1] The average annual precipitation for the historical baseline years of 1961 to 1990 was 13.7 inches. Projected annual rainfall in Lake Elsinore is projected to decrease to 13.2 inches by mid-century and 13.0 inches by the end of the century if emissions continue to rise strongly.[2] This could have dire impacts to potable water supplies and the natural recharge of Lake Elsinore. Drought can also lead to dry vegetative conditions, which can be a contributing factor to wildfires. During periods of intense rainfall, flooding could occur because there is too much water to be adequately drained into soils or drainage systems become overwhelmed. Landslides could also be caused by extreme precipitation events, flooding, and slope destabilization caused by vegetation loss and soil composition change from wildfires.

[1] Hopkins, Francesca. (University of California, Riverside). 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-008.
[2] Cal-Adapt. Maps of Projected Change. https://cal-adapt.org/tools/maps-of-projected-change/

Extreme heat events will become more frequent

Extreme heat occurs when temperatures rise significantly above normal levels. In Lake Elsinore, an extreme heat day occurs when temperatures reach above 103.9 °F. . The historical baseline (1961-1990) for the annual average maximum temperature in Lake Elsinore was 78.1°F. If emission continue to rise significantly, the annual average maximum temperature would reach 83.3°F by mid-century and 86.7°F by end of century. Although extreme heat usually does not cause substantial physical damage to the built environment, extreme heat creates a serious public health threat especially to vulnerable populations, including people with disabilities, the elderly, children, and outdoor workers. The heat also causes more demand for electricity (usually to run air conditioning units), and in combination with the stress on the power lines, may lead to brownouts and blackouts.

Wildfires will continue to be a threat

Recent research indicates that regional climate change will increase fire severity and frequency in Lake Elsinore. A warmer climate will bring drier winters with reduced snowpack, warmer springs with earlier snowmelts, and longer, drier summer fire seasons fueled by drier soils and vegetation from increasing drought frequency. Wildfires will remain a continuous threat in Lake Elsinore and can lead to a wide range of significant primary and secondary hazards. Beyond direct physical threats to life and property, wildfire smoke can reduce air quality and create public health concerns, especially for certain at-risk populations. Cascading hazards include flash floods, heavy erosion, landslides, and mudflows because of vegetation loss and slope destabilization in burn zones.[3]

Vulnerable Communities and Assets

People with limited financial resources, disabilities, and the elderly are highly vulnerable to climate change

Exposure to extreme heat, flooding, landslides, and wildfire leaves many populations highly or severely vulnerable due to the high impacts of exposure and lower levels of adaptive capacity. Adaptation to these hazards may not be possible or financially feasible for some populations.

Households in poverty (2,323 households in Lake Elsinore) have a higher vulnerability to climate hazards than low-income households (8,776 households in Lake Elsinore) because of the differences in financial resources between the two household categories (low-income households having more assets than households in poverty).

People with disabilities, populations over 65, and others with mobility challenges may face challenges in evacuating and thus are considered highly vulnerable to climate hazards which may require evacuation. Additionally, persons with disabilities, chronic illnesses, or seniors may rely on medical equipment that cannot be transported easily.

Lake Elsinore's health care workers, first responders and protective service occupations (13 percent of workers), outdoor workers (18 percent of workers) and houseless populations (an estimated 50

[3] County of Riverside Emergency Management Department, April 2023.

individuals) are highly vulnerable to many different climate hazards due to their high outdoor exposure and lack of alternative options that would reduce impacts of climate hazards.

Many of the key infrastructure networks (roads, freight routes, water systems, wastewater systems, electricity grid) in Lake Elsinore are vulnerable to climate change hazards due to their expensive and complex nature (integration within the system), high exposure to hazards, and the coordination and cost necessary to redesign or relocate the infrastructure.

Emergency and communication services are key services vulnerable to climate change hazards due to their active role in responding to climate events and local emergencies.

Areas of concentrated residential development are highly or severely vulnerable to several hazards. However, some homeowners, especially low-income or cost-burdened households, may not have the appropriate disaster insurance or the ability to pay to fix structure damage. Chronic climate change hazards could cause buildings to become permanently uninhabitable.

Lake Elsinore's wildlands and open spaces are highly susceptible to damage from drought, landslides, and wildfire. Drought can lower water levels and water quality, thus, stressing vegetative communities and wildlife. Higher temperatures and lack of water related to drought can stress the vegetative communities and make them more susceptible pest infestations and wildfire damage. Drought and wildfires can also lead to increased slope instability and landslide susceptibility across the Lake Elsinore's many steep slopes.

NEXT STEPS

Moving forward, the City will develop Safety Element goals and policies to address these issues and improve community resilience. Future community engagement is recommended to confirm the impact and adaptive capacity and of existing populations and assets and to identify future opportunities to increase community-wide climate resilience, especially of highly and severely vulnerable populations and assets.

Climate Resiliency Vulnerability Assessment

1. INTRODUCTION

The City of Lake Elsinore (City) is updating its Safety Element as part of the Lake Elsinore General Plan Update. A recent State of California law requires Safety Elements to assess climate change vulnerability and address climate change adaptation and resilience, as well as new information relating to flood and fire hazards. The goal of the State requirements is to increase Lake Elsinore's resiliency and enable the community to prepare for, respond to, withstand, and recover from disruptions created or worsened by climate change. The Climate Resiliency Vulnerability Assessment (Vulnerability Assessment) is the first step in updating the Safety Element to further include climate adaptation and resiliency planning; it helps Lake Elsinore comply with State laws, including Senate Bill (SB) 379, SB 1035, and SB 99, Assembly Bill (AB) 747 (Figure 1-1). This report follows the process outlined in the California Adaptation Planning Guide 2.0 (released in 2020) to identify climate change related risks and hazards, assess community vulnerability, and discuss implications for the General Plan Update.

WHAT IS A VULNERABILITY ASSESSMENT?

A vulnerability assessment is a detailed analysis of how changing climate conditions can harm people, physical structures, and other community assets throughout the City. The assessment looks at the increasing severity of climate change hazards to the City's people and assets and identifies which ones face the greatest risks. The City will use these results to prepare an update of the City's General Plan Safety Element to comply with the requirements of state law and increase resiliency throughout Lake Elsinore.

FIGURE 1-1: GUIDING LAWS

SB 379	SB 1035	SB 99	AB 747
SB 379 is the foundation for adaptation and resiliency in general plan safety elements—it requires local governments to conduct vulnerability assessments as part of their long-range public safety planning efforts and prepare policies that will protect against harm caused by climate change.	SB 1035 builds on earlier legislation and requires local governments to review and update their safety elements if needed during an update to their housing element or local hazard mitigation plan, or at least once every eight years. Any revisions should include updated information related to flood hazards, fire hazards, and climate adaptation and resilience.	SB 99 requires jurisdictions to review and update the safety element to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes.	Assembly Bill 747 focuses on evacuation routes and requires local governments to identify evacuation route capacity, safety, and viability in the safety element or local hazard mitigation plan.

Community Profile

Lake Elsinore is located in the western portion of Riverside County, approximately 30 miles south of downtown Riverside; Lake Elsinore is bordered by the cities of Wildomar and Canyon Lake, and unincorporated communities of Meadowbrook, Quail Valley, Lakeland Village, Terra Cotta, and Alberhill. Los Angeles is approximately 60 miles northwest, Palm Springs 70 miles northeast, San Juan Capistrano 35 miles southwest, and San Diego 75 miles southwest.

Lake Elsinore is approximately 43 square miles in size. The City surrounds Lake Elsinore, the largest freshwater lake in southern California. The Cleveland National Forest within the Santa Ana Mountain range looms to the southwest of the City's Sphere of Influence. The majority of the City consists of rolling hills and heavily vegetated steep hillsides overlooking the Lake and City. Like many cities in the Inland Empire, Lake Elsinore contains large portions of undeveloped land and open spaces. Other land uses primarily consist of single-family residential homes, with multifamily homes and commercial land uses along major corridors. Industrial uses are predominantly located in Lake Elsinore's north-central area. Schools are located throughout the Lake Elsinore and other civic functions are largely located near the city center of the Historic Downtown District. Interstate 15 (I-15), also known as the Corona Freeway, runs northwest/southeast through Lake Elsinore's urbanized area connecting to nearby Corona and Murrieta. Ortega Highway (State Route 74 or SR-74) runs northeast/southwest connecting Lake Elsinore to Perris and Rancho Mission Viejo.

Lake Elsinore has a High Desert landscape and climate. The California Energy Commission divides California into several distinct climate zones. Lake Elsinore is within Zone 10, which encompasses San Bernardino, Riverside, and San Diego counties. According to Cal-Adapt, average high temperatures from years 1961 to 2005 ranged between 74.1 degrees Fahrenheit (°F) and 81.9 °F. For the same timeframe, the average low temperatures ranged between 43.8 °F and 49.2 °F. An average of five extreme heat days occurs per year, which are temperatures that exceed 103.9 °F[4]. According to Cal-Adapt, the City has historically received an annual average of 14.1 inches of precipitation. Most precipitation falls during the winter months with rare occurrences of late summer rainfall.

Regulatory Framework

As outlined in Figure 1-1, SB 379 requires General Plan safety elements to address climate change vulnerability, adaptation strategies, and emergency response strategies. SB 379 states:

> "This bill would, upon the next revision of a local hazard mitigation plan on or after January 1, 2017, or, if the local jurisdiction has not adopted a local hazard mitigation plan, beginning on or before January 1, 2022, require the safety element to be reviewed and updated as necessary to address climate adaptation and resiliency strategies applicable to that city or county. The bill would require the update to include a set of goals, policies, and objectives based on a vulnerability assessment, identifying the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts, and specified information from federal, state, regional, and local agencies."

[4] The Cal-Adapt Extreme Heat Threshold is the 98th percentile of historical daily maximum temperatures for Lake Elsinore.

As specified in Government Code section 65302(g)(4)(A) vulnerability assessments must identify the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts, utilizing federal, state, regional, and local climate vulnerability documentation such as APG 2.0 and the Cal-Adapt climate tool created by the California Energy Commission (CEC) and University of California, Berkeley Geospatial Innovation Facility. Other sources of information include data from local agencies regarding their adaptive capacity and historical data on natural events and hazards.

Per Government Code section 65302(g)(4)(B), adaptation policies, goals, and objectives are to be developed based on findings from the vulnerability assessment. Additionally, Government Code section 65302(g)(4)(C) requires jurisdictions to create a set of feasible implementation measures to reduce climate change impacts on new or proposed land uses. This Vulnerability Assessment has been prepared to meet those requirements.

SB 1035 builds on earlier legislation and requires local governments to review and update their safety elements if needed during an update to their housing element or local hazard mitigation plan, or at least once every eight years. Any revisions should include updated information related to flood hazards, fire hazards, and climate adaptation and resilience.

SB 99 requires jurisdictions to review and update the safety element to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes.

AB 747 focuses on evacuation routes and requires local governments to identify evacuation route capacity, safety, and viability in the safety element or local hazard mitigation plan.

2. METHODOLOGY

This Assessment integrates information contained in numerous existing documents prepared by the City of Lake Elsinore and others describing various climate change hazards and identifying the vulnerability of populations or physical assets.

This Vulnerability Assessment generally follows the recommended process in the California Adaptation Planning Guide 2.0 (APG) (2020). The APG, published by the California Natural Resources Agency (CNRA) and California Office of Emergency Services (Cal OES), guides regional and local governments in identifying and reducing the harmful effects of climate change. The APG recommends that vulnerability assessments follow a four-step process: (1) characterizing the community's exposure to current and projected climate hazards; (2) identifying potential sensitivities and potential impacts to City populations and assets; (3) evaluating adaptive capacity; and (4) identifying priority vulnerabilities based on systematic vulnerability scoring (Figure 2-1).

WHAT IS VULNERABILITY?

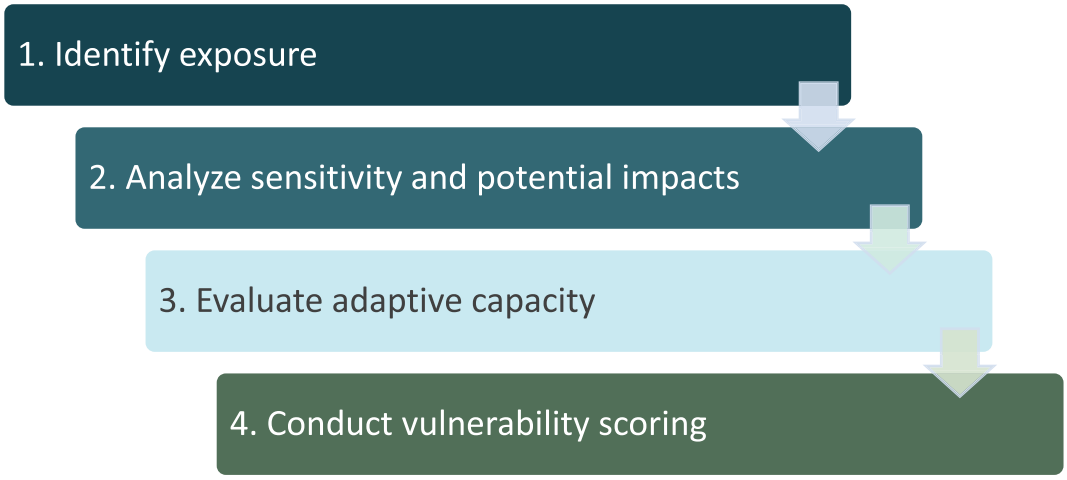
Vulnerability is the exposure of human life and property to damage from natural and human-made hazards. Climate vulnerability describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts.

Differences in exposure, sensitivity, and capacity to adapt affect an individual's or community's vulnerability to climate change. Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s).

Vulnerability is considered a function of exposure, sensitivity, and adaptive capacity.

Source: 2020 APG 2.0

FIGURE 2-1: CALIFORNIA ADAPTATION GUIDE VULNERABILITY ASSESSMENT METHOD



Step 1: Identify Exposure

Step 1's purpose is to understand existing hazards within Lake Elsinore and how these hazards will change. Existing hazards that can be worsened by the effects of climate change are identified and climate projection data was used to develop projections for how existing hazards are expected to change by mid- and late- century.

Lake Elsinore identified **six climate change hazards** for this assessment, listed here and discussed in detail in Chapter 3. These hazards were selected because they are required components of a General Plan safety element and they are worsened by climate change impacts.

Exposure is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.

Source: 2020 APG 2.0

- Drought
- Extreme Heat
- Flooding
- Landslides and Mudflows
- Severe Weather
- Wildfire

HOLY FIRE, LAKE ELSINORE (2018)



Source: FOX26 News, 2018.

Step 2: Analyze Sensitivity and Potential Impacts

Following the guidance in the APG, the City compiled a list of **population groups and community assets that are sensitive to localized climate change effects**. This list includes 17 population groups and 15 assets.

The City identified hazards likely to affect directly or indirectly specific populations and assets. Direct impacts affect buildings and infrastructure, populations, or immediate operations of economic activities or community services. Indirect impacts affect the broader system or community, including populations or asset types in a different category. For example, severe weather can directly damage electrical transmission lines (direct impact) causing power outages, which can indirectly impact persons with chronic illnesses (indirect impact) who depend on the electricity for life support systems. Therefore, both electrical transmission lines and persons with chronic illnesses were identified as being affected by severe weather and were evaluated in the assessment.

Sensitivity is the degree to which a species, natural system, or community, government, and other associated systems would be affected by changing climate conditions.

Impact is a specific negative result of a climate change effect, generally on a particular population or asset. Impact is often determined by the combination of exposure and sensitivity. For example, if the effect of climate change is that droughts are likely to become more frequent and severe, a potential impact to farmers is that less water could be available for irrigation.

Source: 2020 APG 2.0

To identify how great the impacts of each relevant exposure are on the sensitive populations and assets, the 2020 APG 2.0 recommends the following questions to help ensure the assessment broadly covers the range of potential harm:

- What types of impacts may occur?
- Could they cause physical injury or damage?
- Is there a risk of behavioral or mental harm, loss of economic activity, or other nonphysical effects?
- How many people or community assets could be affected by both direct and indirect harm?
- How long would the impacts persist?
- Is there a substantial chance of death or widespread destruction?

Based on the results of the impact assessments, impacts to each population and asset were ranked on a three-point scale from low to high for each relevant exposure (see Appendix A for rankings). As impact is a negative quality, a lower impact score is better (i.e. a lower score means less impact experienced from exposure to a specific climate hazard). This step is summarized in a series of tables identifying the exposure and impact of hazards to populations and assets.

TABLE 2-1: IMPACT SCORING

Impact Score	*Impact Meaning to Population or Ecosystem*	*Impact Meaning to Assets*
Low Impact	Impact is unlikely based on projected exposure; would result in minor consequences to public health, safety, and/or other metrics of concern. Some may not experience or notice any change.	There are minor interruptions in service, damage or negative effects on the economy. Effects may be small or intermittent enough to go mostly unnoticed.
Medium Impact	Impact is somewhat likely based on projected exposure; would result in some consequences to public health, safety, and/or other metrics of concern.	Damage, service interruptions, and other impacts are clearly evident. Impacts may be chronic and occasionally substantial.
High Impact	Impact is highly likely based on projected exposure; would result in substantial consequences to public health, safety, and/or other metrics of concern. This includes widespread injury or death to people or significant or total ecosystem loss.	Impacts are chronic. Buildings, infrastructure, and services may be often or always unable to meet community demand and cannot function as intended or needed. Large sections of the economy experience major hardships.

Step 3: Evaluate Adaptive Capacity

Step 3's goal is to characterize the City's current ability to cope with climate impacts. The City, partner agencies, and countywide organizations have taken steps to build resilience and protect sensitive populations and assets from hazards. The City's ability to adapt to each of the identified climate impacts is determined through a review of existing plans, policies, and programs.

Adaptive capacity is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts [or] moderate harm or [to] exploit beneficial opportunities. Simply stated, it is the ability to adjust to potential damage, to take advantage of opportunities, or to respond to consequences."

Source: 2020 APG 2.0

Following a similar process as used to analyze impacts, the 2020 APG 2.0 recommends various questions to help make sure that the adaptive capacity assessment covers the full potential of a sensitivity to resist and recover from harm. Questions include:

- Are there existing programs and policies to provide assistance?
- Can affected community members take advantage of these programs?
- Are there barriers that limit response or recovery?
- Are these barriers financial limitations, political challenges, lack of access to technology or other resources, or others?
- For community assets, do alternatives exist in or near Lake Elsinore that community members can use?

Based on the results of the adaptive capacity assessment, Lake Elsinore ranked each sensitivity on a three-point scale from low to high. Adaptive capacity is a positive quality, so a higher adaptive capacity score is better. The outcome of this step is an assessment summarized in tables describing Lake Elsinore's capacity to adapt to each of the climate impacts based on existing polices, plans, and programs and the adaptive capacity scoring tables in Appendix A. The results of this step then feed into the final phase of vulnerability scoring.

In the context of this vulnerability assessment, the term "resources" can include financial, social, technological, and/or organizational means that a population or asset has access to. Access to resources can increase or decrease adaptive capacity.

TABLE 2-2: ADAPTIVE CAPACITY

Adaptive Capacity Score	*Meaning (all Populations and Assets)*
Low Capacity	Adaptive solutions are available, but they are expensive, technologically difficult, and/or politically unpopular. Alternatives may not exist that can provide similar services.
Some Capacity	Some adaptation methods are available, but not always feasible. Adapting may create significant challenges for some sensitivities. Some alternatives exist within the jurisdiction area that can provide similar services.
High Capacity	Adaptation solutions are feasible for most or all sensitivities. There may be occasional or small-scale challenges to implementing adaptation methods. Many alternatives exist in the area that can provide similar services.

Step 4: Conduct Vulnerability Scoring

Lastly, this step determines Lake Elsinore's greatest climate vulnerabilities through a vulnerability scoring process. Vulnerability is based on several factors including:

- How severe projected climate exposures will be,
- How sensitive population groups and assets are to the anticipated climate effects,
- Whether sufficient adaptive capacity exists to manage the potential impact.

The outcome of this step is a summary of vulnerabilities in a matrix showing the vulnerability score of the populations and assets for each applicable climate hazard. Vulnerability is assessed on a scale of 1 to 5:

- V1: Minimal vulnerability
- V2: Low vulnerability
- V3: Moderate vulnerability
- V4: High vulnerability
- V5: Severe vulnerability

The matrix below shows how different impact and adaptive capacity scores translate to a vulnerability score.

TABLE 2-3: VULNERABILITY SCORING MATRIX

		Impact Score		
		Low Impact	*Medium Impact*	*High Impact*
Adaptive Capacity Score	*Low Capacity*	V3	V4	V5
	Some Capacity	V2	V3	V4
	High Capacity	V1	V2	V3

The vulnerability scoring assessment helps the City understand which populations and assets are most sensitive to climate change, have the greatest adaptive capacity, and are most urgent and should be prioritized for developing adaptation strategies in the Safety Element.

Next Steps

Upon completion of the vulnerability assessment, Lake Elsinore will begin preparing the Safety Element update with a focus on filling in any identified gaps in existing resiliency planning policy and identifying implementation programs to carry out the policy. The Safety Element will be developed with climate adaptation and resiliency strategies that are based on the outcomes of this vulnerability assessment.

Guiding Documents

California Adaptation Planning Guide

The California Office of Emergency Services (CalOES) published the 2020 Adaptation Planning Guide 2.0 (APG) to provide vulnerability assessment and adaptation planning guidance for communities. CalOES released APG 2.0 (dated June 2020), which includes guidance with an increased focus on equity and outreach, and best practices. APG 2.0 provides a framework for communities to identify potential climate change effects and important physical, social, and natural assets, create adaptation strategies to address climate change impacts, and develop a monitoring and implementation framework for climate change adaptation (CalOES 2020). This vulnerability assessment was prepared according to the guidance provided in APG 2.0.

California's Fourth Climate Assessment

CNRA, OPR, and CEC prepared California's Fourth Climate Assessment in 2018. The Climate Assessment was designed to address critical information gaps that decision-makers at the state, regional, and local levels need to close to protect and build the resilience of people, infrastructure, natural systems, working lands, and waterways. The Vulnerability Assessment relies upon California's Fourth Climate Assessment to provide background information and evidence of regional climate change impacts.

Safeguarding California Plan

Alongside the update to the Climate Assessment, CNRA released the Safeguarding California Plan in 2018 which provides a roadmap for State government action to build climate resilience. The Safeguarding California Plan identifies actions the State government will take to protect communities, infrastructure, services, and the natural environment from climate change impacts and includes strategies for use as

local examples for climate adaptation. The Vulnerability Assessment relied upon the Safeguarding California Plan to provide guidance on assessing the City's vulnerability to climate change.

Lake Elsinore and Regional Planning Efforts

In addition to State adaptation efforts, the City and supporting agencies have developed planning documents focused on local and regional adaptation to climate change hazards. These planning documents analyze existing hazards and include strategies or guidelines to mitigate their severity. The City's Local Hazard Mitigation Plan (LHMP), Climate Action Plan (CAP), Emergency Operations Plan, and General Plan; Riverside County's Multijurisdictional Local Hazard Mitigation Plan (MJLHMP) and CAP; Western Riverside Council of Government's Western Riverside County Vulnerability Assessment and California's Fourth Climate Change Assessment Los Angeles Region Summary Report were all considered in the development of this vulnerability assessment.

Data Sources

The vulnerability assessment is based on the best available science and information contained in the available supporting documents. It uses data from a variety of credible sources including state and federal data, and locally provided data.

State and Federal Data

Lake Elsinore relied on data from state and federal agencies, including published reports and datasets. The state APG provided extensive information about climate-related exposures and vulnerabilities, as did federal reports such as the National Climate Assessment.

Cal-Adapt, a web-based tool developed by the California Energy Commission, provided highly specific information about historic climate conditions and future climate projections. The data available on this website offers a view of how climate change will likely affect Lake Elsinore.

Documents from the California Natural Resources Agency, such as the Safeguarding California and California Climate Adaptation Strategy reports, provided additional information about state climate vulnerabilities and adaptation strategies. Lake Elsinore also relied on information from several agencies including the California Department of Forestry and Fire Protection (CAL FIRE) and the California Energy Commission. Lake Elsinore also relied on demographic data from the US Census Bureau.

Local Data

In addition to the City and Regional documents listed under guiding documents, this Vulnerability Assessment also relied on spatial data maintained by Lake Elsinore and Riverside County. This data shows the location of various buildings and infrastructure, different land uses, boundaries, areas at risk of different hazards, and other items of importance to the vulnerability assessment. The documents described under guiding documents and used as sources of local data include:

1. Lake Elsinore Local Hazard Mitigation Plan (2017)
2. Lake Elsinore Climate Action Plan (2011)
3. Lake Elsinore General Plan (2011)
4. Lake Elsinore Emergency Operations Plan (2007)
5. Riverside County Multijurisdictional Local Hazard Mitigation Plan (2023)
6. Riverside County Climate Action Plan Update (2019)

7. Western Riverside Council of Governments Western Riverside County Vulnerability Assessment (2019)

3. CLIMATE CHANGE HAZARDS OF CONCERN

Climate Scenarios

Climate change is a long-term change in the average meteorological conditions in an area. Currently, the global climate is changing due to an increase in greenhouse gas (GHG) emissions that trap heat near the Earth's surface. While some levels of these gases are necessary to maintain a comfortable temperature on Earth, an increased concentration of these gases due to human activity traps additional heat, changing Earth's climate system in several ways ranging from extended periods of drought, extreme periods of heat, to increased frequency and intensity of storms. This can create intensified or new hazardous conditions that can increase the risk of damage to critical infrastructure, injury to populations, particularly sensitive populations, and disruption of essential services.

Climate Change Modeling Considerations

The Intergovernmental Panel on Climate Change (IPCC), an organization that represents the global scientific consensus about climate change, has identified four climate scenarios, also called Representative Concentration Pathways (RCPs), that can be used to project future conditions.[5] RCPs are labeled with different numbers (e.g., RCP 2.6, RCP 6) that refer to the increase in the amount of energy that reaches each square meter of Earth's surface under that scenario. The four RCPs are:

- RCP 2.6: Under this scenario, global GHG emissions peak around 2020 and then decline quickly.
- RCP 4.5: Under this scenario, global GHG emissions peak around 2040 and then decline.
- RCP 6: Global emissions continue to rise until the middle of the century.
- RCP 8.5: Global emissions continue to increase at least until the end of the century.

Climate hazard projections from Cal-Adapt and other sources rely on climate models, which are computer simulations that forecast future climate conditions under these different RCP scenarios. It is important that the City accounts for all reasonably plausible future conditions, including the most severe of plausible conditions, which will help ensure greater resiliency to climate change. Therefore, the projections in the Vulnerability Assessment use the RCP 8.5 scenario, following State of California guidance from the California Adaptation Planning Guide. No model can project future conditions perfectly, but current models are heavily reviewed by climate scientists and can accurately reproduce observed climate conditions.

The Vulnerability Assessment also relies on the understanding that "weather" and "climate" are two different phenomena.[6] "Weather" describes the conditions at a particular time and place, and "climate" describes the long-term average of conditions. As weather varies greatly, it is difficult to accurately project weather conditions more than a few days in advance. However, climate is a long-term average; it can be projected out for years or decades with a higher degree of accuracy. It is important to remember that, because climate is an average, climate projections do not say whether an event will or will not

[5] County of Placer. 2018. Placer County Sustainability Plan Vulnerability Assessment Report. Administrative Draft. October 2018.
[6] Ibid.

occur, only how likely it is. For example, extreme heat is likely to become more frequent in California but a year with few heat waves does not mean that this projection is wrong. The projection only says that extreme heat days are expected to occur, on average, more often than in the past.

Climate Change in Lake Elsinore

In Lake Elsinore, climate change is expected to intensify existing hazards, such as flooding, wildfire, and drought, and create new hazards such as extreme weather. The Riverside County MJLHMP Plan identifies fire, flood, power failure, extreme weather, and drought to be the top five hazards of concern impacting Lake Elsinore in chronological order. This Vulnerability Assessment evaluates how climate change hazards of concern are expected to occur, including frequency and severity, and how these hazards will affect community populations and assets.

Drought

Hazard Profile

Drought occurs when conditions are drier than normal for an extended period, making less water available for people and ecosystems. Droughts are a regular occurrence in California; however, scientists expect that climate change will lead to more frequent and more intense droughts statewide. Overall, precipitation levels are expected to remain similar, with more years of extreme precipitation events and droughts that last longer and are more intense. Drought conditions mean less water is available for human use and natural ecological systems. According to the California Fourth Climate Change Assessment, Inland Deserts Region Report, precipitation in the Inland Empire will increase by 50 percent of current baseline conditions during the winter season and summer monsoonal precipitation is expected to decrease by up to 40 percent.[7]

Lake Elsinore's water supply consists of a blend of local groundwater, surface water from Railroad Canyon Reservoir (Canyon Lake), and imported water.[8] Imported water is the main source of potable water in Lake Elsinore, accounting for approximately 65 percent of Elsinore Valley Municipal Water District's (EVMWD) supply. The majority of EVMWD's imported water is sourced from the Colorado River Aqueduct and State Water Project. Additional sources include disinfected water from Lake Skinner and Lake Mathews, located in the cities of Temecula and Riverside respectively.[9] The City's reliance on imported water mitigates the impact of local drought conditions on potable water users, unless imported water sources are also impacted by drought conditions.

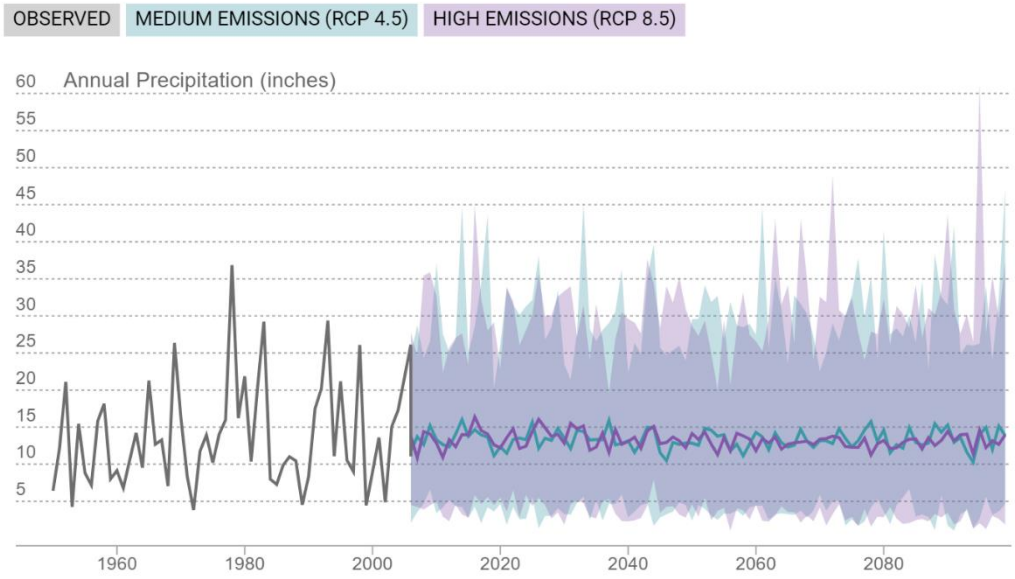
Beyond potable water, drought can lead to a wide range of additional environmental, social, and economic impacts. The City relies on annual rainfall and urban runoff to recharge Lake Elsinore, which is a major source of local recreation and tourism. Under drought conditions, businesses and residents would be impacted by reduced use of the lake due to lower water levels and water quality issues such as algae blooms and fish kills. Drought can also lead to dry vegetative conditions, which can be a contributing factor to wildfires.

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[7] Hopkins, Francesca. (University of California, Riverside). 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-008.
[8] "Water Resources," Elsinore Valley Municipal Water District, November 22, 2023, https://evmwd.com/who-we-are/water-resources/.
[9] Ibid.

Figure 3-1 below shows average annual precipitation under two different GHG emission scenarios; a medium emissions scenario (RCP 4.5) in which emissions peak around 2040, then decline and a high emissions scenario (RCP 8.5) in which emissions continue to rise strongly through 2050 and plateau around 2100. The average annual precipitation for the historical baseline years of 1961 to 1990 was 13.7 inches. Under the medium emissions scenario, projected annual rainfall in Lake Elsinore would decrease to 13.1 inches by mid-century (2035 to 2064) and then increase to 13.5 inches by the end of century (2070 to 2099). Under the high emissions scenario, projected annual rainfall decreases to 13.2 inches by mid-century and 13.0 inches.[10] The bold teal and purple lines in Figure 3-1 represent the most likely outcome and the less saturated teal and purple shading shows the range of future projections of annual precipitation.

FIGURE 3-1: PROJECTED ANNUAL PRECIPITATION IN LAKE ELSINORE



Source: Cal Adapt, Local Climate Change Snapshot for Lake Elsinore (2023)

Disaster History

Drought is a pervasive feature of Southern California, including Lake Elsinore. The most recent drought was experienced from 2011-2015 because of historically warm temperatures, dry soils, precipitation deficits, and low snowpack. Within the past 50 years, other significant droughts occurred during the following years: 1976-1977, 2002, 2007 and 2011-16.[11]

Probability of Future Events

Scientists expect that climate change will lead to more frequent and more intense droughts statewide. Overall precipitation levels are expected to stay similar but there will be more years with extreme levels

[10] Cal-Adapt. Maps of Projected Change. https://cal-adapt.org/tools/maps-of-projected-change/
[11] "COUNTY OF RIVERSIDE OPERATIONAL AREA Multi-Jurisdictional Local Hazard Mitigation Plan." County of Riverside Operational Area: County of Riverside Emergency Management Department, April 2023.

of precipitation, both high and low, due to climate change.[12] This is expected to cause more droughts that last longer and are more intense. Higher air temperatures and increasing extreme heat days are also expected to increase evaporation, causing more water loss from lakes and reservoirs, and decreasing soil moisture to greater depths.

Extreme Heat

Hazard Profile

Extreme heat occurs when temperatures rise significantly above normal levels. In Lake Elsinore, an extreme heat day occurs when temperatures reach above 103.9 °F.

Although extreme heat usually does not cause substantial physical damage to the built environment, extreme heat creates a serious public health threat especially to vulnerable populations, including people with disabilities, the elderly, children, and outdoor workers. Extreme heat events are dangerous because people exposed to extreme heat can suffer a number of heat related illnesses. Extreme heat events often result in increased nighttime temperatures, which prevents overnight cooling and, as a result, reduces the relief from heat typically provided by nighttime temperatures. Very high temperatures can harm plants and animals as well as farm crops and livestock. Indirectly, extreme heat puts more stress on power lines, causing them to run less efficiently. The heat also causes more demand for electricity (usually to run air conditioning units), and in combination with the stress on the power lines, may lead to brownouts and blackouts.

WHAT IS EXTREME HEAT?

There is no universal definition of extreme heat. California guidance documents define 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.

WHAT IS A HEAT WAVE?

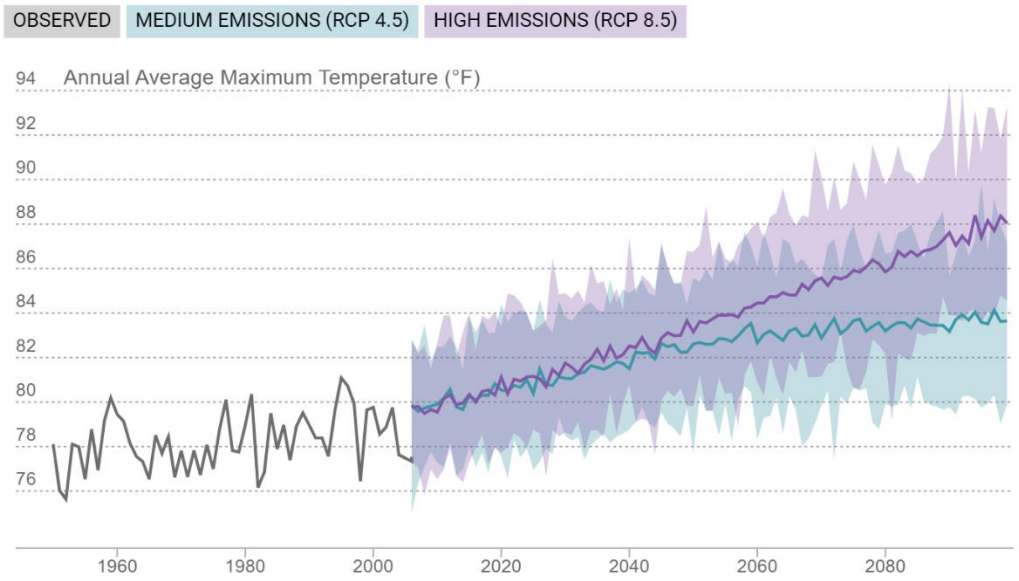
An event with five extreme heat days in a row.

Source: 2020 APG (2.0)

Figure 3-2 shows the projected average of all the hottest daily temperatures in a year in Lake Elsinore under medium (RCP 4.5) and high (RCP 8.5) emissions scenarios. The historical baseline (1961-1990) for the annual average maximum temperature in Lake Elsinore was 78.1°F. Under the medium emissions scenario, the annual average maximum temperature would reach 82.5°F by mid-century (2035-2064) and 83.5°F by end of century (2070-2099).[13] Under the high emissions scenario, the annual average maximum temperature would reach 83.3°F by mid-century and 86.7°F by end of century. The bold teal and purple lines in Figure 3-2 represent the most likely outcome and the less saturated teal and purple shading shows the range of future projections of annual average maximum temperature.

[12] Hall, Berg, Reich, Los Angeles Summary Report, 2018.
[13] "Lake Elsinore Local Climate Change Snapshot," Cal-Adapt, accessed November 2023, https://cal-adapt.org/tools/local-climate-change-snapshot/.

FIGURE 3-2: PROJECTED ANNUAL AVERAGE MAXIMUM TEMPERATURE IN LAKE ELSINORE



Source: Cal-Adapt, Local Climate Change Snapshot for Lake Elsinore (2023)

Disaster History

For purposes of the Cal-Adapt tool, a heat wave is defined as a period of four consecutive extreme heat days or warm nights when the daily maximum/minimum temperature is above the extreme heat threshold (103.9ºF). Lake Elsinore had an average of five extreme heat days and five warm nights between 1950 and 2005, lasting an average of three days. All extreme heat days and warm nights in this time period occurred between May and October.[14]

Average temperatures and the number of extreme heat events have increased in Lake Elsinore in recent years. The Cal-Adapt tool shows the projected annual average number of extreme heat days and warm nights to be thirteen from 2006 to 2023, lasting an average of four days. The average annual number of heat waves was projected to be one from 2006 to 2023.[15]

Probability of Future Events

The frequency, intensity, and duration of extreme heat events and heat waves are expected to rise significantly because of climate change, with an increased number of extreme heat days and nights, increased temperatures over extreme heat days and greater duration of extreme heat events. By the end of the century, Lake Elsinore will average four heat waves a year, with the average longest heat wave lasting eight days. Extreme heat events will also extend seasonally into early spring and fall.[16]

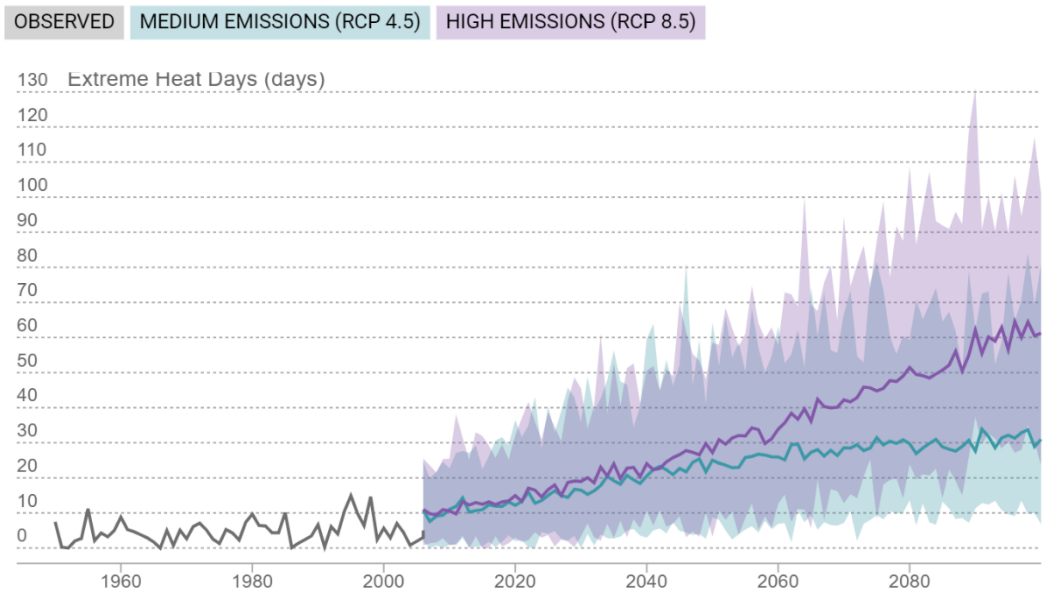
Under a scenario in which emissions peak around 2040, then decline, the average annual number of extreme heat days and warm nights in Lake Elsinore is projected to increase to 24 and 23 by 2064, and 30 and 30 by 2099. The timing of extreme heat days and warm nights is projected to expand from May to

[14] Ibid.
[15] Ibid.
[16] Ibid.

October (historical) to March to October. The average duration of extreme heat days is projected to be seven days by 2064 and eight days by 2099 under this scenario. The average annual heat wave frequency is projected to be three by 2064 and four by 2099.[17]

Under a scenario in which emissions continue to rise strongly through 2050 and plateau around 2100, the average annual number of extreme heat days and warm nights in Lake Elsinore is projected to increase to 31 and 32 by 2064, and 51 and 64 by 2099. The timing of extreme heat days and warm nights is projected to expand from May to October (historical) to February to November. The average duration of extreme heat days is projected to be nine days by 2064 and 25 days by 2099 under this scenario. The average annual heat wave frequency is projected to be four by 2064 and 11 by 2099.[18] Figure 3-3 shows the projected number of extreme heat days (i.e., the number of days in a year when daily maximum temperature is above a threshold temperature) in Lake Elsinore under medium and high emissions scenarios. The bold teal and purple lines in Figure 3-3 represent the most likely outcome and the less saturated teal and purple shading shows the range of future projections of extreme heat days.

FIGURE 3-3: PROJECTED EXTREME HEAT DAYS IN LAKE ELSINORE



Source: Cal-Adapt, Local Climate Change Snapshot for Lake Elsinore (2023)

[17] "Lake Elsinore Local Climate Change Snapshot," Cal-Adapt, accessed November 2023, https://cal-adapt.org/tools/local-climate-change-snapshot/.
[18] Ibid.

Flooding

Hazard Profile

A flood occurs when there is too much water on the ground to be held within local bodies of water, drain into soils, or to be carried away by rivers or urban drainage systems, causing the water to flow into normally dry areas. Watershed flooding is the primary form of flooding that impacts Lake Elsinore. Watershed flooding results from the runoff of severe or prolonged rainfall that overwhelms streams and drainages within the watershed. Major watershed floods are typically generated by rainstorms that include periods of high intensity rainfall.

LAKE ELSINORE FLOOD SOURCES

- 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 Walsh
- Wash G
- Wash I
- Murrieta Creek
- Wasson Canyon Creek
- Railroad Canyon Dam (if incidence of failure occurs)

Flooding can cause significant harm to people, buildings, infrastructure, and the natural environment. Floodwater can be deep enough to drown people and move fast enough to sweep people and vehicles away, lift buildings off foundations, and carry debris that smashes into buildings and other property. Floodwater can cause significant erosion, which can lead to slope instability, severely damage transportation and utility infrastructure by undermining foundations, wash away pavement, or cause extensive damage to buildings and personal property. Flood events that develop very quickly, called flash floods, are especially dangerous because there may be little advance warning.

Large portions of Lake Elsinore are located within the Federal Emergency Management Agency (FEMA) mapped 100-year special flood hazard zones, see Figure 3-4. For this reason, flooding is a primary hazard of concern in Lake Elsinore.

Regional flood control is under 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 also owns and maintains flood control facilities that are part of the drainage plans for individual projects.

Disaster History

In the past decade, the City experienced flood damage from numerous winter storms that have overwhelmed the City's storm drainage system and created localized flood problems.[19] In February 2019, numerous areas of Lake Elsinore, especially areas adjacent to the 2018 Holy fire burn area, experienced flooding and mudflows from heavy rains. Lake Elsinore itself also has a history of flooding. In 1980, heavy rainstorms caused the Lake to flood, destroying nearby homes and businesses. To mitigate future flood damage, a new system was implemented to allow water to be released from Canyon Lake Dam and the

[19] Rick De Santiago, "Lake Elsinore Local Hazard Mitigation Plan" (Lake Elsinore: City of Lake Elsinore, June 2017).

Lake Elsinore Management Project was constructed from 1988-1994, consisting of an earthen levee, an operations island and causeway for well operations, drilling new wells, providing controlled overflow points into the Lake and creating new wetlands habitat areas.[20] All new development projects in Lake Elsinore are required to consider flooding and storm drainage effects. Limited encroachment into the 100-year floodplain fringe is allowed 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.

Probability of Future Events

Although Southern California is likely to experience a decrease in overall precipitation levels due to climate change, the region is also expected to see an increase in the number of extreme precipitation events. Although there are no specific flooding projections for Lake Elsinore and the broader region, multiple local and regional planning documents project that flood events are expected to become more frequent with the expected increase of extreme precipitation events linked to climate change.

[20] "About Lake Elsinore," Lake Elsinore and San Jacinto Watersheds Authority LESJWA, accessed November 2023, https://mywatersheds.com/about-us/about-lake-elsinore/.

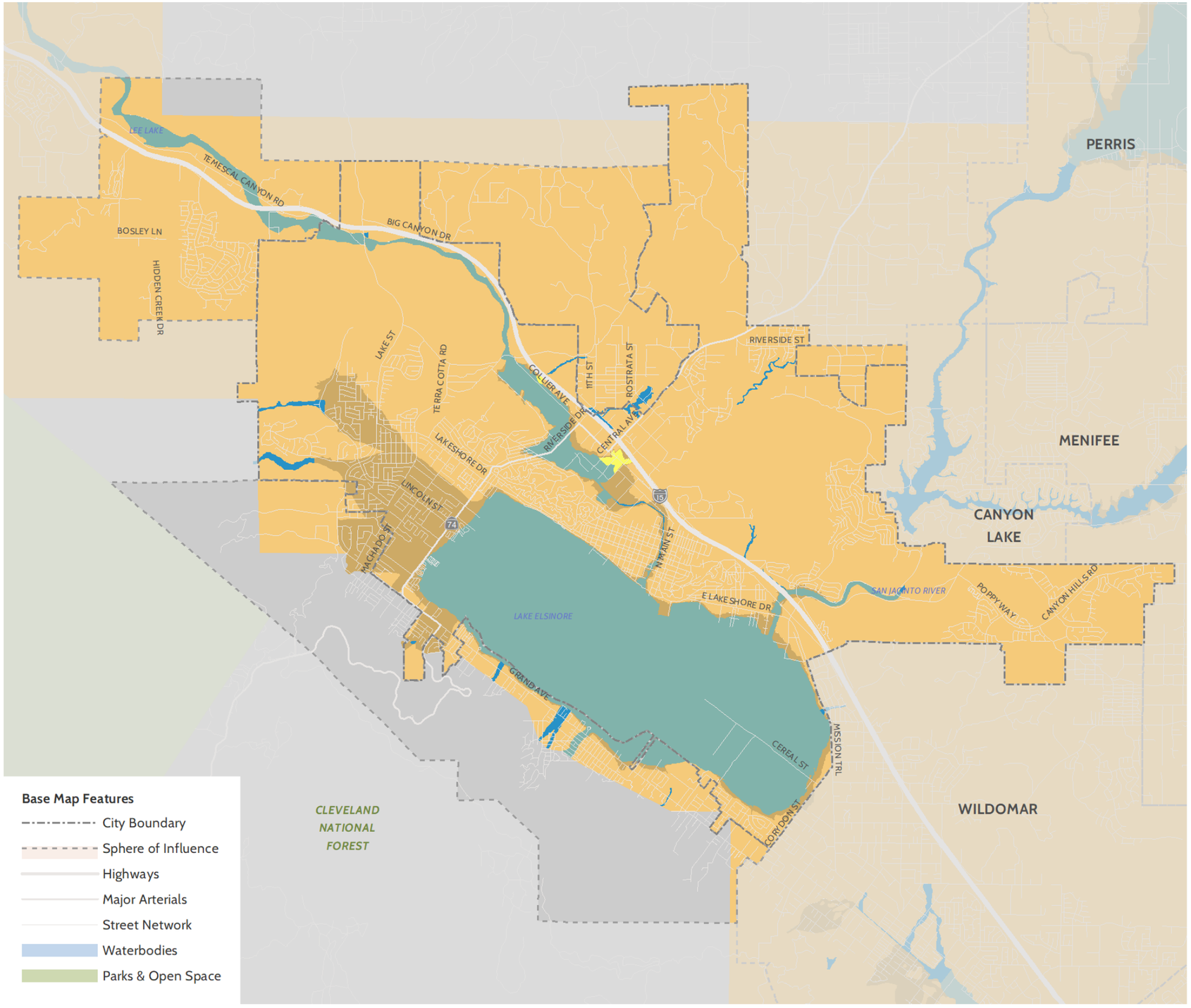


Figure 3-4

FLOOD HAZARDS

FEMA Flood Zones

- 1% Annual Chance of Flooding (100-Year Flood)
- Base Floodplain
- 1% Annual Chance of Shallow Flooding
- 1% Annual Chance of River or Stream Shallow Flooding
- Betwen 0.2% and 1% Annual Chance of Flooding (500-Year and 100-Year Flood)
- 0.2% Chance of Annual Flooding (500-Year Flood)
- Protected by Levee
- Undetermined Risk Areas

Prepared by MIG, October 2023.
Source: California Department of Water Resources, 2023

0 ¼ ½ 1 1½ 2 Miles

Landslides, Mudflows and Debris Flows

Hazard Profile

Landslides occur when a hillside becomes unstable, causing a mass of soil and rocks to slide downslope.[21] Hillsides, particularly steep slopes, tend to absorb water that can lead to slope failure and mudslides (a mixture of mud and water moving downslope) in extreme instances. Landslides and mudslides can move fast enough to damage or destroy buildings or other structures in their path, block roads or railways, and injure or kill people caught in them. Landslides and mudflows can be induced by numerous factors. Earthquakes are a common trigger of landslides, but this Vulnerability Assessment only looks at non-earthquake induced landslides. Common causes of non-earthquake induced landslides include extreme precipitation events, flooding, and slope destabilization caused by vegetation loss and soil composition change from wildfires.

Disaster History

The most recent mudslide and debris flow event occurred in February 2019 following heavy rains that impacted the unstable hillsides of the Holy Fire Burn Scar around Lake Elsinore.[22] Mandatory evacuation orders were issued for residential areas impacted by the Holy Fire, including 800 homes and approximately 2,800 residents. The heavy rains in combination with the unstable slopes caused by the Holy Fire caused thick mud and debris flows down multiple roads and canyons, damaging some houses and public infrastructure. Other landslides have occurred throughout Riverside County in the past few decades, although no other landslides of note have occurred in Lake Elsinore.[23]

LAKE ELSINORE MUD AND DEBRIS FLOW (2019)



Source: Riverside County Fire Department, 2019.

[21] "Western Riverside Adaptation and Resiliency Strategy: Part 1, Vulnerability Assessment" (Western Riverside Council of Governments , 2019).
[22] County of Riverside Emergency Management Department, April 2023.
[23] Ibid.

Probability of Future Events

The potential for landslide and mudflow events will likely increase as climate change progresses. Climate change is expected to cause an increase in extreme precipitation events, which can increase landslides and mudslides in Lake Elsinore. Expected increases in wildfire frequency and severity add to this risk due to slope destabilization potential from vegetation loss and soil disruptions, as seen in the 2019 mud and debris flow around the Holy Fire Burn Scar. Increasing drought conditions can destabilize hillsides even further due to vegetation loss. Figure 3-5 shows the topography of Lake Elsinore. Areas with steep slopes will likely face increased landslide susceptibility during extreme precipitation events, especially if the area has been impacted by wildfires.

Severe Weather

Hazard Profile

Severe weather is usually caused by intense storm systems that can cause atmospheric rivers, strong winds such as Santa Ana winds, hail, lightning, and thunderstorms. Atmospheric rivers, which are extreme topographic-induced precipitation events from high water vapor transport from the tropics to the Pacific Coast, can lead to flooding and landslides.[24] Between 1979-2013, atmospheric rivers impacted Southern California 2-3 times a year, though with significant interannual variability.[25] Santa Ana winds are characterized by strong northeasterly downslope and offshore flows of very dry air that typically occur between October and April in Southern California. Severe weather can cause injuries or deaths, damage to buildings and infrastructure, fallen trees, road and railway blockages by debris and cascading hazards such as flooding, landslides and fires sparked by strong winds and/or lighting.

Disaster History

Severe weather, particularly winter storms and associated flooding, is identified as the most prominent climate-induced hazard impacting Lake Elsinore by the City's 2017 LHMP. Between 2000 and 2017, six severe weather events impacted Lake Elsinore and caused an estimated $791,000 in damages from high winds and/or flooding.[26] Since then, numerous other strong winter storms have occurred resulting in flooding and landslides. The most notable event occurring in February 2018 as described in the Landslides, Mudflows and Debris Flows section above.

A review of the National Oceanic and Atmospheric Administration's National Climatic Data Center database reveals that 410 high wind events, 53 strong wind events, 154 thunderstorm wind events, 30 hail events, and 25 precipitation events occurred in Riverside County as whole between 1950 and 2022.[27]

[24] Hall, Berg, Reich, Los Angeles Summary Report, 2018.
[25] Ibid.
[26] Santiago, "Lake Elsinore Local Hazard Mitigation Plan", June 2017.
[27] County of Riverside Emergency Management Department, April 2023.

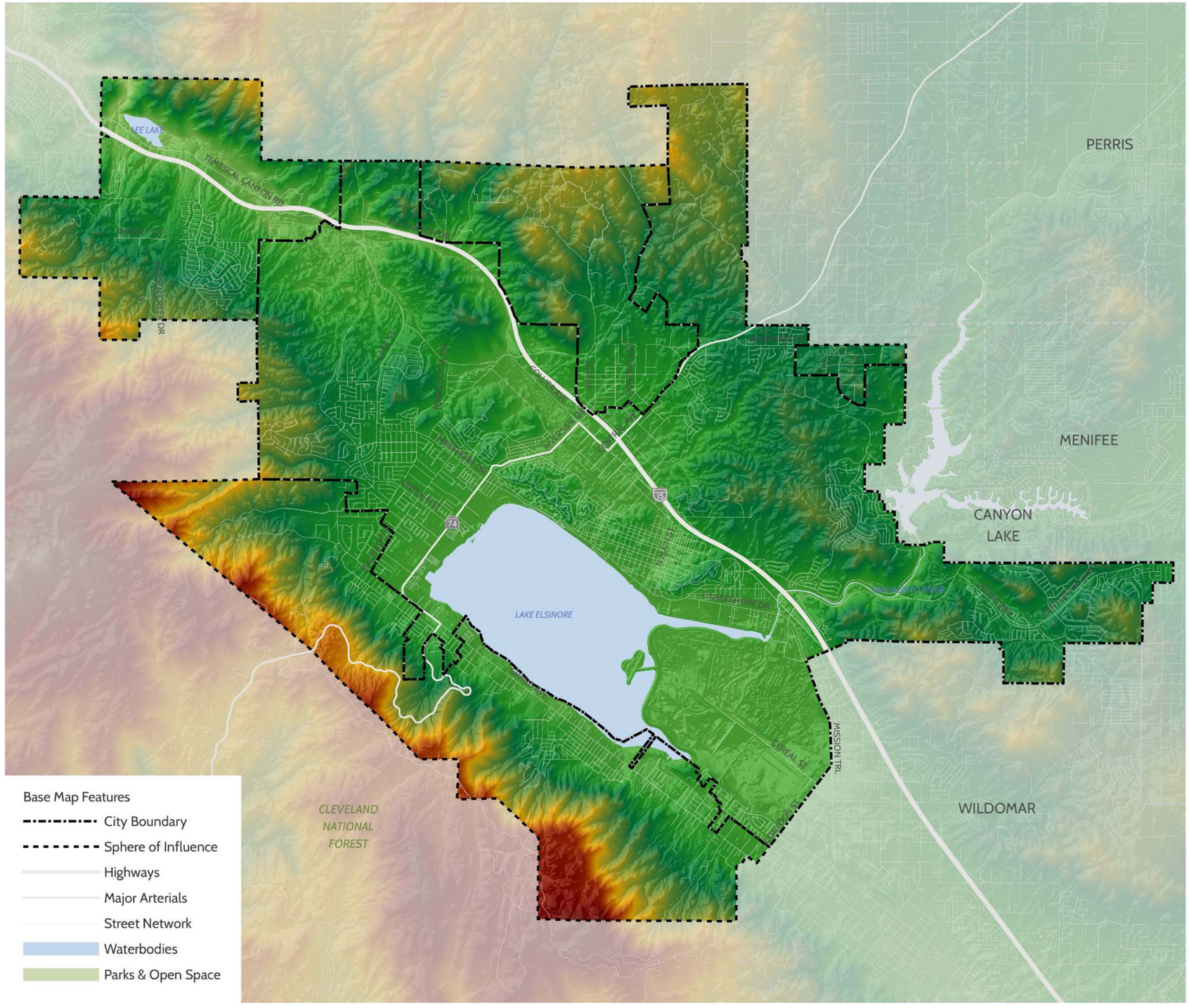


Figure 3-5
TOPOGRAPHY

Elevation (Meters)
High : 1,731
Low : -2.5

Prepared by MIG, October 2023.
Source: California Department of Water Resources, 2023

Miles
0 ¼ ½ 1 1½ 2

Probability of Future Events

Climate change is expected to increase severe weather in and around Lake Elsinore.[28] The Los Angeles Region Summary of California's Fourth Climate Change Assessment projects that extreme storms will increase in severity and frequency over an extended season. Atmospheric rivers will likely increase in frequency and severity and could extend the flood-hazard season in Southern California.[29] The probability of strong wind events is difficult to project but may be linked to climate variability patterns. Recent modeling also indicates that climate change-induced warming may lead to increased lighting, which in turn may increase the number of lightning-caused wildfires that occur throughout the State. The overall incidence of lightning across the continental United States could increase by 12 percent for every 1°C rise in global average air temperature by 50 percent by the end of the 21st century, though increases would vary by local climate.[30]

Wildfire

Hazard Profile

A wildfire is any uncontrolled fire occurring on undeveloped land that requires fire suppression. Wildfires can occur naturally, such as those ignited by lightning and Santa Ana winds, and are important to many ecosystem processes; however, most are started by human activity such as smoking, campfires, equipment use, and arson. Recently, wildfires in Riverside County have been started by arson and equipment use. The mix of weather, dry vegetation, complex topography, and land use and development patterns in and around Lake Elsinore are important contributors to the fire environment.

The topography in Lake Elsinore varies significantly with rolling hills, steep slopes, canyons, valleys, and ridges. This varied terrain can make fighting fires extremely difficult, especially when fueled by dry vegetation. Many of the City's rolling hills and steep slopes consist of undeveloped open space and natural areas with diverse vegetative communities including chaparral, oak woodland, sage scrub, and non-native grasslands (Figure 3-6). Warmer temperatures and drought conditions create more vegetative fuels for fires. Grass and shrub lands pose particularly high wildfire risk because they are easily ignited and will burn hot and fast, especially during high wind conditions.

CAL FIRE is required to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), influence how people construct buildings and protect property to reduce risk associated with wildland fires. Much of Lake Elsinore and the City's Sphere of Influence is designated a "Very High Fire Hazard Severity Zone" by Riverside County and CAL FIRE. Figure 3-7 shows the FHSZs in Lake Elsinore.

[28] "Western Riverside Adaptation and Resiliency Strategy: Part 1, Vulnerability Assessment", 2019.
[29] Ibid.
[30] Romps, Seeley, Vollaro, Molinari, Projected increase in lightning strikes in the United States due to global warming, 2014.

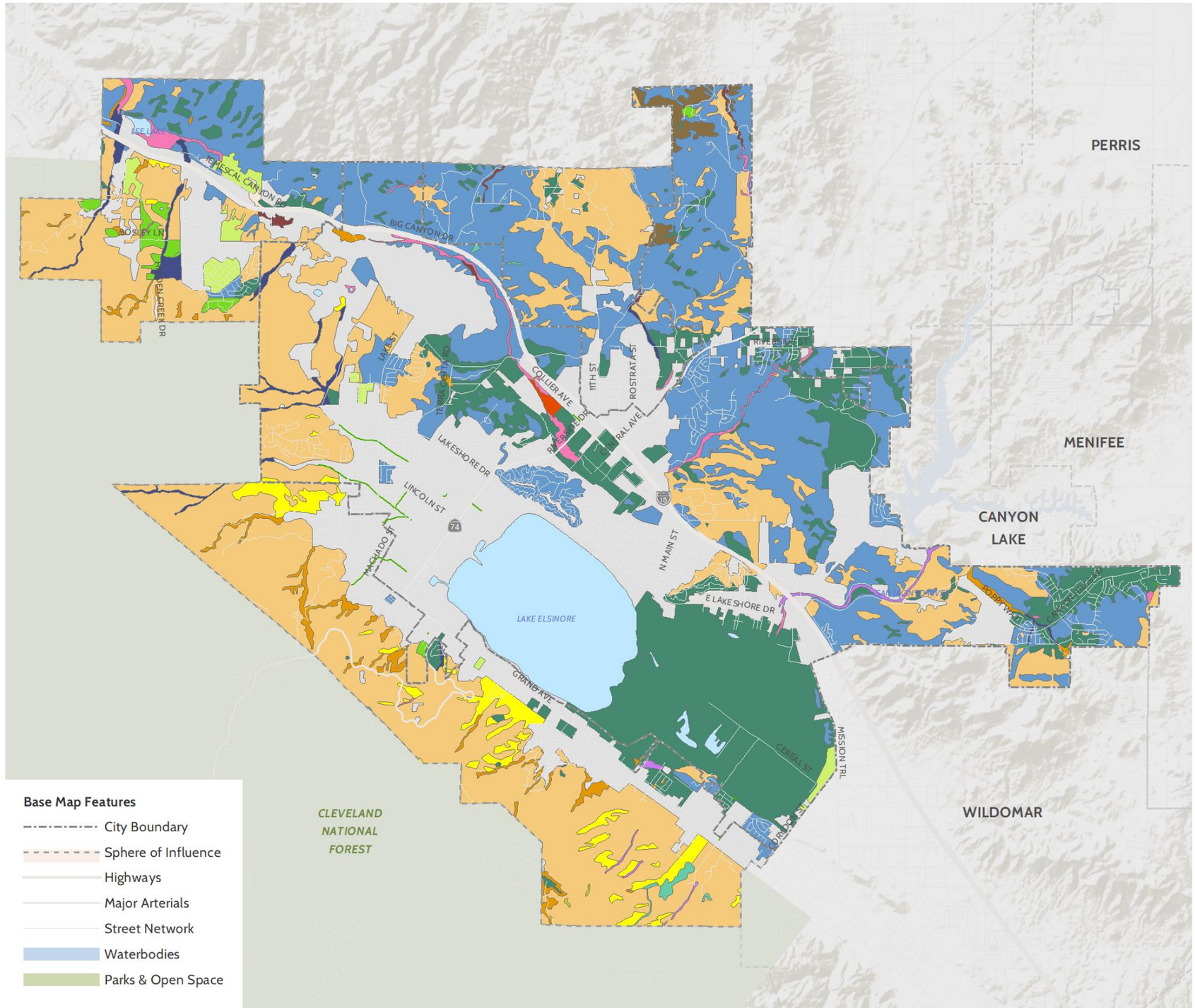


Figure 3-6
VEGETATIVE COMMUNITIES

Vegetative Communities

- Chamise Chaparral
- Chaparral
- Coast Live Oak Woodland
- Coastal and Valley Freshwater Marsh
- Dense Engelmann Oak Woodland
- Diegan Coastal Sage Scrub
- Field Croplands
- Grove/Orchard
- Non-native Grassland
- Oak Woodland
- Open Water/Reservoir/Pond
- Residential/Urban/Exotic
- Riparian Forest
- Riparian Scrub
- Riversidean Alluvial Fan Sage Scrub
- Riversidean Sage Scrub
- Southern Cottonwood/Willow Riparian
- Southern Willow Scrub

Prepared by MIG, October 2023.
Source: County of Riverside, 2023

0 ¼ ½ 1 1½ 2 Miles

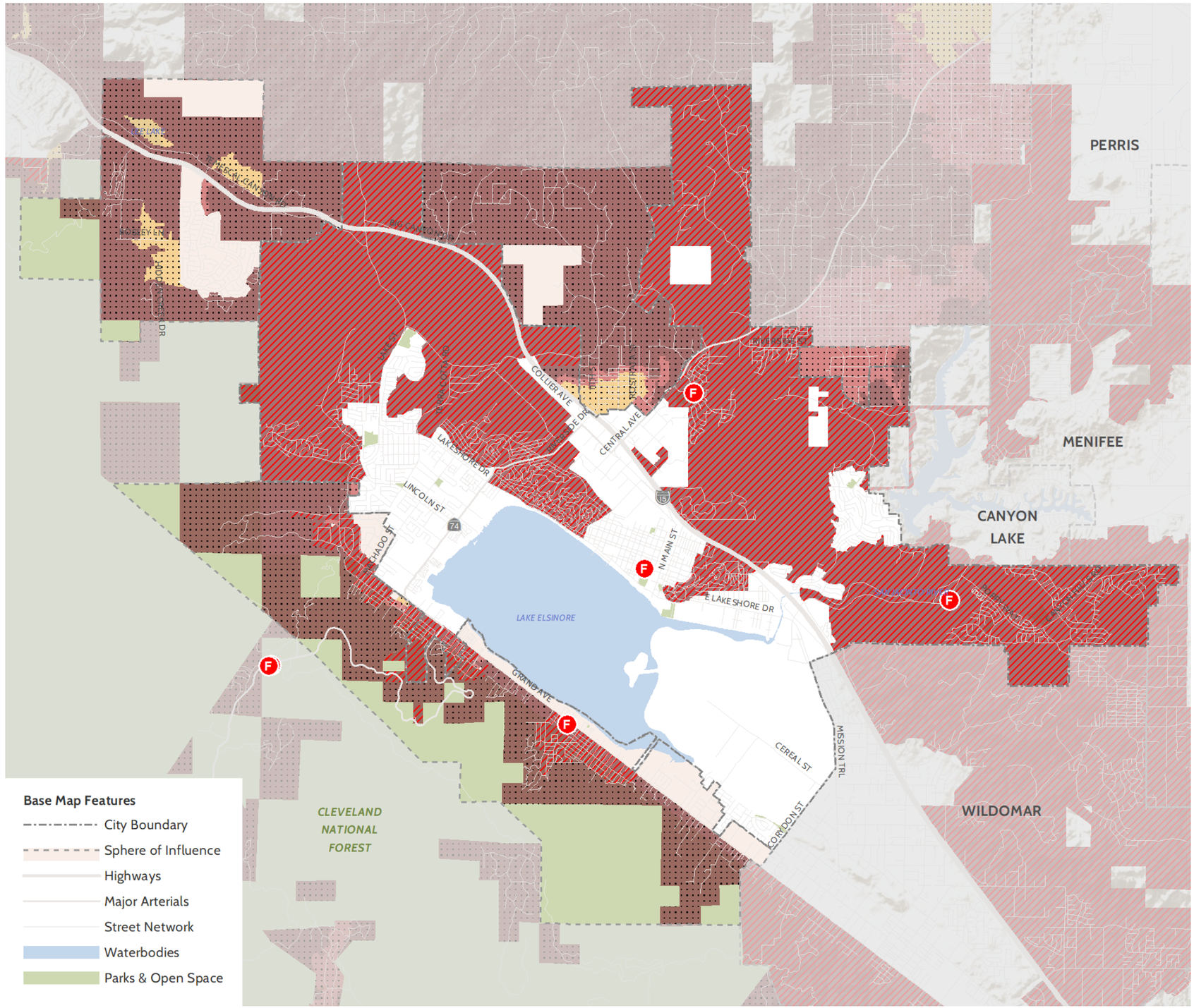


Figure 3-7

WILDFIRE HAZARDS

Fire Hazard Severity Zones

- Very High
- High
- Moderate
- Local Resposibility Area (LRA)
- State Responsibility Area (SRA)
- Fire Station

Prepared by MIG, October 2023.
Source: County of Riverside, 2023

0 ¼ ½ 1 1½ 2 Miles

Fire protection in California is the responsibility of either the federal, state, or local government. On federally owned land, or federal responsibility areas (FRA), fire protection is provided by the federal government, often in partnership with local grants and contracts. In state responsibility areas (SRA), which are defined according to land ownership, population density, and land use, CAL FIRE has a legal responsibility to provide fire protection. CAL FIRE is not responsible for densely populated areas, incorporated cities, agricultural lands, or federal lands. Local responsibility areas (LRA) include incorporated cities and cultivated agriculture lands. In LRAs, fire protection is provided by city fire departments, fire protection districts, or counties, or by CAL FIRE under contract to local government. Figure 3-7 shows the SRA and LRA in and around Lake Elsinore.

Lake Elsinore contracts fire services with the Riverside County Fire Department and CAL FIRE, providing a full range of fire protection services including fire prevention, suppression, and emergency medical response. The Riverside County Fire Department provides firefighting services to Lake Elsinore's portion of the LRA while CAL FIRE is the primary emergency response agency responsible for lands within SRAs.

Wildfires are a continuous threat in Lake Elsinore and can lead to a wide range of significant primary and secondary hazards. Beyond direct physical threats to life and property, wildfire smoke can reduce air quality and create public health concerns, especially for certain at-risk populations. Cascading hazards include flash floods, heavy erosion, landslides, and mudflows because of vegetation loss and slope destabilization in burn zones.[31]

HOLY FIRE, LAKE ELSINORE (2018)



Source: Palm Springs Desert Sun, 2018.



Source: CBS, Patrick Record (2018)

Disaster History

There is a long history of wildfires in Lake Elsinore and Riverside County. The most recent major fire (greater than 500 acres) was the 2018 Holy Fire, which burned 92 square miles of the Cleveland National Forest to the northwest of the City. Approximately 23,025 acres and 160 buildings were burned in Lake Elsinore. According to California's Fourth Climate Change Assessment, nearly 80 percent of wildfires in the region occurred during the summer and fall, with a quarter of annual wildfires occurring during Santa Ana wind events.[32] Table 3-1 identifies other major fires in Lake Elsinore since 1950.

[31] County of Riverside Emergency Management Department, April 2023.
[32] Hall, Berg, Reich, Los Angeles Summary Report, 2018.

Figure 3-8 shows the perimeter of historic fires in Lake Elsinore for which records are available.

TABLE 3-1: MAJOR FIRES IN LAKE ELSINORE AND ITS SPHERE OF INFLUENCE (OVER 500 ACRES), 1950-2023

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
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	9/141958	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
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
Dexter	8/21/1981	N/A	Unidentified	1,350
Canyon	6/16/1983	N/A	Unidentified	1,231
Horse	7/11/1985	N/A	Unidentified	761
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
State #2428	12/9/1988	N/A	Equipment Use	1,446

TABLE 3-1: MAJOR FIRES IN LAKE ELSINORE AND ITS SPHERE OF INFLUENCE (OVER 500 ACRES), 1950-2023

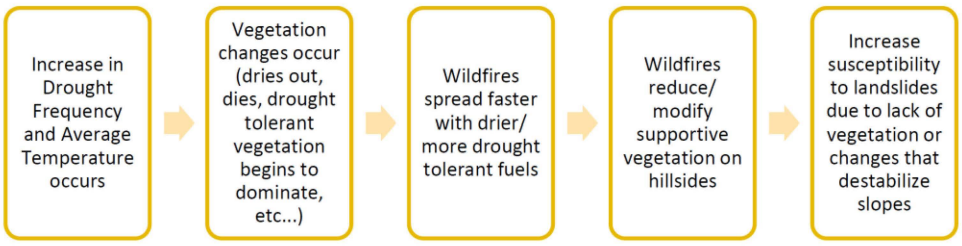
Fire Name	Alarm Date	Containment Date	Cause	Acreage
Ortega	6/27/1989	7/5/1989	Miscellaneous	7,880
Nichols	7/2/1995	N/A	Vehicle	1,264
Dawson	7/20/1995	N/A	Playing with Fire	4,718
Short	6/1/1996	N/A	Equipment Use	683
Cerrito	5/3/2004	5/7/2004	Playing with Fire	16,460
Falls	8/5/2013	8/14/2013	Miscellaneous	1,383
Holy	8/6/2018	10/17/2018	Miscellaneous	23,025

Source: CAL FIRE, Fire and Resource Assessment Program (FRAP).

Probability of Future Events

The Riverside County MJLHMP and the Lake Elsinore LHMP both identify wildfires as one of the natural hazards with the highest probability of occurring in the City and broader region. 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. Recent research indicates that regional climate change will increase fire severity and frequency in Lake Elsinore. A warmer climate will bring drier winters with reduced snowpack, warmer springs with earlier snowmelts, and longer, drier summer fire seasons fueled by drier soils and vegetation from increasing drought frequency. With an increase in wildfire frequency and severity, susceptibility to secondary hazards such as flashfloods, landslides and mudflows will likely increase (Figure 3-9). According to the California Fourth Climate Change Assessment, overall burned area in the region is projected to increase over 60 percent from Santa Ana wind-induced fires and over 75 percent from non-Santa Ana wind-induced fires.[33] These models also suggest that the region will experience a significant increase in average annual acres burned over historic levels by mid-century, which will potentially decrease by the end of the century due to wildfire fuel reductions associated with increased drought and extreme heat conditions.[34]

FIGURE 3-9: CLIMATE CHANGE EFFECTS ON WILDFIRE AND RELATED HAZARDS



Source: Western Riverside Council of Governments Western Riverside County Vulnerability Assessment

[33] Hall, Berg, Reich, Los Angeles Summary Report, 2018.
[34] Ibid.

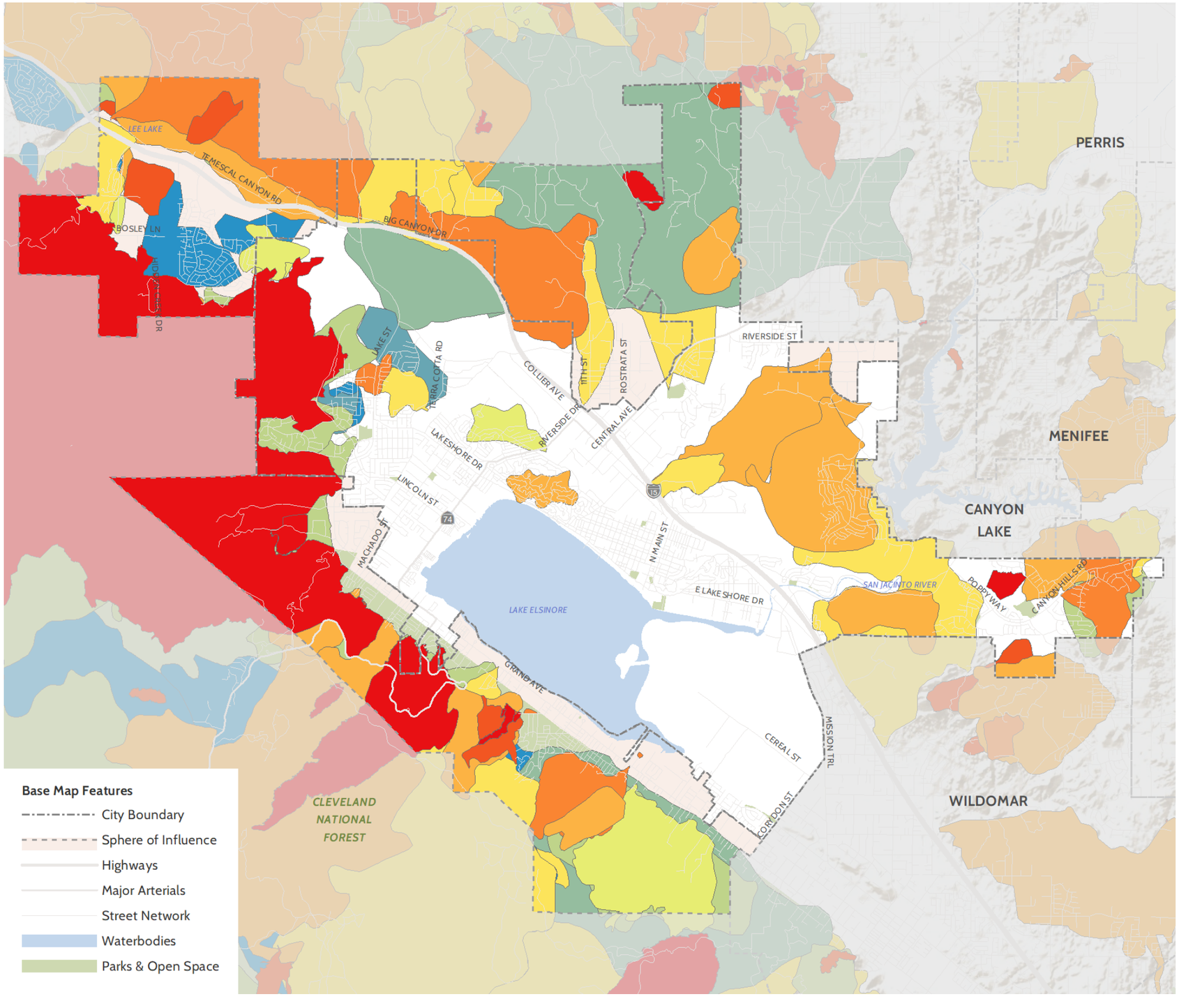


Figure 3-8

HISTORIC FIRE PERIMETER

Historic Fire Perimeters (By Year)

- 1913 - 1930
- 1931 - 1940
- 1941 - 1950
- 1951 - 1960
- 1961 - 1970
- 1971 - 1980
- 1981 - 1990
- 1991 - 2000
- 2001 - 2010
- 2011 - 2022

Prepared by MIG, October 2023.
Source: California Department of Forestry and Fire Protection, 2023

0 ¼ ½ 1 1½ 2 Miles

4. POPULATIONS AND ASSETS OF CONCERN

This section describes the potential impacts of climate change hazards on selected populations and physical assets. The California APG provides a general list of populations and assets, which the City refined to develop 15 distinct asset types and 17 distinct population types as shown in Table 4-1. The project team considered the following questions when deciding which populations and assets to include:

- Is the population or asset likely to face substantive harm from climate-related effects?
- Is the population or asset likely susceptible to climate-related effects in a unique way, different from most other populations or assets in the community?
- If the population or asset is substantially harmed, are there significant negative consequences to the community? Consider both direct and indirect consequences and remember that consequences may not be evident until well after the harm occurs.
- Is the population or asset key to achieving overarching resiliency goals?

WHAT IS A PHYSICAL ASSET?

An asset is any feature of a community that is not a person or group of people. Assets include the natural environment as well as the built environment, such as buildings and infrastructure systems.

SOURCE: 2020 APG 2.0

TABLE 4-1: VULNERBAILITY ASSESSMENT POPULATIONS AND ASSETS

CATEGORY		*POPULATION OR ASSET*
Populations	Financially Constrained Households	Low-income Households Households in Poverty Cost-Burdened Households Severely Overcrowded Households Renters
	Physically or Socially Isolated Communities	Mobile Homes Persons without Access to Transportation or Telecommunications Linguistically Isolated Communities
	Persons with High Outdoor or Hazard Exposure	Outdoor Workers Healthcare Workers, First Responders, and Protective Service Occupations Houseless Population
	Low-Resourced Racial or Ethnic Minorities	Low-Resourced Racial or Ethnic Minorities
	Persons with Limited Mobility, Chronic Health Conditions, or Who May Be Dependent on Individuals or Services	Children Persons with Disabilities Persons with Chronic Health Problems Seniors

TABLE 4-1: VULNERBAILITY ASSESSMENT POPULATIONS AND ASSETS

CATEGORY		*POPULATION OR ASSET*
		Persons Living Alone
Assets	Transportation Services and Infrastructure	Major Roads and Highways Airports Transit Routes Freight
	Energy Infrastructure	Electrical Transmission and Distribution Lines Electrical Substations
	Water and Wastewater Infrastructure	Water and Wastewater Infrastructure Flood Control Infrastructure
	Key Services	Emergency Services Communication Services
	Buildings	Areas of Concentrated Residential Development Government Buildings and Sites Key Employment or Commercial Centers Schools
	Natural and Managed Resources	Natural and Managed Resources

Selected Populations

The Vulnerability Assessment evaluated 17 populations that may be disproportionately harmed by climate hazards. The list of selected populations is based on the guidance of APG 2.0 and the 2018 Integrated Climate Adaptation and Resiliency Program guide "Defining Vulnerable Communities in the Context of Climate Adaption". Selected populations are grouped together under a broader category based on similar climate impacts and characteristics, although different categories may face similar impacts.

APG 2.0 provides direction on how to decide which groups of people to evaluate for climate-related susceptibility. The APG 2.0 directs that vulnerability analyses focus on populations who are likely to face the most harm from climate change. These persons are sometimes said to be "socially vulnerable" or to have "social vulnerability."[35] This does not mean that they lack resilient qualities. Many socially vulnerable people have historically faced, and continue to face, systemic social, economic, and political marginalization and injustice. By identifying groups that are socially vulnerable, communities acknowledge the systemic discrimination that many such persons have faced and seek to correct these wrongs and build resiliency in a manner that is equitable and just.

[35] "California Adaptation Planning Guide" (Cal OES, June 2020).

This Vulnerability Assessment follows the APG 2.0 guidance and identifies and discusses climate change impacts to socially vulnerable populations in Lake Elsinore. The statistics presented below are from the US Census Bureau.

Financially Constrained Households

Low-Income Households

Households with an income below $70,400 for a household of four in Riverside County based on the State Income Limit from Department of Housing and Community Development.[36] There are an estimated 8,776 households in Lake Elsinore with an income below $70,400 or 50.3 percent of all occupied housing units.[37]

Households in Poverty

Households with an income below the 2022 federal poverty level, which is $27,750 for a household of four.[38] There are approximately 2,323 households with an income below the federal poverty level or 13.3 percent of all occupied housing units.

Cost-Burdened Households

Households paying over 30 percent of their income towards housing-related expenses, including mortgage and rental payments, real estate taxes, homeowner's insurance, and utilities. There are approximately 6,845 cost-burdened households in Lake Elsinore or 39.2 percent of all households.[39]

Severely Overcrowded Households

Persons living in households with more than one person per room (including all rooms except bathrooms) are considered overcrowded. Persons living in households with more than 1.5 persons per room are considered severely overcrowded. There are approximately 541 severely overcrowded households or 3.1 percent of all households.[40]

Renters

Persons who do not own the household in which they reside. Approximately 31 percent of occupied housing units in Lake Elsinore are rented.

Physically or Socially Isolated Communities

Mobile Homes

Households living in prefabricated structures, built in a factory before being transported to the site. There are 781 mobile homes in Lake Elsinore or 3.6 percent of all housing units.[41]

Persons Without Access to Transportation or Telecommunications

Persons without access to a car, transit, or communication systems (internet and telephone services). In Lake Elsinore, 574 occupied housing units do not have access to a vehicle, making up 3.3 percent of the

[36] 2022 State Income Limit California Department of Housing and Community Development
[37] 2020 ACS 5-Year Estimates Detailed Tables, S2503: Financial Characteristics
[38] 2022 Poverty Guidelines Office of the Assistant Secretary for Planning and Evaluation
[39] HUD CHAS data, 2016-2020.
[40] 2020 ACS 5-Year Estimates Detailed Tables, B25014: Tenure by Occupants Per Room
[41] 2023 California Department of Finance E-5 Population and Housing Estimates

City's households.[42] An estimated 1,209 households in Lake Elsinore do not have internet access or 6.9 percent of all households.[43]

Linguistically Isolated Communities

A "limited English-speaking household" is one in which no member 14 years old and over (1) speaks only English or (2) speaks a non-English language and speaks English "very well." In other words, all members 14 years old and over have at least some difficulty with English. In Lake Elsinore, 886 households have limited English proficiency, which accounts for approximately 5.41 percent of households in the City.[44]

Persons with High Outdoor or Hazard Exposure

Outdoor Workers

Persons in industries that require them to be outdoors, such as agriculture, outdoor recreation, construction, and landscaping. Approximately 18 percent of Lake Elsinore workers are outdoor workers, which is higher than the state average of 9 percent. Most of Lake Elsinore's outdoor workers are employed in construction rather than agriculture, forestry, fishing and hunting, and mining.

Healthcare Workers, First Responders, and Protective Service Occupations

This category includes healthcare practitioners, health technologists and technicians, healthcare support occupations, firefighting and prevention and other protective service workers including supervisors, and law enforcement workers including supervisors. An estimated 13 percent of workers in Lake Elsinore fall into these categories.[45]

Houseless Population

Persons experiencing homelessness are individuals with a primary nighttime residence that is in a public or private space not designed for use as a regular sleeping accommodation for human beings. The County of Riverside conducts an annual Point-in-Time (PIT) Count and serves as the primary source of population data collected countywide on individuals and families who live in places that are not meant for human habitation (e.g., on the streets or in vehicles). In 2020, an estimated 50 unsheltered individuals lived in Lake Elsinore, which is 2.3 percent of the total number of unsheltered individuals in Riverside County.[46]

Low-Resourced Racial or Ethnic Minorities

Low-Resourced Racial or Ethnic Minorities

Persons identifying as a member of a racial and/or ethnic minority facing limited access to financial, social, healthcare, or educational resources. Individuals in this category may lack access to a car, may be uninsured, or below the poverty level. Lake Elsinore has an estimated 43,590 individuals or 68 percent of the City's population that identify as a member of a racial and/or ethnic minority.[47] Of this population,

[42] 2020 ACS 5-Year Estimates Detailed Tables, B25044: Tenure by Vehicles Available
[43] 2020 ACS 5-Year Estimates Detailed Tables, B28011: Internet Subscriptions in Household
[44] 2020 ACS 5-Year Estimates Detailed Tables, S1602: Limited English Speaking Households
[45] 2020 ACS 5-Year Estimates Detailed Tables, S2401: Occupation for Employed Population
[46] Lake Elsinore 6th Cycle Housing Element
[47] 2020 ACS 5-Year Estimates Detailed Tables, B03002: Origin By Race

several of the characteristics listed in Table 4-2 increase the vulnerability of individuals in this community.

TABLE 4-2: ADDITIONAL POPULATION CHARACTERISTICS FOR LOW RESOURCED ETHNIC MINORITIES

Population Characteristics	Number of Individuals	Percent of Population
Person with a Disability	2,821	6.5%
Persons Below Poverty	7,273	16.6%

Source: U.S. Census Bureau, American Community Survey (2016-2020: 5-Year estimates)

Persons with Limited Mobility, Chronic Health Conditions, or Who May Be Dependent on Individuals or Services

Children

Persons 14 years of age or younger. Lake Elsinore has 16,174 individuals aged 14 or younger, making up 25.2 percent of the City's total population.[48]

Persons with Disabilities

Persons with a physical condition that limits their movements, senses, or activities, including those with access and functional needs; and persons with psychological conditions, including mental, behavioral, cognitive, and developmental disabilities. An estimated 5,482 individuals in Lake Elsinore have one or more disabilities, making up 8.6 percent of the population.[49]

Persons with Chronic Health Problems

Persons with a persistent or long-lasting illness or disease, including those with compromised immune systems. Table 4-3 summarizes the prevalence of chronic conditions, such as asthma, diabetes, heart disease, and serious psychological distress, in Lake Elsinore residents.

TABLE 4-3: CHRONIC HEALTH CONDITIONS

Health Conditions (2020) for Population Age 18 and Older in Past 12 months	Percent of Population
Ever diagnosed with asthma	12.8%
Ever diagnosed with diabetes	12.8%
Ever diagnosed with heart disease	5.2%
Serious psychological distress	12.1%

Source: AskCHIS Neighborhood Edition, California Health Interview Survey (CHIS), UCLA, 2020.

Seniors

Persons 65 years of age or older. In Lake Elsinore, 5,704 individuals or 8.9 percent are age 65 or older.

[48] 2020 ACS 5-Year Estimates Detailed Tables, S0101: Age and Sex
[49] 2020 ACS 5-Year Estimates Detailed Tables, S1810: Disability Characteristics

Persons Living Alone
Individuals aged 18 and older living by themselves. Lake Elsinore has 2,570 individuals living alone, 26.4 percent of which are seniors living alone.[50]

Population Impacts

Table 4-4 summarizes the anticipated climate change impacts on the 19 selected populations discussed above. The table groups each population under a broader category, identifies the climate hazards a population category is exposed to, identifies non-climate stressors, and describes the overall climate impact.

Impact scores to each population are included in Appendix A.

[50] 2020 ACS 5-Year Estimates Detailed Tables, DP02: Selected Social Characteristics in the United States

TABLE 4-4: IMPACTS TO SELECTED POPULATIONS

Population Category	Populations	Non-Climate Stressors	Climate Exposures	Impact Description
Financially Constrained Households	• Low-Income Households • Households in Poverty • Cost-Burdened Households • Overcrowded Households • Renters	• Financial instability • Lack of affordable or quality housing • Lack of air conditioning or heating • Lack of insurance	• Drought • Extreme Heat • Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	Flooding and severe weather can damage homes or cause mold to grow, which can create unhealthy living conditions. Extreme heat can cause indoor air temperatures to skyrocket, causing dehydration and other heat-related illnesses for those inhabiting the structures. Drought and extreme weather can increase utility prices and property maintenance. Smoke from wildfires can infiltrate homes and be especially hazardous in homes without air filtration systems. Financially constrained households may have limited capacity to retrofit, maintain, or rebuild homes to resist impacts from hazards or recover from hazard damages due to financial capacity or home ownership. Financial assistance programs may be available to help with upgrades or repairs to homes, but households may be unaware or unable to participate.
Physically or Socially Isolated Communities	• Mobile Homes • Persons Without Access to Transportation or Telecommunications • Linguistically Isolated Communities	• Remote location or limited access to housing • Lack of access to communication • Lack of access to transportation • Language barriers • Lack of insurance	• Drought • Extreme Heat • Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	Persons belonging to physically or socially isolated communities can be highly impacted by climate hazards as they can easily be cut off from the rest of the City and from receiving vital communications, goods, and services. Water or energy supply may be limited for these communities and can be damaged by drought, flooding, landslides, severe weather, and wildfire, leaving people without water or electricity. These

TABLE 4-4: IMPACTS TO SELECTED POPULATIONS

Population Category	Populations	Non-Climate Stressors	Climate Exposures	Impact Description
				populations may face difficulties during emergencies that require evacuations, because potentially lower levels of social capital and language barriers may prevent adequate preparation and warnings for evacuations.
Persons with High Outdoor or Hazard Exposure	• Outdoor Workers • Healthcare Workers, First Responders, and Protective Service Occupations • Houseless Population	• Lack of air conditioning or heating • Often inflexible occupational demands	• Drought • Extreme Heat • Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	Individuals with high outdoor or hazard exposure are more like to be exposed to climate hazards because they do not work in sheltered locations, often have physically intensive work, or may be responding to a hazard or have unavoidable work duties despite the hazard. The houseless population is continually exposed to weather conditions and may not be able to relocate to a safe area without assistance. Persons with high outdoor exposure may be unable to seek adequate shelter, evacuate, or be aware that hazardous conditions are occurring due to occupation or working conditions. Outdoor workers can easily face economic hardship if work is halted or delayed. Extreme heat can cause individuals to overheat and cause dehydration and heat stroke, and smoke and ash can irritate the respiratory system and create difficulty breathing with extended exposure. Programs such as cooling centers, homeless shelters, and adult education programs are available in some areas of the City and/or county. However, these

TABLE 4-4: IMPACTS TO SELECTED POPULATIONS

Population Category	Populations	Non-Climate Stressors	Climate Exposures	Impact Description
				populations can be difficult to reach during emergencies.
Persons with Limited or Constrained Resources	Low-Resourced Racial and Ethnic Minorities	• Financial Instability • Lack of affordable or quality housing • Lack of access to healthcare or • communication • Lack of insurance	• Drought • Extreme Heat • Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	Disparities in living conditions and institutional biases may cause difficulty for persons with limited resources to prepare for or recover from hazardous events. Language barriers or lower levels of social capital may also prevent individuals from receiving evacuation and other emergency notifications, decreasing their ability to adequately prepare for and respond to hazardous events. These populations may have limited capacity to retrofit, maintain, or rebuild homes to resist damage from hazards or recover from hazard damage due to financial capacity or home ownership.
Persons with Limited Mobility, Chronic Health Conditions, or Who May be Dependent on Individuals or Services	• Children • Seniors • Persons Living Alone • Persons with Disabilities • Persons with Chronic Health Problems	• Mobility and/or health issues • Lack of access to healthcare, transportation, or communication • Lack of insurance	• Drought • Extreme Heat • Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	Seniors, particularly those living alone, are vulnerable to several different climate change hazards due to health and mobility factors. Seniors are usually more susceptible to heat- or smoke-related illnesses because they are more likely to have medical conditions that can worsen with extreme heat, and often take medicine that makes it harder for them to stay cool. Seniors and persons with chronic health problems are more susceptible to poor air quality associated with wildfires, and seniors and persons with disabilities may have a decreased awareness of impending fire events. Additionally, they may have reduced

TABLE 4-4: IMPACTS TO SELECTED POPULATIONS

Population Category	Populations	Non-Climate Stressors	Climate Exposures	Impact Description
				mobility which makes it difficult to quickly evacuate in hazardous conditions. Children often have a lower level of awareness about heat-related illnesses and may not have access to air-conditioned spaces. Persons with limited mobility or chronic illnesses may have difficulty evacuating due to medicine or equipment needs and may not be able to drive themselves. They may also experience equipment issues if there are interruptions to electricity, water, or wastewater supply. Extreme heat or smoke-filled air can worsen existing medical conditions. Existing chronic illnesses can also make new illnesses from climate change hazards more difficult to treat. Individuals in this category may depend on others for assistance during a hazard event to evacuate or shelter safely.

Selected Assets

A total of 15 types of assets are considered in this Vulnerability Assessment. Information in this section is largely sourced from the 2011 Lake Elsinore General Plan, 2017 Lake Elsinore LHMP, or other online data sources.

Transportation Services and Infrastructure

Major Roads and Highways

Lake Elsinore's major roads and highways connect individual communities to others in the region and beyond. Major highways include Interstate 15, running north to south, and State Route 74 running east to west. Major roads include Lake Street, Lakeshore Drive, Riverside Drive, and Railroad Canyon Road. Roads and highways in Lake Elsinore are shown in Figure 4-1.

Airports

Lake Elsinore has one privately owned airport within its boundaries. It is mostly used for recreational purposes, such as gliding and skydiving activities.

Transit Routes

The Riverside Transit Agency (RTA) provides local and regional transportation options. The agency currently operates three routes: Routes 8, 9, and 205/206. Dial-a-Ride services are also provided by the RTA, which provides curb-to-curb reservation-based transportation services to seniors and people with disabilities.

Freight

Designated truck routes help facilitate the movement of goods throughout the City. Truck routes are found along Interstate 15, State Route 74, Lakeshore Drive/Lake Street, Corydon Street, and Railroad Canyon Road.

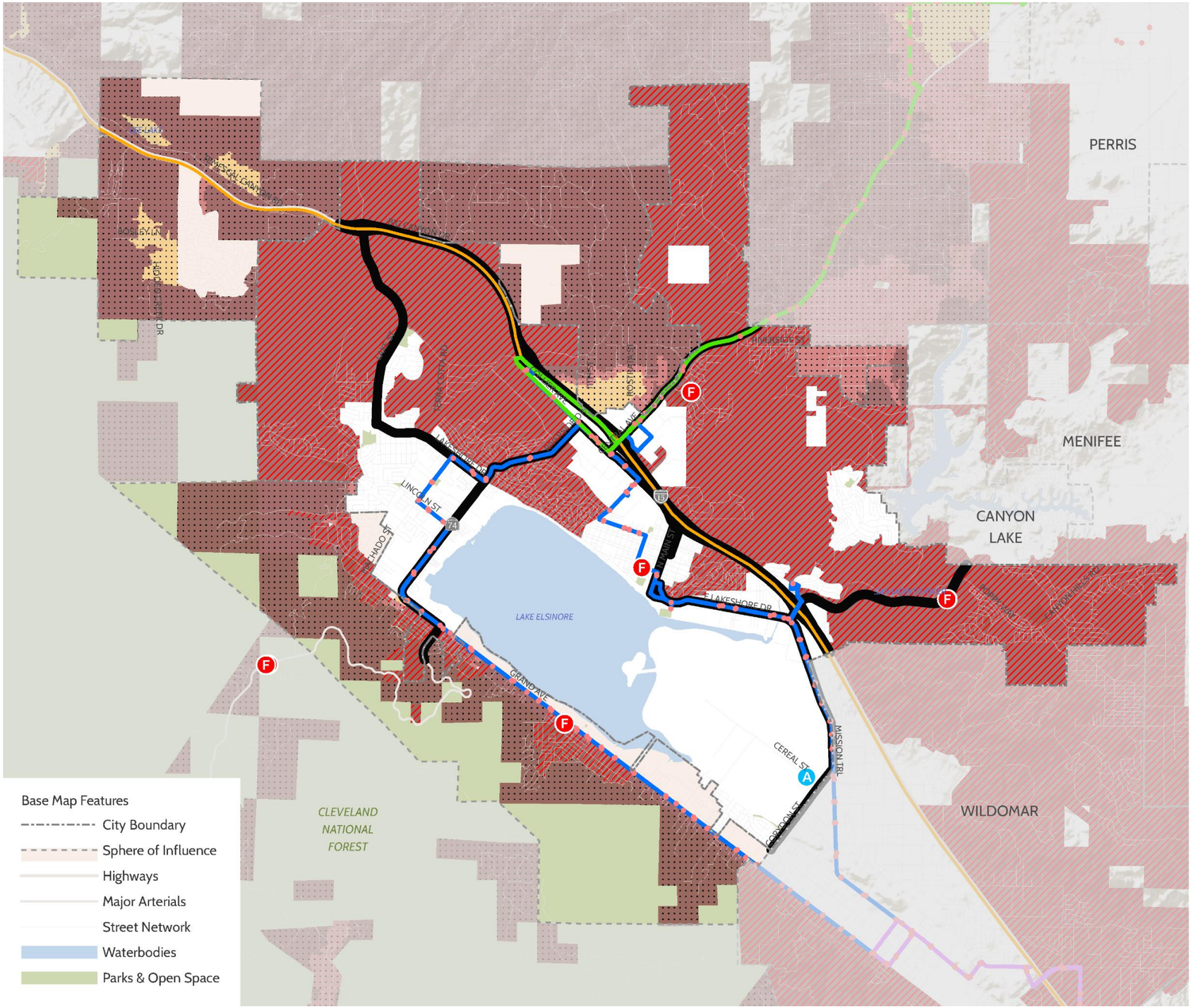


Figure 4-1

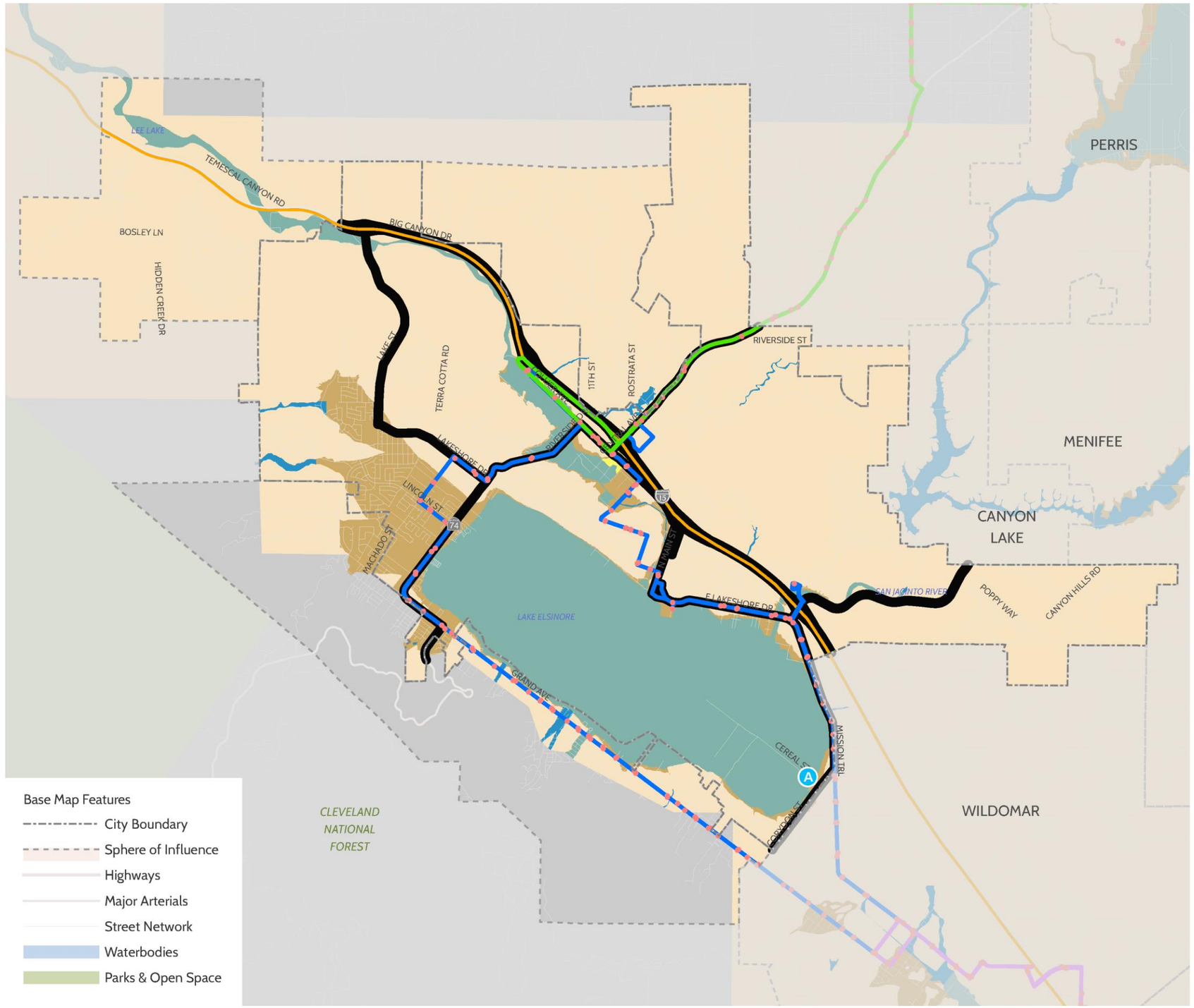
WILDFIRE HAZARD ASSET IMPACTS - TRANSPORTATION

Fire Hazard Severity Zones
- Very High
- High
- Moderate
- Local Resposibility Area (LRA)
- State Responsibility Area (SRA)
- Fire Station

Transportation Assets
- Truck Routes
- Bus Routes and Stops
- Airport

Prepared by MIG, October 2023.
Source: County of Riverside, 2023

0 ¼ ½ 1 1½ 2 Miles



Base Map Features
- City Boundary
- Sphere of Influence
- Highways
- Major Arterials
- Street Network
- Waterbodies
- Parks & Open Space

Figure 4-2
FLOOD HAZARD ASSET IMPACTS - TRANSPORTATION

FEMA Flood
- 1% Annual Chance of Flooding (100-Year Flood)
- Base
- 1% Annual Chance of Shallow
- 1% Annual Chance of River or Stream Shallow Flooding
- Betwen 0.2% and 1% Annual Chance of Flooding (500-Year and 100-Year Flood)
- 0.2% Chance of Annual Flooding (500-Year Flood)
- Protected by
- Undetermined Risk

Transportation Assets
- Truck Routes
- Bus Routes and Stops
- A Airport

Prepared by MIG, October 2023.
Source: California Department of Water Resources, 2023

0 ¼ ½ 1 1½ 2 Miles

Energy Infrastructure

Electrical Transmission and Distribution Lines

Electrical transmission lines are power lines that carry high-voltage electricity long distances between power plants and electrical customers. Electrical distribution lines transport lower voltage electricity over shorter distances. Electrical transmission and distribution lines are operated by Southern California Edison and are located adjacent to Interstate 15 (Figure 4-3 and 4-4).

Electrical Substations

Electrical substations are facilities that convert electricity from one voltage to another, making it suitable for long-distance transmission or for use by homes, businesses, and other electrical customers.

Water and Wastewater Infrastructure

Water and Wastewater Facilities

These facilities provide potable water for public use and treat wastewater so it can be safely discharged into the environment. They include surface storage reservoirs, potable water distribution systems (pipelines and pumps), water treatment facilities, and wastewater treatment facilities.

The Elsinore Valley Municipal Water District (EVMWD) encompasses approximately 100 square miles and supplies water to over 160,000 residents in southwestern Riverside County and eastern Orange County. The Elsinore and Temescal Divisions make up EVMWD's service area, which cover the cities of Lake Elsinore and Canyon Lake, portions of Wildomar and Murrieta, and unincorporated portions of Riverside County and Orange County. The Elsinore Division is the largest, with approximately 43,849 active connections and encompassing about 96 percent of the District's total service area.

Flood Control Infrastructure

The Riverside County Flood Control District manages the region's flood protection and drainage. The District oversees several flood control facilities such as debris dams, storm channels, and storm drains that are referred to as the "backbone" system of flood control for the region. The City of Lake Elsinore also owns and maintains multiple flood control facilities that are generally constructed as part of the drainage plans for individual projects. Naturally occurring flood protection, such as natural channelization, allows water to percolate into local groundwater basins. Two dams operated by the EVMWD impact the Planning Area. The Canyon Lake Dam (also referred to as the Railroad Canyon Dam), located at Canyon Lake northeast of the Planning Area, maintains the level of Canyon Lake Reservoir and regulates flows from the San Jacinto River watershed to Lake Elsinore. The Elsinore Valley Dam (also referred to as the Lee Lake Dam), located at Corona Lake in the northwest corner of the Planning Area, regulates a man-made storage reservoir for non-drinking water that was previously used for agricultural irrigation and recreation but dried up almost completely during the five-year drought.

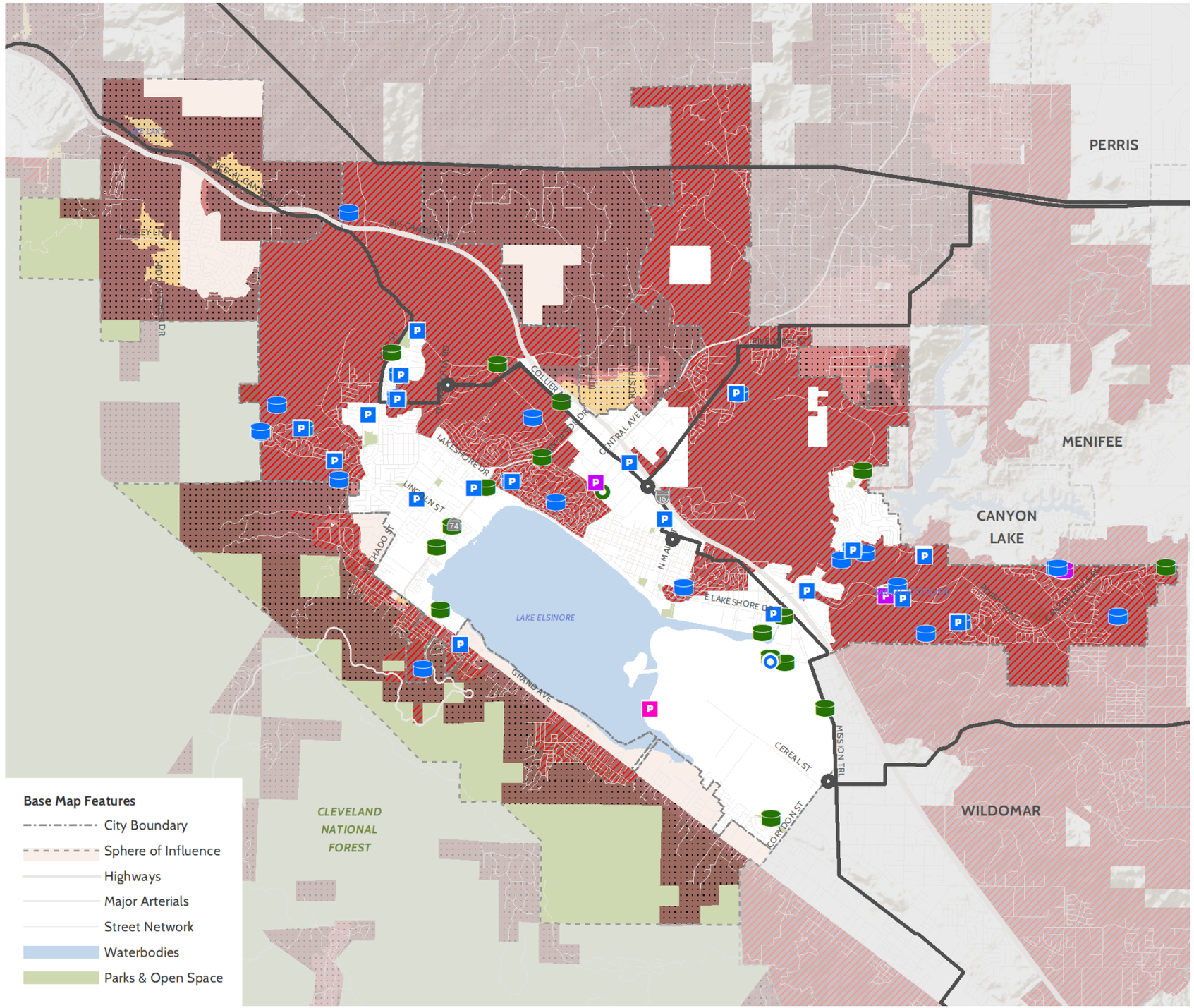


Figure 4-3

WILDFIRE HAZARD ASSET IMPACTS - ENERGY, WATER, AND WASTEWATER

Fire Hazard Severity Zones

- Very High
- High
- Moderate
- Local Resposibility Area (LRA)
- State Responsibility Area (SRA)

Energy Infrastructure

- Substations
- Power Transmission Lines

Water Infrastructure

- EVMWD Water Pump Station
- EVMWD Water Reservoir
- EVMWD Water Treatment Plant
- EVMWD Non-Potable Pump Station
- EVMWD Recycled Water Pump Station
- EVMWD Recycled Water Reservoir

Wastewater Infrastructure

- EVMWD Wastewater Lift Station
- EVMWD Wastewater Treatment Plant

Prepared by MIG, October 2023.
Source: County of Riverside, 2023, City of Lake Elsinore, 2023, EVMWD, 2023.

0 ¼ ½ 1 1½ 2 Miles

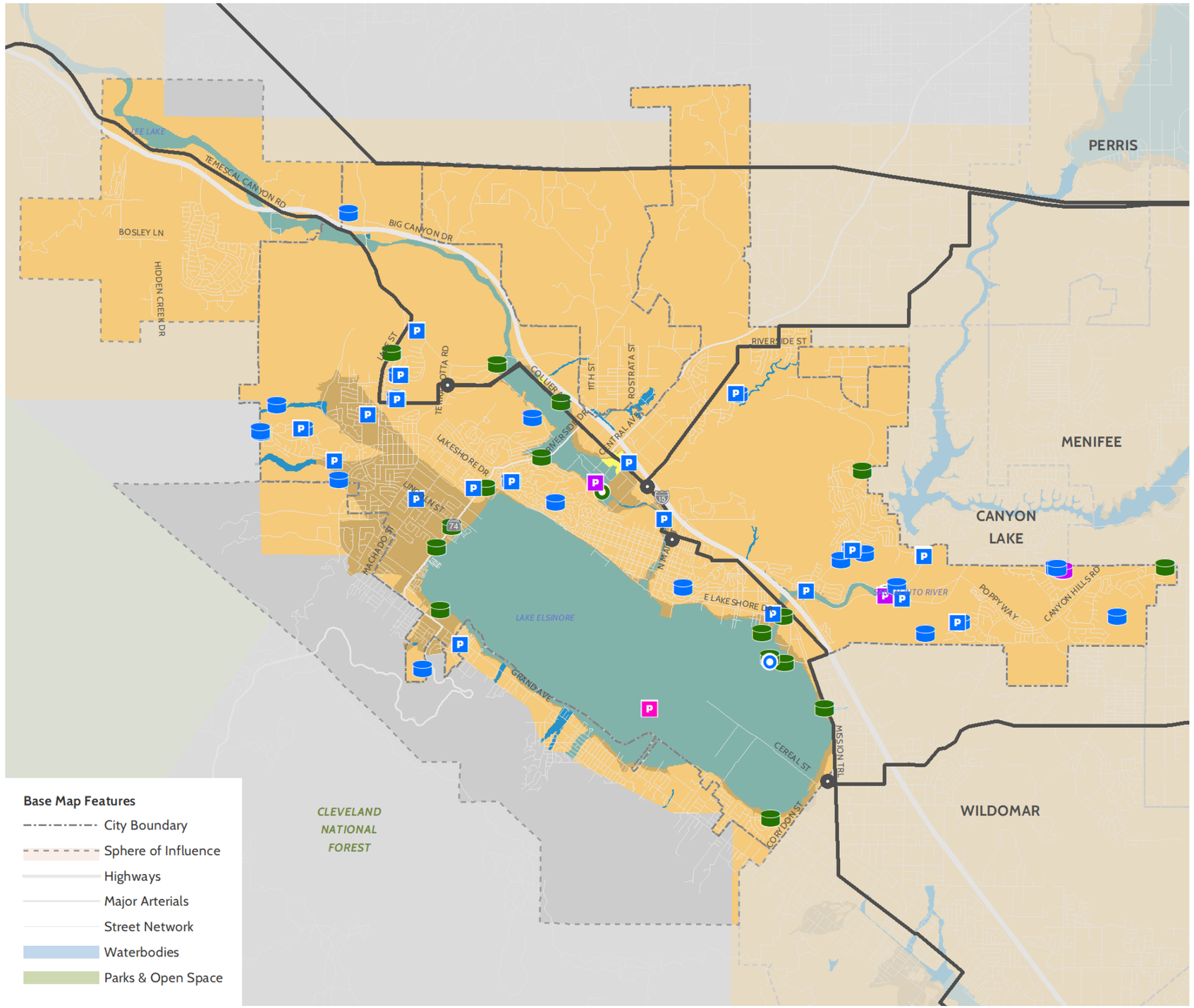


Figure 4-4

FLOOD HAZARD ASSET IMPACTS - ENERGY, WATER, AND WASTEWATER

FEMA Flood Zones

- 1% Annual Chance of Flooding (100-Year Flood)
- Base Floodplain
- 1% Annual Chance of Shallow Flooding
- 1% Annual Chance of River or Stream Shallow Flooding
- Betwen 0.2% and 1% Annual Chance of Flooding (500-Year and 100-Year Flood)
- 0.2% Chance of Annual Flooding (500-Year Flood)
- Protected by Levee
- Undetermined Risk Areas

Energy Infrastructure

- Substations
- Power Transmission Lines

Water Infrastructure

- EVMWD Water Pump Station
- EVMWD Water Reservoir
- EVMWD Water Treatment Plant
- EVMWD Water Well
- EVMWD Non-Potable Pump Station
- EVMWD Non-Potable Well
- EVMWD Recycled Water Pump Station
- EVMWD Recycled Water Reservoir

Wastewater Infrastructure

- EVMWD Wastewater Lift Station
- EVMWD Wastewater Treatment Plant

Prepared by MIG, October 2023.
Source: County of Riverside, 2023, City of Lake Elsinore, 2023, EVMWD, 2023.

0 ¼ ½ 1 1½ 2 Miles

Key Services

Emergency Services (law enforcement, hospitals, and fire department)

Emergency medical response services are usually ambulances but may also be fire or police respondents if ambulances are not available. In remote areas away from roads, emergency medical responses may arrive by helicopter. These services are critical in providing rapid and urgent medical care.

The Riverside County Fire Department and CAL FIRE provide Lake Elsinore with fire prevention, suppression, and emergency medical services. There are four fire stations located within the city limits.

Local law enforcement services, provided by Riverside County Sheriff's Department, are located in Lake Elsinore's downtown. The Lake Elsinore Sheriff's Station serves an area of 241 square miles, including the City of Lake Elsinore, 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.

Communication Services

Communication services include radio, television, cellular and landline phone, and Internet. These services can be delivered via wires or wirelessly, and most are delivered by private companies. Communication services are often used for entertainment but are also for vital information sharing and remaining connected. Most wireless communications facilities are located near Interstate 15.

Buildings

Areas of Concentrated Residential Development

Many of the City's neighborhoods primarily consist of single-family residences. Residential developments in the City's five Sphere Districts and outermost city Districts (Lake Elsinore Hills, Alberhill and North Peak) have low-density lots and a more rural feel than more urbanized parts of the City due to higher amounts of vacant land and open space. Multi-family residences are mostly located in the areas surrounding the Lake.

Government Buildings and Sites

Government facilities could act as operations hubs for emergency services and emergency public works projects during disasters. These include Lake Elsinore City Hall, community centers, libraries, post offices, and district offices.

Key Employment or Commercial Centers

Major employers, banks, and commercial establishments such as grocery stores, hardware stores, and gas stations. Key commercial areas are mostly located in the Downtown and Business Districts.

Schools

Lake Elsinore Unified School District (LEUSD) operates 12 elementary schools, four middle schools, three comprehensive high schools, two K-through-8 schools, and four alternative education schools. LEUSD boundaries stretch over 144 square miles through Southwest Riverside County, serving families in Lake Elsinore, Canyon Lake, and Wildomar, and several unincorporated Riverside County communities, including Lakeland Village and Horsethief Canyon.

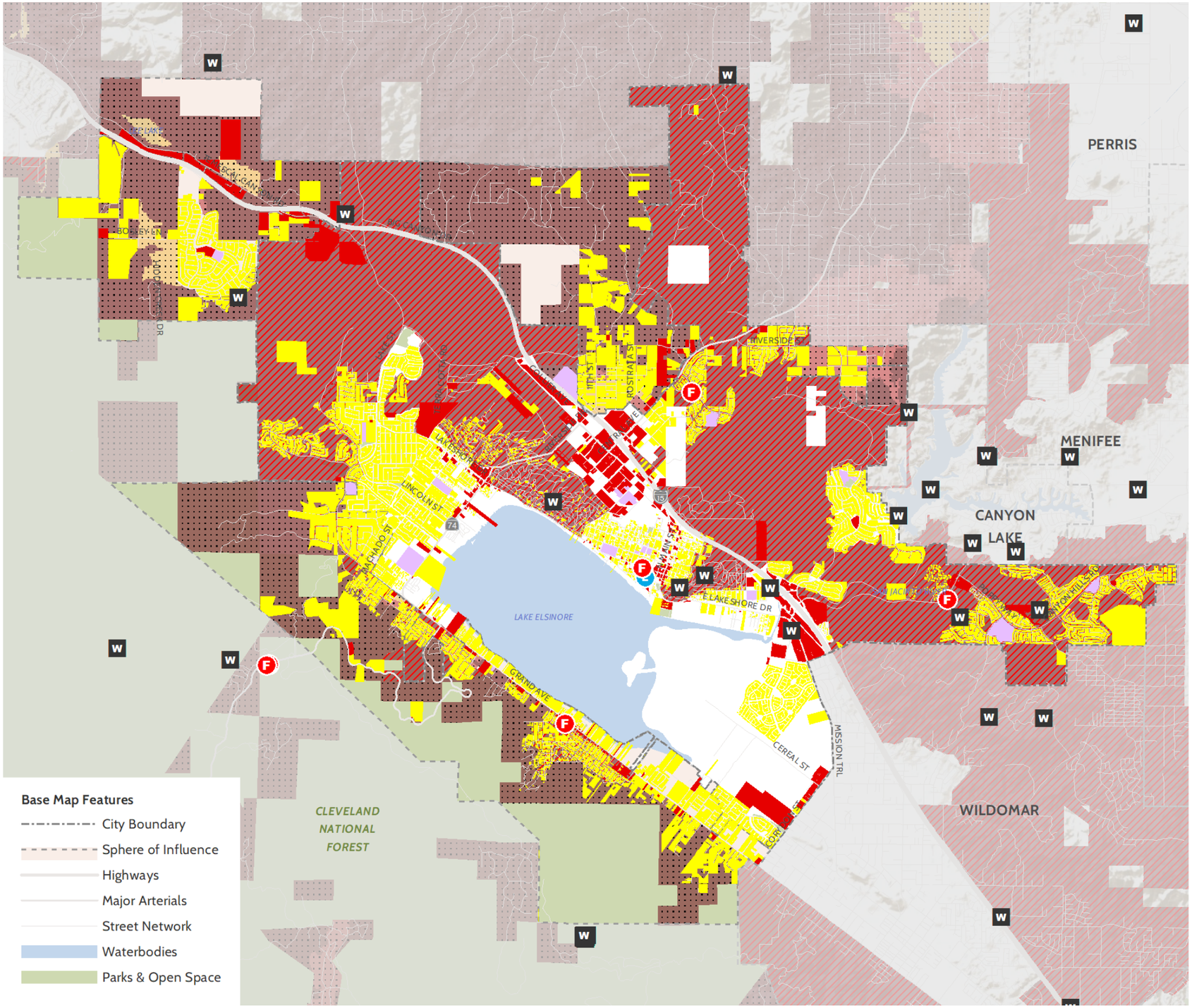


Figure 4-5

WILDFIRE HAZARD ASSET IMPACTS - KEY SERVICES AND BUILDINGS

Fire Hazard Severity Zones

- Very High
- High
- Moderate
- Local Resposibility Area (LRA)
- State Responsibility Area (SRA)

Key Services

- Fire Station
- Law Enforcement
- Wireless Comunication Facilities

Buildings

- Residential
- Employment
- Schools

Prepared by MIG, October 2023.
Source: County of Riverside, 2023, Homeland Infrastructure Foundation-Level Data, 2023, Urban Footprint, 2023.

0 ¼ ½ 1 1½ 2 Miles

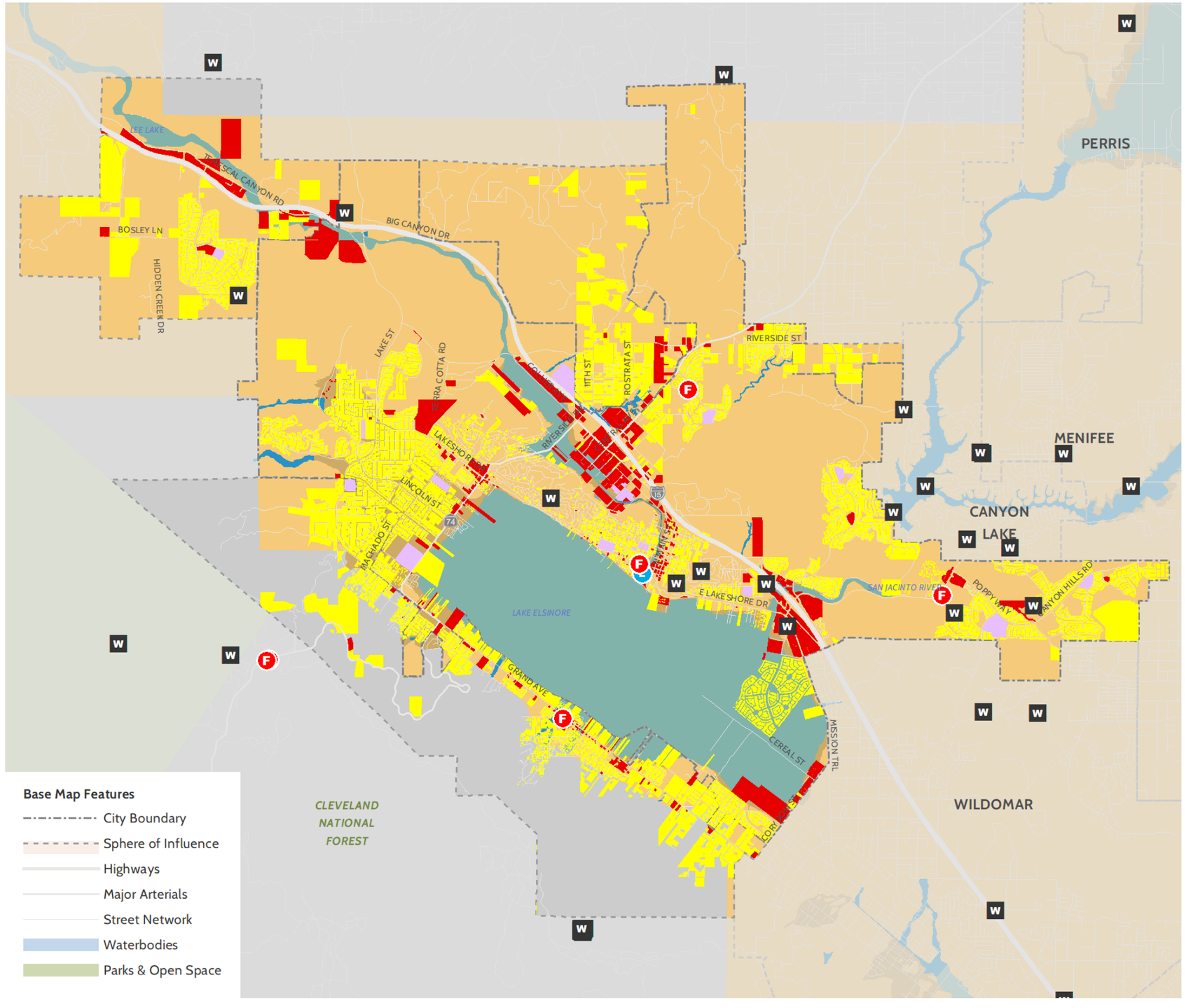


Figure 4-6

FLOOD HAZARD ASSET IMPACTS - KEY SERVICES AND BUILDINGS

FEMA Flood Zones

- 1% Annual Chance of Flooding (100-Year Flood)
- Base Floodplain
- 1% Annual Chance of Shallow Flooding
- 1% Annual Chance of River or Stream Shallow Flooding
- Betwen 0.2% and 1% Annual Chance of Flooding (500-Year and 100-Year Flood)
- 0.2% Chance of Annual Flooding (500-Year Flood)
- Protected by Levee
- Undetermined Risk Areas

Key Services

- Fire Station
- Law Enforcement
- Wireless Comunication Facilities

Buildings

- Residential
- Employment
- Schools

Prepared by MIG, October 2023.
Source: County of Riverside, 2023, Homeland Infrastructure Foundation-Level Data, 2023, Urban Footprint, 2023.

0 ¼ ½ 1 1½ 2 Miles

Natural and Managed Resources

Wildlands and Open Spaces

Open space and natural areas in Lake Elsinore consist of local parks, mountains, rugged hillsides, and the lake. The Cleveland National Forest, located to the west of Lake Elsinore, encompasses most of the Santa Ana Mountains. Much of the City's natural areas fall under the Western Riverside County Multiple Species Habitat Conservation Plan, which is a multi-jurisdictional species and habitat conservation effort. Mineral resources, such as sand, gravel, and clay, are also found in the Alberhill, Rice Canyon, Temescal Wash, and Cottonwood Hills areas.

Asset Impacts

Table 4-5 summarizes the climate impacts on the 15 selected assets. The table groups each asset under a broader category, identifies the climate hazards an asset category is exposed to, identifies non-climate stressors, and describes the overall climate impact.

In addition to the data sources used to identify, determine, and define assets, the impact descriptions rely upon information contained in California's Fourth Climate Assessment and the Safeguarding California Plan which provide background information and evidence of regional climate change impacts as well as strategies to reduce impacts.

Impact scores for each asset are included in Appendix A.

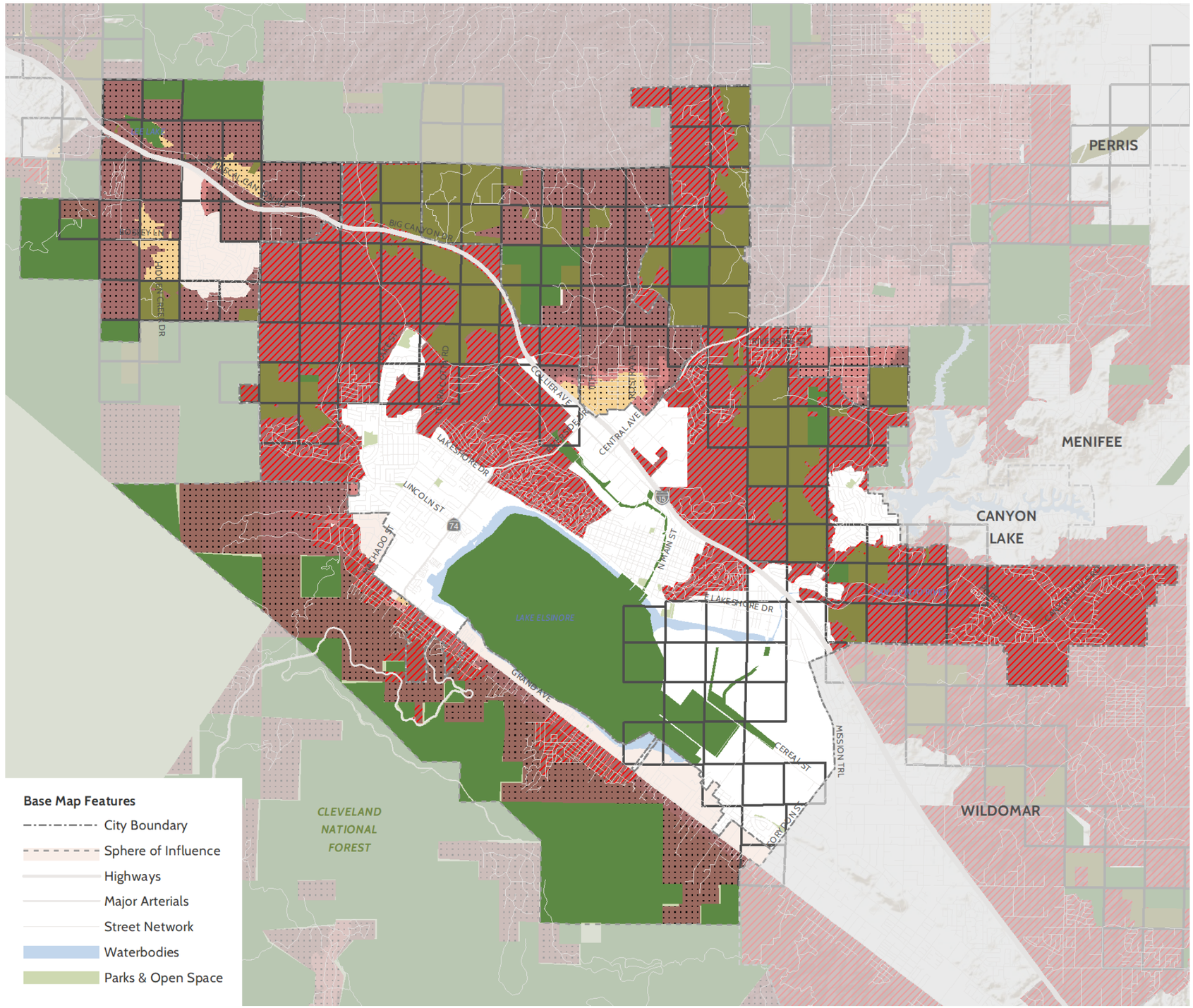


Figure 4-7

WILDFIRE HAZARD ASSET IMPACTS - NATURAL & MANAGED RESOURCES

Fire Hazard Severity Zones

- Very High
- High
- Moderate
- Local Resposibility Area (LRA)
- State Responsibility Area (SRA)

MSHCP Conservation Areas

- Criteria Cells
- RCA MSHCP Conserved Lands / Easments
- Public / Quasi-Public Conserved Lands

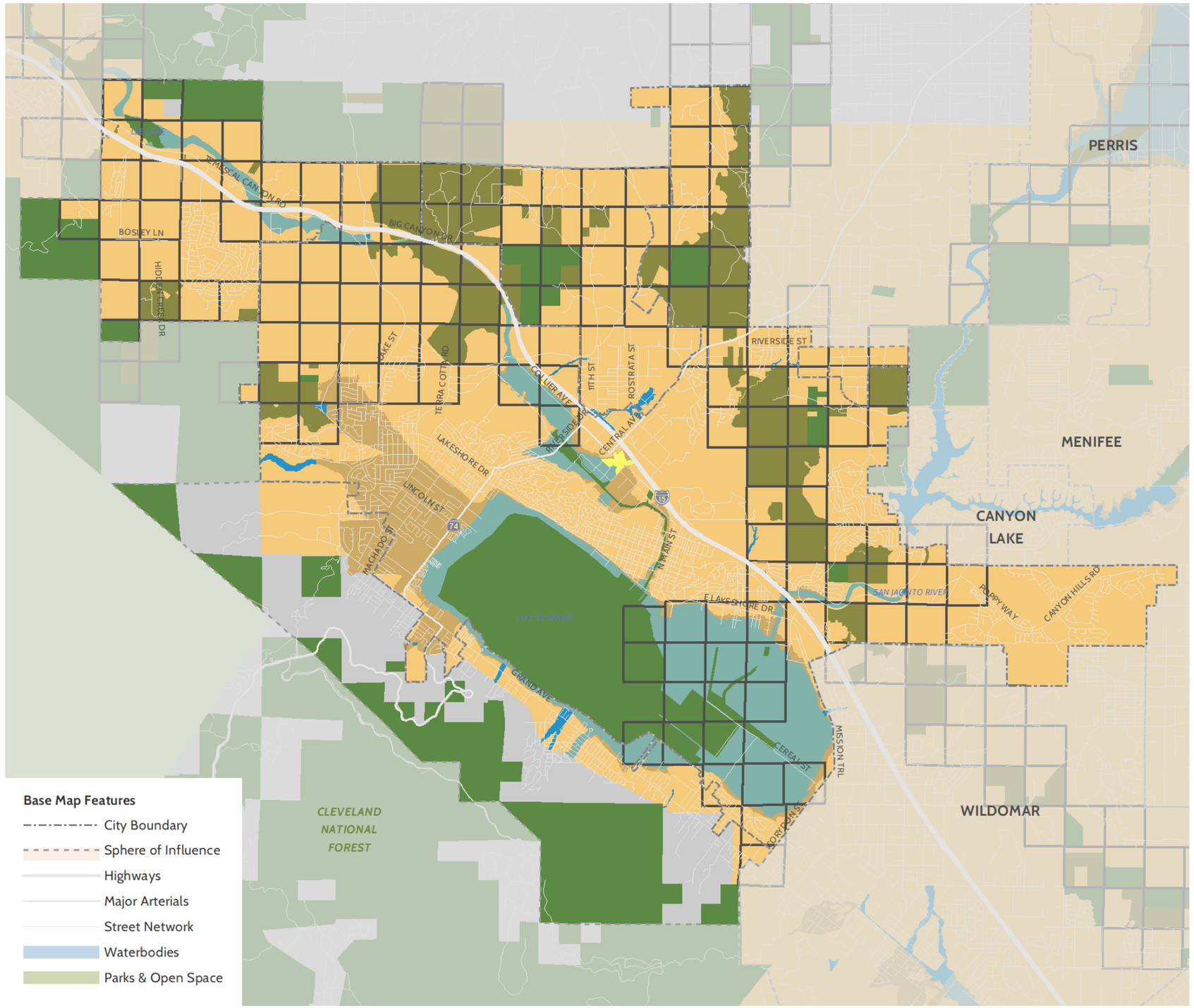
Public / Quasi-Public Conserved Lands: Properties owned, managed, or maintained by public agencies for the purposes of conservation.

RCA MSHCP Conserved / Easements: Additional reserve lands that contribute toward MSHCP conservation goals.

Criteria Cells / Area: A roughly 160-acre rectangle overlaid onto parcels within the MSHCP Plan Area and that has areas described for conservation.

Prepared by MIG, October 2023.
Source: County of Riverside, 2023

0 ¼ ½ 1 1½ 2 Miles



Base Map Features
- City Boundary
- Sphere of Influence
- Highways
- Major Arterials
- Street Network
- Waterbodies
- Parks & Open Space

Figure 4-8

FLOOD HAZARD ASSET IMPACTS - NATURAL & MANAGED RESOURCES

FEMA Flood Zones
- 1% Annual Chance of Flooding (100-Year Flood)
- Base Floodplain
- 1% Annual Chance of Shallow Flooding
- 1% Annual Chance of River or Stream Shallow Flooding
- Betwen 0.2% and 1% Annual Chance of Flooding (500-Year and 100-Year Flood)
- 0.2% Chance of Annual Flooding (500-Year Flood)
- Protected by Levee
- Undetermined Risk Areas

MSHCP Conservation Areas
- Criteria Cells
- RCA MSHCP Conserved Lands / Easments
- Public / Quasi-Public Conserved Lands

Public / Quasi-Public Conserved Lands: Properties owned, managed, or maintained by public agencies for the purposes of conservation.

RCA MSHCP Conserved / Easements: Additional reserve lands that contribute toward MSHCP conservation goals.

Criteria Cells / Area: A roughly 160-acre rectangle overlaid onto parcels within the MSHCP Plan Area and that has areas described for conservation.

Prepared by MIG, October 2023.
Source: County of Riverside, 2023

0 ¼ ½ 1 1½ 2 Miles

TABLE 4-5: IMPACTS TO SELECTED ASSETS

Asset Category	Assets	Non-Climate Stressors	Climate Exposures	Impact Description
Transportation Services and Infrastructure	• Major Roads and Highways • Airports • Transit Routes • Freight	• Age of facility • Undersized or overused • Not routinely maintained • Poorly designed for current needs	• Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	Low-lying roads in the City can be susceptible to flooding during storm events. Fire service agencies may need to close stretches of major roads and highways during wildfires to reduce threats to the public, which would result in disruptions to regular commuting. Wildfires may also make roads dangerous or unpassable if trees overhang the road or roads have been burned. When a road network is compromised, communities are extremely vulnerable to reduced goods movement and limited access to supplies essential for daily living. Emergency and other public services could be interrupted and commuting, and tourism capacity could be reduced.
Energy Infrastructure	• Electrical Transmission and Distribution Lines • Electrical Substations • Water and Wastewater Infrastructure	• Lack of funding and staff capacity for retrofits, repairs, and/or upgrades • Lack of alternatives or redundancy	• Drought • Extreme Heat • Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	Electricity infrastructure can be damaged or destroyed by climate change hazards, preventing electricity from traveling to residents and businesses in the City. Extreme heat conditions increase use of air conditioning which can stress and overload the grid, causing power outages and potential damage to electricity transmission lines and substations. During severe wind events, electrical transmission lines can be damaged or turned off by the service provider, causing widespread power outages and hardships for City residents. Electrical system infrastructure is often not designed to withstand prolonged

TABLE 4-5: IMPACTS TO SELECTED ASSETS

Asset Category	Assets	Non-Climate Stressors	Climate Exposures	Impact Description
				extreme heat and may shut down or be damaged under extreme heat conditions. Electrical substations and individual power poles are vulnerable to post-fire debris-flows. Transmission and distribution lines can be brought down by strong winds and wildfire and can be impacted by flooding wherever transmission lines are located near flood zones.
Water and Wastewater Infrastructure	• Water and Wastewater Facilities • Flood Control Infrastructure	• Lack of funding and staff capacity for retrofits, repairs, and/or upgrades • Difficulty relocating	• Flooding • Severe Weather	Drought can prevent water infrastructure from functioning properly because of very low reservoir levels. Water and wastewater infrastructure can become overwhelmed by stormwater runoff and debris from flooding, causing them to malfunction and become damaged. The extreme heat of wildfires may also burn and damage the water supply distribution system such as pump stations. Flood control infrastructure can become overwhelmed by water and debris from severe weather, causing it to malfunction and become damaged. Flood waters may overtop flood control infrastructure during high storm surge events.
Key Services	• Police, fire, and ambulance stations • Communication Services	• Aging infrastructure and technology • Staff capacity • Reduced funding • Disruption of services from the	• Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	Emergency services are highly dependent on transportation and energy infrastructure to deliver services and therefore can be disrupted by flooding, landslides and debris flows, and wildfire. Extreme heat events could fatigue emergency responders and frontline

TABLE 4-5: IMPACTS TO SELECTED ASSETS

Asset Category	Assets	Non-Climate Stressors	Climate Exposures	Impact Description
		failure of buildings or infrastructure during repairs		healthcare workers. Wildfires require all emergency services to be activated in dangerous conditions and impact the ability of emergency responders to reach and transport residents. Cascading and compounding effects of climate change impacts will increase the frequency and amount of emergency services needed to address hazards, straining staffing, and resources, interrupting staff time dedicated to nonresponse activities, projects, and programs. Communication facilities located in flood-prone areas could be damaged by water or the footings of cell towers could be compromised by erosion from flood waters. Communication services are highly vulnerable to landslides, severe weather, and wildfires. Communication systems, such as phone poles or cell towers, in landslide prone areas of the City can be damaged when landslides and debris flows undermine the foundations supporting these systems. Severe winds on these steep slopes can also damage communication facilities. These hazards can damage communication facilities or cut off the power to them, preventing communities from receiving or relaying emergency notifications and other essential communications.

TABLE 4-5: IMPACTS TO SELECTED ASSETS

Asset Category	Assets	Non-Climate Stressors	Climate Exposures	Impact Description
Buildings	• Areas of concentrated residential development • Government Buildings and Sites • Key Employment or Commercial Centers • Schools	• Lack of funding for retrofits, repairs, and/or upgrades • Lack of alternative sites • Aging buildings	• Drought • Extreme Heat • Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	Older residential buildings may have greater heating/cooling needs or be more susceptible to damage from severe weather, flooding, and wildfire. On the steeper slopes in the City, building foundations can be undermined by landslides, post-fire landslides and debris flows caused by heavy rain events. Fire stations, post offices, libraries, and other government facilities in fire hazard areas are vulnerable to wildfire and may be vulnerable to post-fire debris flows. Damage to these facilities could cause them to become unusable to the community until repaired or rebuilt. Commercial buildings could be vulnerable to flooding from severe weather events. The destruction of commercial centers reduces opportunities for residents to access daily necessities, including food and medical supplies. School buildings could be damaged or destroyed by flooding from severe weather events and wildfire impacts. If not destroyed, these buildings may have mold and mildew growth because of being flooded or smoke damage that makes them unusable until they are repaired. These facilities may also not have adequate heating, ventilation, and air

TABLE 4-5: IMPACTS TO SELECTED ASSETS

Asset Category	Assets	Non-Climate Stressors	Climate Exposures	Impact Description
				conditioning systems to maintain healthy air temperatures during extreme heat events.
Natural and Managed Resources	• Wildlands and open spaces		• Drought • Extreme Heat • Flooding • Landslides, Debris Flows, and Post-Fire Debris Flows • Severe Weather • Wildfire	The health of wildlands and protected open spaces may be severely impacted by climate change impacts, particularly drought and wildfires, but also extreme heat, flooding, and landslides.

5. ADAPTIVE CAPACITY

The City and regional agencies have developed policies, plans, and programs to moderate the potential damage caused by climate change and/or natural hazards. The following sections summarize documents that outline existing efforts to manage climate impacts.

Existing Resiliency Planning Efforts

Lake Elsinore General Plan (updated 2011)

The Lake Elsinore General Plan, most recently updated in 2011, serves as the City's comprehensive long-range general plan that guides long-term growth and promotes the Lake Elsinore community's fundamental values and vision for future development. The Plan serves as the basis for most City regulatory documents and addresses a range of mandated elements including land use, circulation, housing, open space, conservation, noise, and safety. Sustainability is a central focus of the 2011 document with goals and policies relating to sustainable development spread throughout the plan. The Safety Element, most recently updated in 2023, also incorporates numerous goals and policies focused on addressing climate change adaptation and resilience.

The Plan can be found here: Lake Elsinore General Plan

Lake Elsinore Local Hazard Mitigation Plan (updated 2018)

The Lake Elsinore LHMP focuses on eight hazards: flood, wildfire, earthquake, severe weather, hazardous materials, air quality, dam failure, and drought. Each hazard has a profile that provides brief background information on extent, potential impacts, and vulnerability. Mitigation actions and strategy programs were developed for hazards of concern. The Lake Elsinore LHMP also includes a list of hazard mitigation capital improvement projects and project cost estimates.

The Plan can be found here: Lake Elsinore Hazard Mitigation Plan

Lake Elsinore Climate Action Plan (updated 2011)

The Lake Elsinore Climate Action Plan (CAP) serves as the City's long-range plan to reduce community wide GHG emissions. Although the CAP is primarily focused on strategies and measures to achieve greenhouse gases (GHG) reduction targets, identified actions also support the City's overall ability to plan for, mitigate, and adapt to climate change.

The Plan can be found here: Lake Elsinore Climate Action Plan

Riverside County Multi-Jurisdictional Local Hazard Mitigation Plan (updated 2023)

The Riverside County MJLHMP focuses on 28 hazards, including seven climate related hazards: wildland fire, flood, drought, extreme weather (extreme heat and severe cold), and landslides. Each hazard has a profile which includes hazard definition, probability of future events, extent (magnitude/severity), impacts and vulnerability. For hazards which the County was found to be vulnerable to, prioritized mitigation actions were developed. The MJLHMP also includes community profiles for all cities within its jurisdiction, including Lake Elsinore.

The Plan can be found here: Riverside County Multi-Jurisdictional Local Hazard Mitigation Plan

Riverside County Climate Action Plan (updated 2019)

The Riverside County Climate Action Plan Update (CAP Update) serves as the County's long-range plan to reduce county-wide greenhouse gas (GHG) emissions. The CAP Update summarizes various State and

local policies that will help the County plan sustainably, achieve GHG reduction targets, and address climate change.

The Plan can be found here: Riverside County Climate Action Plan Update

Western Riverside Council of Governments Western Riverside County Vulnerability Assessment (updated 2019)

The Western Riverside County Vulnerability Assessment was completed as part of the Resilient IE, a collaborative effort between the Western Riverside Council of Governments (WRCOG) and San Bernardino County Transportation Authority (SBCTA) with funding from Caltrans. Resilient IE aims to support regional and local efforts to prepare for and mitigate risks associated with climate change through five project components, including subregional vulnerability assessments. The Western Riverside County Vulnerability Assessment identifies nine subregional climate change hazards of concern including: agricultural pests and diseases, air quality, drought, extreme heat, human health hazards, landslides, severe weather, and wildfire. In conjunction with the Vulnerability Assessment, WRCOG identified nine priority adaptation issues and strategies to address each issue and increase climate resilience in the subregion.

The Assessment can be found here: Western Riverside County Vulnerability Assessment

The Adaptation Strategies can be found here: Western Riverside County Adaptation Strategies

Current Planning Efforts Adaptive Capacity Summary

Table 5-1 evaluates how each plan and report discussed above addresses Lake Elsinore's climate change hazards of concern through targeted policies and adaptation measures. As shown in the table, multiple planning documents include some policies or programs to address the climate change-related impacts that are expected to impact the City. Mitigation and adaptation measures for existing hazards including extreme heat, flooding, severe weather, and wildfires are well documented in these plans and reports. The goals and policies developed for the Lake Elsinore Safety Element will aim to fill the gaps that have not been addressed in other City or regional planning efforts.

TABLE 5-1: ADAPTIVE CAPACITY IN LOCAL AND REGIONAL EXISTING PLANS AND REPORTS

Document	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Lake Elsinore General Plan	-[1]	X	X	-[2]	X	X
Lake Elsinore Local Hazard Mitigation Plan	-[1]	X	X	-[2]	X	X
Lake Elsinore Climate Action Plan[2]						
Riverside County Multi-Jurisdictional Local Hazard Mitigation Plan	X[4]	X	X	X	X	X

TABLE 5-1: ADAPTIVE CAPACITY IN LOCAL AND REGIONAL EXISTING PLANS AND REPORTS

Document	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Riverside County Climate Action Plan[2]						
Western Riverside Council of Governments Western Riverside County Vulnerability Assessment and Adaptation Strategies	X	X	X	X	X	X

[1] While the Plan's explore how drought will affect Lake Elsinore's populations and assets, they do not contain drought-specific policies and adaptation measures.

[2] Includes policies and adaptation measures relating to earthquake-induced landslides, but not climate-induced landslides.

[3] The Climate Action Plans do not identify hazard specific policies and adaptation measures, although GHG reduction policies and measures could reduce the future probability and severity of climate-induced hazards.

[4] Identifies California water mitigation efforts as of 2022.

Adaptive Capacity Summary

This section presents a summary description of the existing adaptive capacity of the City's vulnerable populations and assets based on the description of climate change exposure described in Section 3, the description of vulnerable populations and assets presented in Section 4, and the existing adopted planning documents described above. The tables below are organized by the populations and assets described in Section 4 and present a high-level overview of their adaptive capacity. The City's vulnerability to each identified climate change exposure is assessed based on the magnitude of risk posed to populations and assets, and any existing measures in place to mitigate these impacts. When combined with a population or assets impact score, adaptive capacity scores ultimately feed into determining each population and assets' vulnerability to climate change hazards.

Based on the results of the adaptive capacity assessment, each population or asset was ranked on a three-point scale (1-3) ranging from Low Capacity to High Capacity. Adaptive capacity scoring for each population and asset is included in Appendix A.

TABLE 5-2: ADAPTIVE CAPACITY OF POPULATIONS

Population Category	Populations	Adaptive Capacity Description
Financially Constrained Households	• Low-Income Households • Households in Poverty • Cost-Burdened Households • Overcrowded Households • Renters	*Climate Exposures: Drought, Extreme Heat, Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather, Wildfire* Financially constrained households throughout the City are exposed to all climate change hazards addressed in this Vulnerability Assessment. Lacking financial resources, these households generally have limited ability to respond to the climate change hazards and their adaptive capacity is considered low. Financially constrained households likely have limited capacity to evacuate for an extended period, or to retrofit homes to resist damage or recover from hazard damage. Retrofitting construction work is expensive and not financially feasible for many of these populations. There are assistance programs that can help retrofit homes or recover from climate events, however these communities may be unaware of these programs and how to participate or may not be able to qualify and the assistance programs are unlikely to pay the entire cost of retro fit/repair. Financially constrained households that rent are subject to the maintenance practices of the landlord who may not invest in protecting the home against climate change impacts. Communities that are financially constrained may not have health insurance or access to healthcare to treat illnesses or conditions created or worsened by climate change impacts.
Physically or Socially Isolated Communities	• Mobile Homes • Persons Without Access to Transportation or Telecommunications • Linguistically Isolated Communities	*Climate Exposures: Drought, Extreme Heat, Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather, Wildfire* Depending on their location, isolated and rural communities could be exposed to all climate change hazards addressed in this Vulnerability Assessment. Because of the remote locations these populations live in and the difficulties in preparing for and responding to climate hazards these populations may have limited adaptive capacity to certain hazards. Persons living in remote areas with limited access can prepare themselves through retrofitting buildings and infrastructure, creating emergency preparedness kits, and working with others in their community on emergency evacuations and operations. While vegetation management and

TABLE 5-2: ADAPTIVE CAPACITY OF POPULATIONS

Population Category	Populations	Adaptive Capacity Description
		prescribed burns may increase adaptive capacity regarding wildfire, actions or programs may not extend over multiple properties due to different ownership or management. These communities may be unable to receive emergency notifications because of lack of cell phone service or may not have access to alternative roadways to evacuate, or utilities may not be available to provide or quickly restore services to the area. Language barriers or lower levels of social capital may also impact emergency preparedness or evacuation.
Persons with High Outdoor or Hazard Exposure	• Outdoor Workers • Healthcare Workers, First Responders, and Protective Service Occupations • Houseless Population	*Climate Exposures: Drought, Extreme Heat, Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather, Wildfire* Persons with high outdoor exposure may be unable to seek adequate shelter or evacuate during hazardous conditions or be aware that hazardous conditions are occurring due to age, working conditions, or living conditions. Programs such as cooling centers, homeless shelters, and adult education programs are available in some areas of the City and/or county. However, these populations can be difficult to reach during emergencies. Outdoor work sites can make water, shelter, and protective gear available, although not all sites may do so even when required to. Persons working outdoors are often aware of the warning signs of heat-related illnesses, although access to medical care may be more limited in remote outdoor work sites.
Persons with Limited or Constrained Resources	Low-Resourced Racial and Ethnic Minorities	*Climate Exposures: Drought, Extreme Heat, Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather, Wildfire* Disparities in living conditions and institutional biases may hinder persons with limited resources in preparing for or recovering from hazardous events. Due to citizenship status or language barriers, these persons may be afraid to seek help, qualify for, or connect with disaster relief services during, or after a disaster. Language barriers may also prevent this group from receiving evacuation and other emergency notifications, decreasing their ability to adequately prepare for and respond to hazardous events.

TABLE 5-2: ADAPTIVE CAPACITY OF POPULATIONS

Population Category	Populations	Adaptive Capacity Description
Persons with Limited Mobility, Chronic Health Conditions, or Who May be Dependent on Individuals or Services	• Children • Seniors • Persons Living Alone • Persons with Disabilities • Persons with Chronic Health Problems	*Climate Exposures: Drought, Extreme Heat, Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather, Wildfire* Persons with chronic health problems have existing conditions that make it difficult to adapt to climate change hazards. These persons may find it difficult to adapt to increases in extreme heat and smoke from wildfires, or to effectively evacuate during flooding or wildfire events. These persons may also rely on life supporting equipment or treatment machines, such as dialysis or breathing equipment, which requires electricity, which can be turned off or lost during severe weather conditions. Agencies or groups may maintain evacuation assistance lists to locate vulnerable populations and help them evacuate safely. However, communities may be unaware of these services.

TABLE 5-3: ADAPTIVE CAPACITY OF ASSETS

Asset Category	Assets	Adaptive Capacity Description
Transportation Services and Infrastructure	• Major Roads and Highways • Airports • Transit Routes • Freight	*Climate Exposures: Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather and Wildfire* Highways, major roads, freight routes, and road infrastructure, can be protected from flooding, retrofitted to resist landslides, and repaired when damaged, and cleared of vegetation to protect it during wildfire events. However, major roads and highways are the primary method of travel in the City for residents, visitors and freight routes, and therefore any disruptions could harm the economy and quality of life. The infrastructure may not be usable for days or weeks if it is damaged by climate change hazards and requires repairs.

TABLE 5-3: ADAPTIVE CAPACITY OF ASSETS

Asset Category	Assets	Adaptive Capacity Description
		Airports can be protected from flooding with levees and other flood control improvements and hardened against certain severe weather impacts. However, airports experience temporary closures during severe storm events. An airport in a wildfire zone can be protected with vegetation management and firefighting capabilities.
Energy Infrastructure	• Electrical Transmission and Distribution Lines • Electrical Substations • Water and Wastewater Infrastructure	*Climate Exposures: Drought, Extreme Heat, Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather, Wildfire* Electrical infrastructure can be protected from environmental hazards but depending on the specific hazard, the infrastructure may still suffer damage such as being inundated during a flooding, covered in landslide, impacted by severe wind, or wildfire. Pieces of the energy infrastructure may be undergrounded to avoid certain hazards such as severe weather and wildfire. However, this can be expensive and could take years to complete. Electric vehicle charging stations and fuel pumps may be able to install backup battery systems to ensure that people can still use the charging infrastructure during power outages. To prevent secondary damage, electricity infrastructure can be turned off; however, this causes secondary affects to those relying on the electricity for critical services.
Water and Wastewater Infrastructure	• Water and Wastewater Facilities • Flood Control Infrastructure	*Climate Exposures: Flooding, Severe Weather* Water and wastewater infrastructure can be protected from environmental hazards but depending on the specific hazard, the infrastructure may still suffer damage such as from being inundated during a flooding, covered or dislocated in a landslide, or impacted by wildfire. Pipeline alignments are underground and thus would avoid certain hazards such as impacts from severe weather or wildfire. Water and wastewater infrastructure is highly regulated and protection from climate change hazards will eventually be required. However, this infrastructure is very difficult and expensive to move or place outside of a hazard prone area. Additional pumping or pipeline systems may have to be installed to keep this infrastructure functioning

TABLE 5-3: ADAPTIVE CAPACITY OF ASSETS

Asset Category	Assets	Adaptive Capacity Description
		properly. Water conservation measures, use of more recycled water, and more extensive filtering equipment can protect the water services throughout the City. Wastewater services may have a more difficult time adapting due to the expensive nature of moving wastewater infrastructure. Flood control infrastructure is highly regulated and can be hardened to prevent damage from climate change hazards. However, this infrastructure is very difficult and expensive to move or raise outside of a hazard prone area.
Key Services	• Police, fire, and ambulance stations • Communication Services	*Climate Exposures: Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather and Wildfire* The ability to provide emergency and communication services can be impacted by many of the climate change hazards discussed in this Vulnerability Assessment. Emergency service and communication service providers can plan for climate change hazards and the disruptions to service that may occur. Service providers can provide additional training in how to avoid service disruptions during an event, they can provide additional equipment, establish command centers and shelters outside of all known hazard areas, have repair crews on standby, and plan for such events as power outages. Local and regional medical centers and providers can strengthen medical supply chains and prepare emergency contingency plans for if/when hazards increase in frequency and intensity. However, this may take time and require extensive coordination and redundancy within the emergency service system. Communication systems can also be retrofitted to prevent damage and keep communication capabilities working during hazard events.
Buildings	• Areas of concentrated residential development • Government Buildings and Sites	*Climate Exposures: Drought, Extreme Heat, Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather, and Wildfire* Buildings can be partially protected against flooding, landslides, severe weather, and damage from wildfires by building hardening and retrofitting and creating defensible space. However,

TABLE 5-3: ADAPTIVE CAPACITY OF ASSETS

Asset Category	Assets	Adaptive Capacity Description
	• Key Employment or Commercial Centers • Schools	these adaptive options can be expensive and do not always provide complete protection. It is extremely difficult to protect or repair individual buildings from large scale hazards like flooding and wildfire. Although steps to harden specific buildings can be taken, more complete protection from these hazards is best approached on a local or regional scale. Chronic climate change hazards could cause buildings to become permanently uninhabitable and/or unusable.
Natural and Managed Resources	• Wildlands and open spaces	*Climate Exposures: Drought, Extreme Heat, Flooding, Landslides, Debris Flows, and Post-Fire Debris Flows, Severe Weather, and Wildfire* The health of natural and managed resources may be severely impacted by climate change impacts, particularly drought and wildfires, but also extreme heat, flooding, and landslides. Extreme heat can raise water temperatures in aquatic systems, increasing dissolved oxygen content, decreasing overall water quality, and potentially contribute to algal blooms, which fish and plant populations may not be able to fully recover from.

6. VULNERABILITY ASSESSMENT RESULTS

The vulnerability assessment evaluates the impact and adaptive capacity of each population and asset for each relevant exposure and assigns a final vulnerability score on a scale of 1 to 5 (adjusted for risk and onset of the exposure). The vulnerability score reflects how susceptible the population or asset is to the harm posed by the exposure. For the purposes of this vulnerability assessment, a score of V4 or V5 is considered significant. Populations and assets that score at least a V4 for one or more exposures are considered substantially vulnerable.

TABLE 6-1: VULNERABILITY SCORING MATRIX

		Impact Score		
		Low Impact	*Medium Impact*	*High Impact*
Adaptive Capacity Score	*Low Capacity*	V3	V4	V5
	Some Capacity	V2	V3	V4
	High Capacity	V1	V2	V3

In total, this vulnerability assessment assigns vulnerability scores to 159 different pairings of populations and assets and the hazards they are exposed. Although there are 192 potential scores, many populations or assets were not given a score because the exposure is not applicable to the population or asset. For example, no score was given to drought hazards to buildings or infrastructure because drought does not pose a hazard to certain infrastructure or buildings.

While the summaries in this chapter focus on scores of at least V4, lower scores should not be ignored, and [redacted].

This chapter discusses the significant vulnerabilities within Lake Elsinore's populations and assets. Blank squares in the tables mean that a climate hazard exposure is not applicable to the population or asset, and gray squares indicate that the hazard is applicable, but the score is less than V4 (highly vulnerable). For a complete listing of the vulnerability scores for all sensitivities and exposures for each population and asset, see Table A-3 in Appendix A.

Vulnerable Populations

Exposure to extreme heat, flooding, landslides, and wildfire leaves many populations highly or severely vulnerable due to the high impacts of exposure and lower levels of adaptive capacity (Figure 6-2). Adaptation to these hazards may not be possible or financially feasible for some populations.

People who have limited financial resources or who do not own their home are more limited in their emergency response capacity and therefore vulnerable to climate hazards. Households in poverty (2,323 households) have a higher vulnerability to climate hazards than low-income households (8,776 households) because of the differences in financial resources between the two household categories (low-income households having more assets than households in poverty).

Lower levels of social capital, or the network of relationships an individual or population has, can increase vulnerability. Many communities in Lake Elsinore may be unable to receive emergency notifications, may not be able to evacuate, or evacuate quickly due to financial, social, or infrastructure limitations.

People with disabilities, populations over 65, and others with mobility challenges may face challenges in evacuating and thus are considered highly vulnerable to climate hazards which may require evacuation. Additionally, persons with disabilities, chronic illnesses, or seniors may rely on medical equipment that cannot be transported easily.

Lake Elsinore's health care workers, first responders and protective service occupations (13 percent of workers), outdoor workers (18 percent of workers) and houseless populations (an estimated 50 individuals) are highly vulnerable to many different climate hazards due to their high outdoor exposure and lack of alternative options that would reduce impacts of climate hazards.

Some policies, plans, and programs exist in Lake Elsinore and the broader region to increase the climate resilience and social capacity of highly and severly vulnerable populations, although additional measures are needed to build on these strategies and strengthen their ability to manage present and potential future climate impacts. Many existing and planned strategies applicable to the most highly and severely vulnerable populations are implemented at the regional scale, especially within the Western Riverside Council of Governments Western Riverside County Vulnerability Assessment and Adaptation Strategies. Strategies identified within this analysis should be integrated into Lake Elsinore plans and documents to supplement existing local strategies and increase the local resilience and adaptability of the City's most vulnerable populations.

FIGURE 6-2: HIGHLY AND SEVERELY VULNERABLE POPULATIONS

	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Populations						
Low-Income Households	_	V4	V5	V5	V4	V4
Households in Poverty	_	V5	V5	V5	V5	V5
Cost-Burdened Households	_					
Severely Overcrowded Households	_					
Renters	_		V4	V4	V4	
Mobile Homes	_				V4	V4
Persons Without Access to Transportation or Telecommunications	_		V5	V5	V5	V5
Linguistically Isolated Communities	_					V4
Low-Resourced Racial or Ethnic Minorities	_		V4	V4	V4	V4
Outdoor Workers	V5	V4	V4	V4	V4	V4
Healthcare Workers, First Responders, and Protective Service Occupations	V5	V4	V4	V4	V4	V4
Houseless Population	V5	V4	V5	V4	V4	V4
Children (under 14 years of age)	_	V5				V5
Persons with Disabilities	_	V4	V4	V4		V5
Persons with Chronic Health Problems	_	V5				V5
Seniors (65+)	_	V4				V5
Persons Living Alone	_					

Vulnerable Assets

Many of the key infrastructure networks (roads, freight routes, water systems, wastewater systems, electricity grid) in Lake Elsinore are vulnerable to climate change hazards due to their expensive and complex nature (integration within the system), high exposure to hazards, and the coordination and cost necessary to redesign or relocate the infrastructure. For example, major roads and highways throughout Lake Elsinore are vulnerable to numerous hazards, which can cause them to close or become impassable, isolating residents and business owners from key services and potentially creating severe health and safety risks. Local and/or regional policies and plans exist to mitigate the impact of climate hazards on key infrastructure and encourage climate-smart locations of future infrastructure projects.

Emergency and communication services are key services vulnerable to climate change hazards due to their active role in responding to climate events and local emergencies. Climate-smart emergency management activities will require an increased commitment of staff time and expertise, materials and equipment, and other resources. Multi-jurisdictional emergency management efforts allow communities to effectively share resources but ensure a sufficient supply if all participating communities are simultaneously affected by a major disaster. Existing multi-jurisdictional and local emergency response and communication strategies exist but will likely need to increase as climate hazards worsen, especially relating to emergency services.

Buildings can be retrofitted, upgraded, or raised to prevent damage from climate hazards, but these solutions can be expensive or infeasible for property owners to complete and are not always effective in protecting the building from certain hazards. Areas of concentrated residential development are highly or severely vulnerable to several hazards. However, some homeowners, especially low-income or cost-burdened households, may not have the appropriate disaster insurance or the ability to pay to fix structure damage. Chronic climate change hazards could cause buildings to become permanently uninhabitable. Regional and local policies, plans, and programs can increase building's climate resilience, including specific programs for low-income and vulnerable communities, and develop additional resilience hubs in Lake Elsinore and the broader region.

Lake Elsinore's wildlands and open spaces are highly susceptible to damage from drought, landslides, and wildfire. Drought can lower water levels and water quality, thus, stressing vegetative communities and wildlife. Higher temperatures and lack of water related to drought can stress the vegetative communities and make them more susceptible pest infestations and wildfire damage. Drought and wildfires can also lead to increased slope instability and landslide susceptibility across the Lake Elsinore's many steep slopes. Local and regional level policies and plans can manage vegetation and reduce the impact of climate hazards (especially wildfires) on wildlands and open spaces, although additional strategies are needed to manage vulnerability against drought and landslides.

FIGURE 6-3: HIGHLY AND SEVERELY VULNERABLE ASSETS

	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Infrastructure						
Airports	_	_		_		
Transit Routes	_	_		_		
Major Roads and Highways	_	_	V4	V4	V4	V4
Freight	_	_	V4	V4	V4	V4
Electrical Substations	_	V4			V4	V4
Electrical Transmission and Distribution Lines	_	V4			V4	V4
Water and Wastewater Infrastructure			V4		V4	
Flood Control Infrastructure	V4	_	V4		V4	
Key Services						
Emergency Services	_	V4	V4	V4	V4	V4
Communication Services	_			V5		V5
Buildings						
Areas of Concentrated Residential Development	_		V5	V5		V4
Government Buildings and Sites	_					
Key Employment or Commercial Centers	_					
Schools	_					
Natural and Managed Resources						
Wildlands and open spaces	V4			V4		

Next Steps

Moving forward, the City will develop Safety Element goals and policies to address these issues and improve community resilience. Future community engagement is recommended to confirm the impact and adaptive capacity and of existing populations and assets and to identify future opportunities to increase community-wide climate resilience, especially of highly and severely vulnerable populations and assets.

TABLE A-1: IMPACT SCORING

	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Populations						
Low-Income Households	_	High	High	High	High	High
Households in Poverty	_	High	High	High	High	High
Cost-Burdened Households	_	Medium	Medium	Medium	Medium	Medium
Severely Overcrowded Households	_	Medium	Medium	Medium	Medium	Medium
Renters	_	Medium	Medium	Medium	Medium	Medium
Mobile Homes	_	Medium	High	Medium	High	High
Persons Without Access to Transportation or Telecommunications	_	Medium	High	High	High	High
Linguistically Isolated Communities	_	Medium	Medium	Medium	Medium	High
Low-Resourced Racial or Ethnic Minorities	_	Medium	High	High	High	High
Outdoor Workers	High	High	Medium	Medium	High	High
Healthcare Workers, First Responders, and Protective Service Occupations	High	High	High	High	High	High
Houseless Population	High	High	High	Medium	High	High
Children (under 14 years of age)	_	High	Medium	Medium	Medium	High
Persons with Disabilities	_	High	Medium	Medium	Medium	High
Persons with Chronic Health Problems	_	High	Medium	Medium	Medium	High
Seniors (65+)	_	High	Medium	Medium	Medium	High
Persons Living Alone	_	Low	Medium	Medium	Low	Medium
Infrastructure						
Airports	_	_	Medium	_	Medium	Medium
Transit Routes	_	_	Medium	_	Medium	Medium
Major Roads and Highways	_	_	High	High	High	High
Freight	_	_	High	High	High	High
Electrical Substations	_	High	Medium	Medium	High	High
Electrical Transmission and Distribution Lines	_	High	Medium	Medium	High	High
Water and Wastewater Infrastructure	Medium	Medium	High	Medium	High	Low
Flood Control Infrastructure	Medium	_	High	Medium	High	Low
Key Services						
Emergency Services	_	High	High	High	High	High
Communication Services	_	Low	Medium	High	High	High
Buildings						
Areas of Concentrated Residential Development	_	Low	High	High	Medium	High
Government Buildings and Sites	_	Low	Medium	Medium	Medium	Medium
Key Employment or Commercial Centers	_	Low	Medium	Medium	Medium	Medium
Schools	_	Low	Medium	Medium	Medium	Medium
Natural and Managed Resources						
Wildlands and open spaces	Medium	Medium	Medium	Medium	Medium	Medium

TABLE A-2: ADAPTIVE CAPACITY SCORING

	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Populations						
Low-Income Households	_	Some	Low	Low	Some	Some
Households in Poverty	_	Low	Low	Low	Low	Low
Cost-Burdened Households	_	Some	Some	Some	Some	Some
Severely Overcrowded Households	_	Some	Some	Some	Some	Some
Renters	_	Some	Low	Low	Low	Some
Mobile Homes	_	Some	Some	Some	Some	Some
Persons Without Access to Transportation or Telecommunications	_	Some	Low	Low	Low	Low
Linguistically Isolated Communities	_	Some	Some	Some	Some	Some
Low-Resourced Racial or Ethnic Minorities	_	Some	Some	Some	Some	Some
Outdoor Workers	Low	Some	Low	Low	Some	Some
Healthcare Workers, First Responders, and Protective Service Occupations	Low	Some	Some	Some	Some	Some
Houseless Population	Low	Some	Low	Low	Some	Some
Children (under 14 years of age)	_	Low	Some	Some	Some	Low
Persons with Disabilities	_	Some	Low	Low	Some	Low
Persons with Chronic Health Problems	_	Low	Some	Some	Some	Low
Seniors (65+)	_	Some	Some	Some	Some	Low
Persons Living Alone	_	Some	Some	Some	Some	Some
Infrastructure						
Airports	_	_	Some	_	Some	Some
Transit Routes	_	_	Some	_	Some	Some
Major Roads and Highways	_	_	Some	Some	Some	Some
Freight	_	_	Some	Some	Some	Some
Electrical Substations	_	Some	Some	Some	Some	Some
Electrical Transmission and Distribution Lines	_	Some	Some	Some	Some	Some
Water and Wastewater Infrastructure	Some	Some	Some	Some	Some	Some
Flood Control Infrastructure	Low	_	Some	Some	Some	Some
Key Services						
Emergency Services	_	Some	Some	Some	Some	Some
Communication Services	_	High	High	High	High	High
Buildings						
Areas of Concentrated Residential Development	_	Some	Low	Low	Some	Some
Government Buildings and Sites	_	Some	Some	Some	High	Some
Key Employment or Commercial Centers	_	Some	Some	Some	Some	Some
Schools	_	Some	Some	Some	Some	Some
Natural and Managed Resources						
Wildlands and open spaces	Low	Some	Some	Low	Some	Some

TABLE A-3: VULNERABILITY SCORING

	Drought	Extreme Heat	Flooding	Landslides and Mudflows	Severe Weather	Wildfire
Populations						
Low-Income Households	_	V4	V5	V5	V4	V4
Households in Poverty	_	V5	V5	V5	V5	V5
Cost-Burdened Households	_	V3	V3	V3	V3	V3
Severely Overcrowded Households	_	V3	V3	V3	V3	V3
Renters	_	V3	V4	V4	V4	V3
Mobile Homes	_	V3	V3	V3	V4	V4
Persons Without Access to Transportation or Telecommunications	_	V3	V5	V5	V5	V5
Linguistically Isolated Communities	_	V3	V3	V3	V3	V4
Low-Resourced Racial or Ethnic Minorities	_	V3	V4	V4	V4	V4
Outdoor Workers	V5	V4	V4	V4	V4	V4
Healthcare Workers, First Responders, and Protective Service Occupations	V5	V4	V4	V4	V4	V4
Houseless Population	V5	V4	V5	V4	V4	V4
Children (under 14 years of age)	_	V5	V3	V3	V3	V5
Persons with Disabilities	_	V4	V4	V4	V3	V5
Persons with Chronic Health Problems	_	V5	V3	V3	V3	V5
Seniors (65+)	_	V4	V3	V3	V3	V5
Persons Living Alone	_	V2	V3	V3	V2	V3
Infrastructure						
Airports	_	_	V3	_	V3	V3
Transit Routes	_	_	V3	_	V3	V3
Major Roads and Highways	_	_	V4	V4	V4	V4
Freight	_	_	V4	V4	V4	V4
Electrical Substations	_	V4	V3	V3	V4	V4
Electrical Transmission and Distribution Lines	_	V4	V3	V3	V4	V4
Water and Wastewater Infrastructure	V3	V3	V4	V3	V4	V2
Flood Control Infrastructure	V4	_	V4	V3	V4	V2
Key Services						
Emergency Services	_	V4	V4	V4	V4	V4
Communication Services	_	V1	V3	V5	V3	V5
Buildings						
Areas of Concentrated Residential Development	_	V2	V5	V5	V3	V4
Government Buildings and Sites	_	V2	V3	V3	V2	V3
Key Employment or Commercial Centers	_	V2	V3	V3	V3	V3
Schools	_	V2	V3	V3	V3	V3
Natural and Managed Resources						
Wildlands and open spaces	V4	V3	V3	V4	V3	V3

Appendix D

Climate Adaptation Strategies
Prioritization Criteria and Scoring Tool

City of Lake Elsinore Climate Adaptation Strategies Prioritization Criteria, Scoring Rationale, and Scoring Matrix & Implementation Matrix

This workbook supports the development and prioritization of climate adaptation strategies for the City of Lake Elsinore. It is organized into several tabs that guide the evaluation process from criteria definition through scoring and implementation planning

Tab Name	Content
Prioritization Criteria	>Lists the evaluation criteria used to rank adaptation strategies (including description and guiding questions). >Includes FEMA STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, Environmental) criteria plus an added Equity criterion to address fairness and disproportionate impacts.
Scoring Rationale	>Explains the overall scoring system and basis for how each criterion should be applied in scoring.
Scoring Tool	>Contains the full list of proposed adaptation strategies. >Interactive worksheet where each adaptation strategy is scored against each criterion. >Produces comparative scores to help identify high-priority strategies and allows notes to be added. >**Those criteria that need additional support and feedback from the City are highlighted in orange.**
Implementation Matrix	>Details key implementation considerations for each strategy, including agencies and departments responsible (primary & supporting), potential partnerships, funding sources, equity considerations, indicators of success, and methods to assess success. >Provides a roadmap for moving from planning to action
Funding Sources	>Provides a summary of potential funding sources that the City can explore to support the implementation of the proposed climate adaptation strategies.

Criterion	Description	Guiding Questions
Social	Based on the idea that community consensus is a necessary precondition for successful implementation of mitigation measures (i.e., measures should be supported and accepted by the entire community). This also means that measures should not affect adversely a particular segment of the population or a particular neighborhood, or adversely impact local cultural values or resources.	- Will the proposed action adversely affect any one segment of the population? - Will it give some disproportionate benefit to only one segment? - Will the action disrupt established neighborhoods, break up legal, political, or electoral districts, or cause the relocation of lower-income people? - Is the action compatible with present and future community values? - Will the actions adversely affect cultural values or resources? - Does the measure treat people fairly? (e.g., social equity, different groups, different generations)?
Technical	Address the technical feasibility of the proposed measures, in terms of effectiveness, secondary impacts, and the technical capabilities of your community to implement and sustain these measures.	- How effective is the action in avoiding or reducing future losses? It is important the measures taken are able to achieve the anticipated results, not a fraction thereof. - Will it create more problems than it fixes? - Does it solve the problem or only a symptom? - Is the action technically feasible? Does it solve the problem?
Administrative	Address the administrative capabilities required to implement each mitigation measure. For example, does your jurisdiction have the necessary organization, staff, and funding sources to implement and sustain the mitigation process?	- Does the jurisdiction have the capability (staff, technical experts, and or funding) to implement the action, and can it be readily obtained? - Can the community provide the necessary maintenance work required to maintain the method of mitigation? - Can the implementation project be accomplished in a timely manner, without excessive disruption to the community?
Political	Consider the need for political support for mitigation measures. This means that all stakeholders in the political process, especially political organizations and institutions both inside and outside of the community, should support the measure.	- Is there political support to implement and maintain this action? - Have political leaders participated in the planning process so far? - Is there a local champion willing to help see the action to completion? - Who are the stakeholders in this proposed action, and how do they feel about the changes that will occur as a result of the action? - Is there enough public support, toward which political leaders are likely to lean, to ensure the success of the action? - Have all of the stakeholders been offered an opportunity to participate in the planning process? - How can the mitigation objectives be accomplished at the lowest “cost” to the public?
Legal	Determine the appropriate legal authority necessary to implement each mitigation measure and whether such an authority can be delegated. In addition, you will examine the mitigation measure from the standpoint of current statutes, codes, ordinances, and other regulations, as well as the possible legal ramifications of the measure’s implementation.	- Does the government in question have the authority to grant permission or permits for the work that is to be conducted? - Is there a technical, scientific, or legal basis for the mitigation action (i.e., does the mitigation action “fit” the hazard setting)? - Are the proper laws, ordinances, and resolutions in place to implement the action? - Are there any potential legal consequences? - Will there be any issues of liability for the actions or support of actions, or lack of action, by any of the mitigation stakeholders? - Is the action likely to be challenged by stakeholders who may be negatively affected? - Does the jurisdiction have the legal authority to implement the action? Is it legal?
Economic	Address the cost-effectiveness of the proposed measure and its economic impact on the community. It is only reasonable to expect that the benefits of implementation will exceed the costs incurred. Economic considerations also consider the economic impact on the community’s future development.	- Are there currently sources of funds that can be used to implement the action? - What benefits will the action provide? - Does the cost seem reasonable for the size of the problem and likely benefits? - What financial burden will be placed on the tax base or local economy to implement or maintain this action? - Will the result of the action negatively affect the economy in some secondary manner, such as reducing some form of income generation that was dependent upon the existence of the hazard? - Does the action contribute to other community economic goals, such as capital improvements or economic development?
Environmental	Have become an important consideration in examining mitigation options. Although most mitigation measures are usually beneficial for the environment, some measures may have adverse effects, which must be considered and addressed.	- How will this action affect the environment (including land, water, and air resources, and endangered species)? - Will this action comply with environmental laws and regulations? - Is the action consistent with the community’s values and goals?
Equity	Recognize that climate adaptation measures should reduce, instead of worsening existing disparities. Actions should prioritize the needs of historically marginalized and vulnerable populations, ensure fair distribution of benefits and burdens, and meaningfully engage underrepresented communities in decision-making.	- Will the proposed action reduce disproportionate climate or hazard impacts on disadvantaged, low-income, or historically marginalized communities? - Does the action prioritize investments in communities with the highest unmet needs or highest exposure to risk? - Could the action unintentionally create or worsen burdens (economic, social, or environmental) on vulnerable groups? - Does it promote distributional equity (fair distribution of benefits, resources, and protections)?

Criterion	+1 (Positive)	0 (Neutral)	-1 (Negative)	City Input Needed?	City Comments
Social	Widely supported by the public; improves safety, health, or quality of life	Limited public benefit; unclear support	Likely to face community opposition or cause social disruption	Y	
Technical	Proven, reliable, and feasible with current tools, staff, and knowledge	Some uncertainty or moderate complexity	Unproven, complex, or technically infeasible with current capacity	Y	
Administrative	Easily implemented with existing staff and systems	May require moderate coordination or added effort	Requires major new staff, systems, or administrative burden	Y	Please advise on expected level of effort using the scores
Political	Strong support from elected officials, partners, or key stakeholders	Mixed or unknown support	Faces political resistance or controversy	Y	
Legal	Fully legal and aligned with current codes and regulations	May need clarification, adjustment, or minor permitting	Conflicts with existing laws or regulations; requires major legal changes	Y	
Economic	Cost-effective; low or moderate cost with strong long-term value	Uncertain funding or moderate cost with unclear return	High cost with limited funding or poor cost-benefit ratio	Y	
Environmental	Provides clear environmental benefits (e.g., reduces emissions, improves habitat)	Mixed or neutral effects on the environment	Potential for environmental harm or tradeoffs	Y	
Equity	Benefits frontline, low-income, or historically underserved populations	General benefits without specific equity focus	Risks widening disparities or ignores vulnerable populations	Y	

To City:

We would greatly value your input and review on all of the prioritization criteria. In particular, we would appreciate additional support and feedback on the **Administrative, Political, and Legal** criteria, as your perspective will be especially important for ensuring these are tailored appropriately for the City's context.

Strategy Name & No.	Social	Technical	Administrative	Political	Legal	Economic	Environmental	Equity	Total Score	Notes
GOAL 1: IMPROVE THE OVERALL CLIMATE RESILIENCE OF THE CITY OF LAKE ELSINORE										
Strategy All-1: Implement and monitor the effectiveness of existing policies, actions, and measures identified in the City and regional entities' existing plans, including, but not limited to the hazard mitigation plan(s), general plan safety element and Western Riverside Adaptation and Resiliency Strategy.	1	1	1	1	1	0	0	0	5	
Strategy All-2: Enhance the climate resilience of existing and new residential and commercial developments by encouraging and incentivizing the use of pervious paving and climate-smart landscaped surfaces to prepare for more frequent extreme heat, drought and flooding events.	1	1	1	1	1	0	0	0	5	
Strategy All-3: Increase the climate resilience of existing and new residential and commercial development through structural strengthening and hardening to adapt to multiple climate change hazards, via updating the City's local building code or adopting targeted amendments to address key climate vulnerabilities.	1	1	1	1	1	1	0	0	6	
Strategy All-4: Avoid the future construction of critical facilities and infrastructure in or near climate change hazard-prone areas.	1	1	1	1	1	1	0	0	6	
Strategy All-5: Collaborate with nearby jurisdictions and Riverside County to protect existing critical facilities and infrastructure from climate change hazards via regular maintenance and retrofitting.	1	1	1	1	1	1	0	0	6	
Strategy All-6: Invest in sustainable backup power sources to provide redundancy and continued services for critical facilities in the event of an outage.	1	1	0	1	1	1	0	0	5	
Strategy All-7: Utilize the best available data and research to understand how climate change hazards may affect the city's transportation system and infrastructure. Collaborate with the California Department of Transportation (Caltrans) to improve the climate resilience of the city's transportation system and infrastructure.	1	0	0	1	1	1	0	0	4	
Strategy All-8: Incorporate considerations of climate change and health equity into all governmental initiatives and fundamental operations. Ensure that public health initiatives serving vulnerable communities address the disproportionate impacts of climate change hazards on these communities.	1	1	1	1	1	0	0	1	6	
Strategy All-9: Integrate climate change considerations into all stages of the City's emergency management planning, encompassing mitigation, preparedness, response, and recovery endeavors.	1	1	1	1	1	1	0	0	6	
Strategy All-10: Consider the impacts of climate change hazards when carrying out the City's evacuation planning. Ensure the planning efforts are consistent with the City's emergency operations plan and general plan safety element.	1	1	1	1	1	1	0	0	6	
Strategy All-11: Enhance the resilience of energy infrastructure systems against climate change hazards by collaborating with Southern California Edison (SCE) to bolster redundancy in the energy network. Ensure the regular maintenance and retrofitting of energy infrastructure to prepare it for climate change hazards.	1	0	0	1	1	1	0	0	4	
Strategy All-12: Maintain and update the City's website with information about current climate change hazards. Enhance the monitoring of these hazards to ensure rapid response and recovery. Coordinate with SCE on the notifications of power outages due to climate change hazards	1	1	1	1	1	1	0	0	6	
Strategy All-13: Increase public awareness of climate change hazards and how to prepare for such hazards via the regular community outreach events hosted in the city. Improve collaboration and information sharing among the City, other public agencies, community-based organizations, and vulnerable communities.	1	1	1	1	1	0	0	1	6	
Strategy All-14: Identify potential locations throughout the city as new community resilience centers or "resilience hubs", either through new construction or repurposing of existing facilities. Resilience hubs provide places of refuge for vulnerable community members during power outages, extreme weather events, wildfires, or other climate change hazards.	1	0	0	1	1	0	0	1	4	
Strategy All-15: Establish backup power and water resources at emergency shelters and cooling centers in case of power outages due to climate change hazards.	1	0	0	1	1	1	0	1	5	
Strategy All-16: Coordinate with the County of Riverside Continuum of Care and other existing programs to ensure that emergency shelters are available during climate change hazards. Ensure that vulnerable communities are made aware of these resources.	1	1	1	1	1	0	0	1	6	
Strategy All-17: Enhance the climate resilience of existing and new residential and commercial development by promoting structural hardening, pervious surfaces, and climate-smart landscaping to address multiple hazards such as extreme heat, flooding, and wildfire. This may include updates to the City's building code, targeted retrofits, and incentives or support for resilience upgrades, particularly in disadvantaged communities, mobile home parks, and other vulnerable areas.	1	0	0	0	1	1	0	1	4	
GOAL 2: PREPARE FOR MORE FREQUENT DROUGHT EVENTS AND ENHANCE THE CITY'S OVERALL WATER SUPPLY RESILIENCE										
Strategy Drought-1: Partner with EVMWD to evaluate the vulnerability of the local water supply systems and networks to climate impacts and develop strategies to enhance the resilience of these systems.	1	1	0	1	1	0	0	0	4	
Strategy Drought-2: Collaborate with EVMWD and expand upon existing water conservation-related education and outreach programs for the City's residents and businesses.	1	1	1	1	1	1	0	0	6	
Strategy Drought-3: Collaborate with federal, State, and local agencies and organizations to identify future water supplies and explore alternative supply sources.	1	0	0	1	1	0	0	0	3	
Strategy Drought-4: Implement systems to capture and store stormwater for reuse in irrigation, landscape maintenance, or non-potable uses. Encourage the installation of greywater and water recycling systems to reuse water for irrigation purposes.	1	0	0	1	1	1	0	0	4	
Strategy Drought-5: Collaborate with regional water agencies to stabilize water levels in Lake Elsinore, using supplemental water sources if necessary to maintain the Lake's ecological health and recreational value. Restore the Lake's surrounding wetlands and riparian zones to enhance water retention, improve water quality, and support biodiversity.	1	0	0	1	1	1	1	0	5	
Strategy Drought-6: Consider amending the City's Uniform Building Code to require development projects to reduce indoor water consumption by 30% (consistent with 2025 CALGreen Tier 1, Section A5.303.2.3.1), and implement through conditions of approval.	0	1	0	0	1	1	0	0	3	Given that the City proposed to change language to say "Consider", I selected 0 for Social, Admin, and Political.
Strategy Drought-7: For outdoor irrigation, recommend using automatic timers and adjusting watering schedules to the cooler hours between 6 p.m. and 6 a.m., which are more restrictive than the current municipal code hours of 5 p.m. to 9 a.m.	1	1	1	1	1	1	0	0	6	
Strategy Drought-8: Encourage the adoption of advanced irrigation techniques such as drip irrigation, moisture sensors, and weather-responsive controllers to enhance water efficiency and promote sustainable landscaping practices. Incentivize planting native and drought-tolerant plants that require less watering instead of traditional lawns.	1	0	0	1	1	1	0	0	4	
Strategy Drought-9: Restrict water use during construction activities to only those purposes required by regulatory agencies when using water from a construction meter, hydrant meter, or water truck.	0	1	1	1	1	1	0	0	5	
Strategy Drought-10: Encourage the installation of water-saving devices for indoor and outdoor uses, including but not limited to open hoses equipped with automatic and positive shutoff nozzles, low-flow showerheads and faucet aerators for residential and commercial buildings, and recirculating pumps for swimming pools, fountains, and other water features.	1	1	1	1	1	1	0	0	6	
Strategy Drought-11: Collaborate with EVMWD to offer residential and commercial customers water efficient rebate to upgrade their properties and fixtures.	1	1	0	1	1	1	0	0	5	
Strategy Drought-12: Encourage and expand the implementation of drought-resistant green infrastructure such as street trees and landscaped areas to enhance cooling in both public and private spaces.	1	1	1	1	1	0	1	0	6	
GOAL 3: PREPARE FOR INCREASED TEMPERATURES AND MORE FREQUENT EXTREME HEAT EVENTS										
Strategy Temp-1: Enhance the City's emergency preparedness and response efforts regarding extreme heat events by developing or enhancing heatwave early warning systems. Consider collaborating with Riverside County or creating the City's own heat action plan.	1	0	0	1	1	0	0	0	3	
Strategy Temp-2: Use reflective or permeable pavement materials that reduce heat absorption and mitigate the heat island effect, particularly in parking lots, sidewalks, and streets.	1	1	0	1	1	0	0	0	4	
Strategy Temp-3: Collaborate with SCE to prepare the City's electric substations as well as transmission and distribution lines for more frequent extreme heat events by upgrading conductors, transformers, and other critical components with materials that are better suited to withstand higher temperatures, as well as improving the insulation on transmission and distribution lines to prevent overheating.	1	1	0	1	1	1	0	0	5	
Strategy Temp-4: Partner with SCE to implement load management strategies and demand response programs to reduce strain on electric substations and transmission lines during extreme heat events.	1	0	0	1	1	1	0	0	4	
Strategy Temp-5: Revise the City's municipal code to require new development to plant at minimum two 15-gallon non-deciduous, umbrella-form trees per 30 linear feet of boundary length near buildings through the development review process. Trees shall be planted in strategic locations around buildings or to shade pavement in parking lots and streets.	1	1	0	1	1	0	1	0	5	
Strategy Temp-6: Consider amending the City's municipal code to require new non-residential development to use roofing materials having solar reflectance, thermal emittance or solar reflectance index consistent with 2025 CALGreen Tier 1 values (Table A5.106.11.2.1) and implement through conditions of approval.	0	1	0	0	0	1	1	0	3	Given that the City proposed to change language to say "Consider", I selected 0 for Social, Admin, and Political.
Strategy Temp-7: Employ passive solar heating techniques whenever possible with new development projects. Such techniques involve, but are not limited to, orienting buildings properly, planting trees to take advantage of the sun, as well as ensuring adequate roof overhangs and proper wall insulation.	1	0	0	1	1	1	1	0	5	
Strategy Temp-8: Work with the California Division of Occupational Safety and Health and employers to provide outdoor workers with sufficient training regarding protection from extreme heat conditions, ensuring the maintenance of healthy and safe working environments.	1	1	1	1	1	0	0	1	6	
Strategy Temp-9: Coordinate with Riverside Transit Agency to increase shading and heat-mitigating materials on pedestrian walkways and transit stops.	1	0	0	1	1	0	1	1	5	
Strategy Temp-10: Restore and enhance plant habitats for natural shading and cooling.	1	0	0	1	1	0	1	0	4	
Strategy Temp-11: Reduce public exposure to extreme heat by expanding access to drinking water and shaded spaces in parks, schoolyards, and recreational facilities with a focus on equity and prioritization of underserved communities and high-heat zones.	1	1	0	1	1	0	1	1	6	
GOAL 4 PREPARE FOR MORE FREQUENT EXTREME PRECIPITATION, FLOODING, LANDSLIDE, MUDFLOW, AND DEBRIS FLOW EVENTS										
Strategy Flood-1: Implement the Master Drainage Plan adopted by the City in April 2023. Continue to update studies that outline flood hazard areas outside of the Master Drainage Plan.	1	1	1	1	1	0	1	0	6	
Strategy Flood-2: Ensure that new construction activities in floodways and floodplains conform to all applicable provisions of the National Flood Insurance Program to protect from flooding.	1	0	0	1	1	1	0	0	4	
Strategy Flood-3: Utilize the City's Capital Improvement Program for storm drainage projects and maintenance and improvement of local storm drain systems including but not limited to channels, pipes, and inlets to ensure capacity for maximum runoff flows.	1	1	1	1	1	1	0	0	6	
Strategy Flood-4: Identify and address areas with poor drainage to lower disease risks associated with stagnant water. Enhance education and outreach initiatives to inform communities about potential increases in vector-borne diseases due to stagnant water.	1	1	0	1	1	0	1	0	5	
Strategy Flood-5: Encourage retrofits of hardscaped areas to use permeable paving. Permeable paving can also mitigate the heat island effect, as specified in Strategy Temp-2.	1	1	1	1	1	0	0	0	5	
Strategy Flood-6: Restore riparian corridors, soft-bottomed streambeds, and seasonal flood basins to help mitigate flood hazards.	1	0	0	1	1	0	1	0	4	
Strategy Flood-7: Encourage the creation of floodway setbacks for greenways, trails, and recreation areas while discouraging development within floodways.	1	0	0	1	1	0	1	0	4	
Strategy Flood-8: Mandate the construction of channel improvements designed to accommodate 100-year flood flows where applicable. Promote drainage improvements that maintain a natural or semi-natural floodplain.	1	0	0	1	1	0	1	0	4	
Strategy Flood-9: Promote low-impact development practices in new construction projects. Low-impact development is a land use and engineering design approach that aims to manage stormwater runoff and protect water quality.	1	0	0	1	1	0	1	0	4	
Strategy Flood-10: Assess new development applications for potential flood hazards through project review and California Environmental Quality Act processes using Federal Emergency Management Agency (FEMA) regulations and mapping data. Require compliance with FEMA Special Flood Hazard Area requirements for projects located within or adjacent to designated flood hazard areas, or when site-specific conditions indicate a flood risk.	1	1	1	1	1	1	0	0	6	
Strategy Flood-11: Coordinate with EVMWD and other sanitation districts and waste management agencies to improve sewage and solid waste management infrastructure to lessen the occurrences of floodwater contamination, thereby reducing the spread of pollution and degraded water quality.	1	0	0	1	1	0	1	0	4	

Strategy Flood-12: Coordinate with Riverside County Flood Control and Water Quality Management District to identify new locations suitable for multi-benefit flood control that encourage groundwater recharge and habitat restoration.	1	0	0	1	1	0	1	0	4	
Strategy Flood-13: Retrofit and/or relocate infrastructure and critical facilities exposed to flooding and landslide hazards to make them more resilient to such hazards, based on GIS-based spatial analyses.	1	0	0	1	1	1	0	0	4	
Strategy Flood-14: Ensure the regular maintenance of water and wastewater infrastructure and facilities to prepare them for extreme precipitation events.	1	1	1	1	1	0	0	0	5	
Strategy Flood-15: Assess and map areas with bare soil or significant disturbance due to natural hazards such as wildfire events and/or anthropogenic changes to prioritize restoration efforts. Implement targeted restoration activities where feasible by selecting appropriate vegetation, applying erosion control measures, and following best management practices.	1	0	0	1	1	0	1	0	4	
Strategy Flood-16: Partner with Riverside County Flood Control and Water Quality Management District, Riverside County, and National Weather Service to deliver robust multilingual education and outreach materials accessible across multiple media forms (e.g. radio, text messaging) to publicize information regarding potential day-to-day flood risk, key terminology, emergency supplies, pet protection, electrical safety, and evacuation routes in the case of flooding.	1	1	1	1	1	0	0	1	6	
GOAL 5: PREPARE FOR AND ADAPT TO INCREASED WILDFIRE RISK										
Strategy Fire-1: Promote programs aimed at raising public awareness of regional air quality issues and highlighting actionable solutions and improvement opportunities.	1	1	1	1	1	0	1	0	6	
Strategy Fire-2: Implement ongoing brush clearance requirements and establish low-fuel landscaping policies to minimize combustible vegetation near the urban-wildland interface.	1	1	1	1	1	0	0	0	5	
Strategy Fire-3: Strengthen defensible space inspections in wildfire-prone areas. Create fuel modification zones around developments within high wildfire hazard areas by clearing combustible vegetation within 100 feet of such developments. The fuel modification zone size may be altered with the addition of fire-resistant building techniques.	1	0	0	1	1	0	0	0	3	
Strategy Fire-4: Perform fuel reduction projects throughout the city to reduce fire potential. Develop a wildfire risk reduction assessment that the City can use for new development in wildfire-prone areas.	1	0	0	1	1	0	0	0	3	
Strategy Fire-5: Develop and enforce construction and design standards that ensure the development project incorporates fire prevention features. Encourage the use of fire-resistant building techniques for new developments such as non-combustible wall surfacing materials, enclosed materials and features, and automatic fire sprinklers.	1	1	1	1	1	1	0	0	6	
Strategy Fire-6: Promote programs that educate city residents about the threat of human wildfire origination from residential practices such as outdoor barbeques and from highway use, such as cigarette littering.	1	1	1	1	1	1	0	0	6	
Strategy Fire-7: Continue to follow Riverside County Fire Department's most current guidelines to achieve standard response times and staffing levels to prepare for wildfire events.	0	1	1	1	1	0	0	0	4	
Strategy Fire-8: Establish neighborhood and building design standards that minimize wildfire hazards in very high and high fire hazard severity zones. Create wildfire protection zones that reduce the risks to citizens and firefighters from fire dangers.	1	0	0	1	1	1	0	0	4	
Strategy Fire-9: Initiate wildfire fuel management practices in parks and open spaces.	1	0	0	1	1	0	-1	0	2	Environmental receives a -1 assuming the air quality degradation from prescribed burn
Strategy Fire-10: Collaborate with Riverside County and regularly maintain existing fire roads throughout the city to provide fire department access.	1	0	0	1	1	1	0	0	4	
Strategy Fire-11: Implement long range fire safe planning through code adoption/policies consistent with the City's General Plan Public Safety, Noise, and Air Quality Element.	1	1	1	1	1	0	1	0	6	
Strategy Fire-12: Work with the California Department of Forestry and Fire Protection (CAL FIRE) and the Riverside County Fire Department to map and identify locations that are newly at risk, or at risk for fire hazards because of climate change; implement wildfire mitigation best practices such as maintaining defensible spaces and fire breaks, as well as hardening structures with fire-resistant materials in these mapped and identified locations.	1	0	0	1	1	1	0	0	4	
Strategy Fire-13: Coordinate with CAL FIRE, California Department of Fish and Wildlife, University of California Cooperative Extension, and other agencies and organizations to establish post-fire ecological recovery programs to support ecological restoration efforts. Such ecological restoration endeavors could include the reintroduction and establishment of native species, and ecologically-beneficial vegetation management techniques (e.g., prescribed burns, invasive species removal) that would reduce the potential for high-intensity wildfires and improve the resilience of the City's wildlands.	1	0	0	1	1	0	1	0	4	
Strategy Fire-14: Retrofit and/or relocate infrastructure and critical facilities exposed to wildfire hazards to make them more resilient to wildfire, based on GIS-based spatial analyses.	1	0	0	0	1	1	0	0	3	
Strategy Fire-15: Increase the City's water storage capacity specifically for firefighting purposes, ensuring that fire hydrants are well-distributed in vulnerable and wildfire-prone areas	1	0	0	1	1	0	0	1	4	
Strategy Fire-16: Similar to Strategy Flood-5, invest in fire detection and early warning systems such as remote sensors and surveillance technologies to detect wildfires early and notify residents and responders quickly.	1	0	0	1	1	1	0	0	4	
Strategy Fire-17: Adhere to Chapter 7.1 of the Fire Code pursuant to adopted High Severity Zone Maps.	1	1	1	1	1	0	0	0	5	
Strategy Fire-18: Collaborate with the CAL FIRE and the Riverside County Fire Department to support public wildfire education and prevention programs.	1	1	1	1	1	0	0	1	6	

Strategy All-1: Implement and monitor the effectiveness of existing policies, actions, and measures identified in the City and regional entities' existing plans, including, but not limited to the hazard mitigation plan(s), general plan safety element and Western Riverside Adaptation and Resiliency Strategy.	City Manager's Office / Administrative Services	Community Development, Economic Development, Engineering, Public Works, Recreation, Fire, Emergency Services	Western Riverside Council of Governments (WRCOG); California Governor's Office of Emergency Services (Cal OES); Riverside County	FEMA Building Resilient Infrastructure and Communities (BRIC); Adaptation Planning Grant Program (APGP); General Fund; Local Budget	Ensure inclusive participation and representation in CAAP processes; provide multilingual access and prioritize underrepresented groups.	Percentage of adaptation and hazard mitigation policies, actions and measures from existing City and regional plans that are implemented on schedule, with monitoring results used to refine future actions	Tracking and reporting on a regular basis
Strategy All-2: Enhance the climate resilience of existing and new residential and commercial developments by encouraging and incentivizing the use of pervious paving and climate-smart landscaped surfaces to prepare for more frequent extreme heat, drought and flooding events.	Community Development	Public Works, Engineering	WRCOG; Cal OES; Riverside County	General Fund; Local Budget	Prioritize disadvantaged communities that are also hazard-prone.	Adoption of updated development standards and measurable increase in the percentage of existing and new development projects incorporating pervious paving and climate-smart landscaping	Tracking and reporting on a regular basis
Strategy All-3: Increase the climate resilience of existing and new residential and commercial development through structural strengthening and hardening to adapt to multiple climate change hazards, via updating the City's local building code or adopting targeted amendments to address key climate vulnerabilities.	Community Development	Public Works, Engineering, Fire	WRCOG; Riverside County	General Fund; Local Budget	N/A	Adoption of local building code and/or targeted amendments to address climate vulnerabilities, with increasing percentages of new and retrofitted buildings and developments meeting resilience standards	Tracking and reporting on a regular basis
Strategy All-4: Avoid the future construction of critical facilities and infrastructure in or near climate change hazard-prone areas.	Community Development	Public Works, Engineering, Fire	WRCOG; Riverside County	N/A	N/A	No future construction of such facilities and infrastructure in or near climate change hazard-prone areas.	Tracking and reporting on a regular basis
Strategy All-5: Collaborate with nearby jurisdictions and Riverside County to protect existing critical facilities and infrastructure from climate change hazards via regular maintenance and retrofitting.	Public Works	Community Development, Engineering, Fire	WRCOG; Cal OES; Riverside County	FEMA BRIC; General Fund; Local Budget	Prioritize those facilities located in disadvantaged areas that are also hazard-prone	Establishment of collaboration with nearby jurisdictions and Riverside County; Measurable increases in the percentage of critical facilities retrofitted or maintained to withstand climate hazards	Tracking and reporting on a regular basis
Strategy All-6: Invest in sustainable backup power sources to provide redundancy and continued services for critical facilities in the event of an outage.	Public Works	Community Development, Engineering, Emergency Services	WRCOG; Cal OES; Riverside County	FEMA BRIC; General Fund; Local Budget	Prioritize those facilities located in disadvantaged areas that are also hazard-prone	Percentage of critical facilities equipped with sustainable backup power sources	Tracking and reporting on a regular basis
Strategy All-7: Utilize the best available data and research to understand how climate change hazards may affect the city's transportation system and infrastructure. Collaborate with the California Department of Transportation (Caltrans) to improve the climate resilience of the city's transportation system and infrastructure.	Engineering, Public Works	Community Development	Caltrans; WRCOG; Cal OES; Riverside County	FEMA BRIC; APGP; General Fund; Local Budget	Prioritize such transportation infrastructure located in disadvantaged areas that are also hazard-prone	Integration of climate hazard data into city transportation planning; Measurable increase in resilience features across new and retrofitted transportation projects	Tracking and reporting
Strategy All-8: Incorporate considerations of climate change and health equity into all governmental initiatives and fundamental operations. Ensure that public health initiatives serving vulnerable communities address the disproportionate impacts of climate change hazards on these communities.	City Manager's Office / Administrative Services	Recreation, Community Operations	WRCOG; Riverside County	General Fund; Local Budget	N/A (Already captured by the strategy itself)	Measurable increases in public health resources and services directed toward vulnerable communities disproportionately affected by climate hazards	Tracking and reporting on a regular basis
Strategy All-9: Integrate climate change considerations into all stages of the City's emergency management planning, encompassing mitigation, preparedness, response, and recovery endeavors.	Emergency Services	Community Development, Engineering, Fire Public Works	WRCOG; Cal OES; Riverside County	General Fund; Local Budget	N/A	Climate change considerations are integrated into the City's emergency management planning	Tracking and reporting on a regular basis
Strategy All-10: Consider the impacts of climate change hazards when carrying out the City's evacuation planning. Ensure the planning efforts are consistent with the City's emergency operations plan and general plan safety element.	Emergency Services	Community Development, Engineering, Fore, Public Works	WRCOG; Cal OES; Riverside County	General Fund; Local Budget	N/A	Climate change considerations are integrated into the City's evacuation planning	Tracking and reporting on a regular basis
Strategy All-11: Enhance the resilience of energy infrastructure systems against climate change hazards by collaborating with Southern California Edison (SCE) to bolster redundancy in the energy network. Ensure the regular maintenance and retrofitting of energy infrastructure to prepare it for climate change hazards.	Engineering/Public Works	City Manager's Office, Economic Development Community Operations, Community Development	WRCOG; SCE; Riverside County	FEMA BRIC; General Fund; Local Budget	Prioritize such transportation infrastructure located in disadvantaged areas that are also hazard-prone	Establishment of a collaboration framework with SCE; Measurable increases in energy system redundancy and resilience upgrade	Tracking and reporting on a regular basis
Strategy All-12: Maintain and update the City's website with information about current climate change hazards. Enhance the monitoring of these hazards to ensure rapid response and recovery. Coordinate with SCE on the notifications of power outages due to climate change hazards	Emergency Services	City Manager's Office / Administrative Services, Community Operations, Recreation	WRCOG; SCE; Riverside County	General Fund; Local Budget	Provide multilingual access and prioritize underrepresented groups.	City maintains a climate hazard information webpage and coordinated SCE outage notifications, with timely public updates and increased outreach effectiveness	Tracking and reporting on a regular basis
Strategy All-13: Increase public awareness of climate change hazards and how to prepare for such hazards via the regular community outreach events hosted in the city. Improve collaboration and information sharing among the City, other public agencies, community-based organizations, and vulnerable communities.	Emergency Services	City Manager's Office, Economic Development, Community Operations, Recreation	WRCOG; Riverside County; CBOs	General Fund; Local Budget	Provide multilingual access and prioritize underrepresented groups.	Increased number of outreach events; Strengthened partnerships with local organizations; Measurable improvements in participation and preparedness among vulnerable communities	Tracking and reporting on a regular basis
Strategy All-14: Identify potential locations throughout the city as new community resilience centers or "resilience hubs", either through new construction or repurposing of existing facilities. Resilience hubs provide places of refuge for vulnerable community members during power outages, extreme weather events, wildfires, or other climate change hazards.	Recreation	Public Works, Emergency Services, Fire, Community Operations	WRCOG; Cal OES; Riverside County	FEMA BRIC; General Fund; Local Budget	Prioritize disadvantaged communities that are also hazard-prone.	Completion of a citywide resilience hub siting study; Establishment of new or repurposed resilience hubs	Tracking and reporting on a regular basis
Strategy All-15: Establish backup power and water resources at emergency shelters and cooling centers in case of power outages due to climate change hazards.	Emergency Services	Public Works, Fire, Community Operations	WRCOG; Cal OES; Riverside County	FEMA BRIC; General Fund; Local Budget	Prioritize those facilities located in disadvantaged areas that are also hazard-prone	Designated emergency shelters and cooling centers have backup power and adequate emergency water supplies	Tracking and reporting on a regular basis
Strategy All-16: Coordinate with the County of Riverside Continuum of Care and other existing programs to ensure that emergency shelters are available during climate change hazards. Ensure that vulnerable communities are made aware of these resources.	Emergency Services	Recreation, Community Operations	Riverside County	General Fund; Local Budget	Provide multilingual access and prioritize underrepresented groups.	Regular coordination with the County of Riverside Continuum of Care and other existing programs to ensure shelter availability and accessibility, with measurable increases in outreach effectiveness	Tracking and reporting on a regular basis
Strategy All-17: Enhance the climate resilience of existing and new residential and commercial development by promoting structural hardening, pervious surfaces, and climate-smart landscaping to address multiple hazards such as extreme heat, flooding, and wildfire. This may include updates to the City's building code, targeted retrofits, and incentives or support for resilience upgrades, particularly in disadvantaged communities, mobile home parks, and other vulnerable areas.	Community Development	Engineering, Public Works, Fire, City Manager's Office, Economic Development, Community Operations	WRCOG; Cal OES; Riverside County	FEMA BRIC; APGP; General Fund; Local Budget	Prioritize those developments located in disadvantaged areas that are also hazard-prone	Updated codes and incentives result in measurable increases in resilience upgrades and retrofits, with targeted benefits for disadvantaged neighborhoods and other vulnerable areas.	Tracking and reporting on a regular basis
Strategy Drought-1: Partner with Elsinore Valley Municipal Water District (EVMWD) to evaluate the vulnerability of the local water supply systems and networks to climate impacts and develop strategies to enhance the resilience of these systems.	Engineering	Community Development, Fire, Public works	EVMWD; CA DWR; State Water Board	CA DWR funds; State Water Board funds; FEMA BRIC; APGP	N/A	Joint vulnerability assessment with EVMWD completed on local water supply systems; Strategies developed for system enhancement	Tracking and reporting on a regular basis
Strategy Drought-2: Collaborate with EVMWD and expand upon existing water conservation-related education and outreach programs for the City's residents and businesses.	Lake & Community Operations	Public Works, Engineering, Economic Development	EVMWD	General Fund; Local Budget	Provide multilingual access and prioritize underrepresented groups.	Joint water conservation education campaigns with EVMWD, which result in measurable reductions in per capita water use; Increased participation in water conservation incentive programs	Tracking and reporting on a regular basis
Strategy Drought-3: Collaborate with federal, State, and local agencies and organizations to identify future water supplies and explore alternative supply sources.	Engineering	Community Development	EVMWD; CA DWR; State Water Board	CA DWR funds; State Water Board funds; FEMA BRIC; APGP	N/A	Completion of feasibility studies and agreements that diversify the city's water supply portfolio, with measurable improvements in drought resilience	Tracking and reporting on a regular basis
Strategy Drought-4: Implement systems to capture and store stormwater for reuse in irrigation, landscape maintenance, or non-potable uses. Encourage the installation of greywater and water recycling systems to reuse water for irrigation purposes.	Engineering	Community Development, Public Works	EVMWD	General Fund; Local Budget	Provide multilingual access and prioritize underrepresented groups.	Increased stormwater capture and reuse, measured by acre-feet of water reused; Percentage of developments incorporating greywater and/or water recycling systems	Tracking and reporting on a regular basis
Strategy Drought-5: Collaborate with regional water agencies to stabilize water levels in Lake Elsinore, using supplemental water sources if necessary to maintain the Lake's ecological health and recreational value. Restore the Lake's surrounding wetlands and riparian zones to enhance water retention, improve water quality, and support biodiversity.	Lake & Community Operations	Recreation, Public Works	EVMWD; Department of Water Resources (CA DWR)	General Fund; Local Budget; CA DWR funds	N/A	Water quality improvement in Lake Elsinore; Acreage of wetlands and/or riparian zones restored, as well as other measurable improvements in water quality and biodiversity	Tracking and reporting on a regular basis
Strategy Drought-6: Consider amending the City's Uniform Building Code to require development projects to reduce indoor water consumption by 30% (consistent with 2025 CALGreen Tier 1, Section A5.303.2.3.1), and implement through conditions of approval.	Community Development	City Manager's Office / Administrative Services, Fire	N/A	N/A	N/A	Whether such an amendment is approved; Measurable reductions in water demand	Tracking and reporting
Strategy Drought-7: For outdoor irrigation, recommend using automatic timers and adjusting watering schedules to the cooler hours between 6 p.m. and 6 a.m., which are more restrictive than the current municipal code hours of 5 p.m. to 9 a.m.	Community Development	Public works, Code Enforcement	EVMWD	N/A	Provide multilingual access and prioritize underrepresented groups.	Whether such proposed watering schedules are adopted and enforced	Tracking and reporting

Strategy Drought-8: Encourage the adoption of advanced irrigation techniques such as drip irrigation, moisture sensors, and weather-responsive controllers to enhance water efficiency and promote sustainable landscaping practices. Incentivize planting native and drought-tolerant plants that require less watering instead of traditional lawns.	Community Development	Public Works, Engineering, Economic Development	EVMWD	General Fund; Local Budget; CA DWR funds	Ensure equitable access to water conservation programs; provide bill assistance and rebates for low-income households	Expansion of advanced irrigation and sustainable landscaping practices; Measurable reductions in outdoor water use; Increased participation in other water conservation incentives	Tracking and reporting on a regular basis
Strategy Drought-9: Restrict water use during construction activities to only those purposes required by regulatory agencies when using water from a construction meter, hydrant meter, or water truck.	Public Works	Community Development, Engineering	N/A	N/A	N/A	Construction water use restricted to regulatory-required purposes only; Measurable reductions in construction water use	Tracking and reporting on a regular basis
Strategy Drought-10: Encourage the installation of water-saving devices for indoor and outdoor uses, including but not limited to open hoses equipped with automatic and positive shutoff nozzles, low-flow showerheads and faucet aerators for residential and commercial buildings, and recirculating pumps for swimming pools, fountains, and other water features.	Community Development	Public Works, Engineering	EVMWD	General Fund; Local Budget; CA DWR funds	Ensure equitable access to water conservation programs; provide bill assistance and rebates for low-income households	Adoption of water-saving device standards and increased installations across new and existing developments; Measurable reductions in per capita water use	Tracking and reporting on a regular basis
Strategy Drought-11: Collaborate with EVMWD to offer residential and commercial customers water efficient rebate to upgrade their properties and fixtures.	Community Development	Engineering, Public Works, Economic Development	EVMWD	General Fund; Local Budget; CA DWR funds	Ensure equitable access to water conservation programs; provide bill assistance and rebates for low-income households	City & EVMWD rebate program launched and widely utilized, yielding measurable water savings	Tracking and reporting on a regular basis
Strategy Drought-12: Encourage and expand the implementation of drought-resistant green infrastructure such as street trees and landscaped areas to enhance cooling in both public and private spaces.	Public Works	Community Development, Engineering	N/A	General Fund; Local Budget	Prioritize disadvantaged communities that are also hazard-prone.	Increased # of trees planted, and acreage of areas with improved landscape	Tracking and reporting on a regular basis
Strategy Temp-1: Enhance the City's emergency preparedness and response efforts regarding extreme heat events by developing or enhancing heatwave early warning systems. Consider collaborating with Riverside County or creating the City's own heat action plan.	Emergency Services	Community Operations, Recreation	Riverside County	FEMA BRIC; General Fund; Local Budget; APGP	Prioritize disadvantaged communities that are also hazard-prone.	Establishment of a City heat action plan and early warning system	Tracking and reporting
Strategy Temp-2: Use reflective or permeable pavement materials that reduce heat absorption and mitigate the heat island effect, particularly in parking lots, sidewalks, and streets.	Engineering	Public Works, Community Development	N/A	General Fund; Local Budget	Prioritize disadvantaged communities that are also hazard-prone.	Increased acreage of areas using reflective or permeable pavement materials	Tracking and reporting on a regular basis
Strategy Temp-3: Collaborate with SCE to prepare the City's electric substations as well as transmission and distribution lines for more frequent extreme heat events by upgrading conductors, transformers, and other critical components with materials that are better suited to withstand higher temperatures, as well as improving the insulation on transmission and distribution lines to prevent overheating.	Public Works	Emergency Services, Engineering	SCE, Riverside County	FEMA BRIC; General Fund; Local Budget	Prioritize those located in disadvantaged communities that are also hazard-prone	Increased substations and/or utility lines upgraded	Tracking and reporting on a regular basis
Strategy Temp-4: Partner with SCE to implement load management strategies and demand response programs to reduce strain on electric substations and transmission lines during extreme heat events.	Public Works	Emergency Services, Engineering	SCE, Riverside County	General Fund; Local Budget; APGP	N/A	Increased participation in SCE demand response and load management programs, resulting in measurable reductions in peak demand and improved grid reliability	Tracking and reporting on a regular basis
Strategy Temp-5: Revise the City's municipal code to require new development to plant at minimum two 15-gallon non-deciduous, umbrella-form trees per 30 linear feet of boundary length near buildings through the development review process. Trees shall be planted in strategic locations around buildings or to shade pavement in parking lots and streets.	Community Development	Engineering, Public Works	N/A	General Fund; Local Budget	N/A	Adoption and enforcement of new code requirements; Increased # of trees planted, and acreage of areas with improved landscape	Tracking and reporting
Strategy Temp-6: Consider amending the City's municipal code to require new non-residential development to use roofing materials having solar reflectance, thermal emittance or solar reflectance index consistent with 2025 CALGreen Tier 1 values (Table A5.106.11.2.1) and implement through conditions of approval.	Community Development	City Manager's Office / Administrative Services, Engineering	N/A	N/A	N/A	Adoption and enforcement of new code requirements	Tracking and reporting
Strategy Temp-7: Employ passive solar heating techniques whenever possible with new development projects. Such techniques involve, but are not limited to, orienting buildings properly, planting trees to take advantage of the sun, as well as ensuring adequate roof overhangs and proper wall insulation.	Community Development	Public Works, Engineering	N/A	General Fund; Local Budget;	Prioritize those located in disadvantaged communities that are also hazard-prone	Increased incorporation of passive solar design features in new developments	Tracking and reporting on a regular basis
Strategy Temp-8: Work with the California Division of Occupational Safety and Health and employers to provide outdoor workers with sufficient training regarding protection from extreme heat conditions, ensuring the maintenance of healthy and safe working environments.	Adminstrative Services	Public Safety, Economic Development, City Manager's Office / Administrative Services	California Division of Occupational Safety and Health	General Fund; Local Budget	N/A	Increased training coverage and improved heat safety compliance among outdoor workers; Fewer heat-related workplace incidents	Tracking and reporting on a regular basis
Strategy Temp-9: Coordinate with Riverside Transit Agency to increase shading and heatmitigating materials on pedestrian walkways and transit stops.	Engineering	Community Development, Public Works	Riverside Transit Agency, Caltrans	General Fund; Local Budget; ; Caltrans grants	Prioritize those located in disadvantaged communities that are also hazard-prone	Increased number of shaded and cooled transit stops and walkways	Tracking and reporting on a regular basis
Strategy Temp-10: Restore and enhance plant habitats for natural shading and cooling.	Public Works	Community Development, Engineering, Lake & Community Operations	Riverside County, CDFW	General Fund; Local Budget; CDFW funding	Prioritize potential areas located in disadvantaged communities that are also hazard-prone	Expanded plant habitats that increase canopy cover and reduce heat exposure	Tracking and reporting on a regular basis
Strategy Temp-11: Reduce public exposure to extreme heat by expanding access to drinking water and shaded spaces in parks, schoolyards, and recreational facilities with a focus on equity and prioritization of underserved communities and high-heat zones.	Recreation	Community Development, Public Works	Riverside County, CBOs, Schools	General Fund; Local Budget;	N/A (Already captured by the strategy itself)	Expanded shaded areas and drinking water access in priority neighborhoods, resulting in reduced public heat exposure and increased equitable access to safer outdoor spaces	Tracking and reporting on a regular basis
Strategy Flood-1: Implement the Master Drainage Plan adopted by the City in April 2023. Continue to update studies that outline flood hazard areas outside of the Master Drainage Plan.	Engineering	Community Development, Public Works	Riverside County, CA DWR, Riverside County Flood Control and Water Quality Management District	General Fund; Local Budget	N/A	Implementation of the April 2023 Master Drainage Plan and regular updates of flood hazard studies	Tracking and reporting on a regular basis
Strategy Flood-2: Ensure that new construction activities in floodways and floodplains conform to all applicable provisions of the National Flood Insurance Program (NFIP) to protect from flooding.	Engineering	Community Development, Public Works, Fire	Riverside County, CA DWR, FEMA, Riverside County Flood Control and Water Quality Management District	FEMA Flood Mitigation Assistance Program (FMA); General Fund; Local Budget	N/A	Records proving that new construction activities in floodways and floodplains conform to such provisions	Tracking and reporting on a regular basis
Strategy Flood-3: Utilize the City's Capital Improvement Program (CIP) for storm drainage projects and maintenance and improvement of local storm drain systems including but not limited to channels, pipes, and inlets to ensure capacity for maximum runoff flows.	Engineering	Public Works, City Manager's Office / Administrative Services, Community Development	Riverside County, CA DWR, U.S. Army Corps of Engineers (USACE)	General Fund; Local Budget; CA DWR funds; FEMA BRIC	Prioritize those located in disadvantaged communities that are also hazard-prone	Implementation of storm drainage projects through the CIP increases storm drain system capacity and reduces localized flooding	Tracking and reporting on a regular basis
Strategy Flood-4: Identify and address areas with poor drainage to lower disease risks associated with stagnant water. Enhance education and outreach initiatives to inform communities about potential increases in vector-borne diseases due to stagnant water.	Public Works	Lake & Community Operations, Engineering	Riverside County, CA DWR, CBOs	General Fund; Local Budget	Provide multilingual access and prioritize underrepresented groups; Prioritize those located in disadvantaged communities that are also hazard-prone.	Such areas have improved drainage; Increased public participation in related outreach initiatives	Tracking and reporting on a regular basis
Strategy Flood-5: Encourage retrofits of hardscaped areas to use permeable paving. Permeable paving can also mitigate the heat island effect, as specified in Strategy Temp-2.	Public Works	Engineering, Community Development	Riverside County	General Fund; Local Budget	Prioritize those located in disadvantaged communities that are also hazard-prone	Expansion of permeable pacing retrofits, reducing surface heat	Tracking and reporting on a regular basis
Strategy Flood-6: Restore riparian corridors, soft-bottomed streambeds, and seasonal flood basins to help mitigate flood hazards.	Public Works	Community Development, Engineering	Riverside County, CA DWR, USACE; Riverside County Flood Control and Water Quality Management District	General Fund; Local Budget; FEMA BRIC; CA DWR funds	Prioritize those located in disadvantaged communities	Completion of riparian, streambed, and flood basin restoration projects that reduce flood hazards	Tracking and reporting on a regular basis
Strategy Flood-7: Encourage the creation of floodway setbacks for greenways, trails, and recreation areas while discouraging development within floodways.	Community Development	Engineering, Public Works	Riverside County, CA DWR, USACE, Riverside County Flood Control and Water Quality Management District	General Fund; Local Budget; FEMA BRIC; CA DWR funds	Prioritize those located in disadvantaged communities	Adoption of floodway setback policies resulting in new greenways, trails, and recreation areas; Reduced development pressures in flood-prone zones	Tracking and reporting on a regular basis
Strategy Flood-8: Mandate the construction of channel improvements designed to accommodate 100-year flood flows where applicable. Promote drainage improvements that maintain a natural or semi-natural floodplain.	Engineering	Community Development, Fire, Public Works	Riverside County, CA DWR, USACE, FEMA, Riverside County Flood Control and Water Quality Management District	General Fund; Local Budget; FEMA BRIC; CA DWR funds	Prioritize those located in disadvantaged communities	Channel improvements designed to 100-year flood capacity are completed where applicable, reducing flood risks while maintaining semi-natural floodplains	Tracking and reporting on a regular basis
Strategy Flood-9: Promote low-impact development practices in new construction projects. Low-impact development is a land use and engineering design approach that aims to manage stormwater runoff and protect water quality.	Community Development	Public Works, Engineering	Riverside County	General Fund; Local Budget	Prioritize those new construction located in disadvantaged communities	Expanded use of low-impact development practices in new development projects, resulting in reduced runoff and improved water quality	Tracking and reporting on a regular basis

Strategy Flood-10: Assess new development applications for potential flood hazards through project review and California Environmental Quality Act (CEQA) processes using Federal Emergency Management Agency (FEMA) regulations and mapping data. Require compliance with FEMA Special Flood Hazard Area (SFHA) requirements for projects located within or adjacent to designated flood hazard areas, or when site-specific conditions indicate a flood risk.	Community Development	Engineering, Fire	Riverside County, FEMA, Riverside County Flood Control and Water Quality Management District	General Fund; Local Budget	N/A	All new development applications reviewed for flood hazards through CEQA and FEMA mapping, with compliance in FEMA SFHAs	Tracking and reporting on a regular basis
Strategy Flood-11: Coordinate with EVMWD and other sanitation districts and waste management agencies to improve sewage and solid waste management infrastructure to lessen the occurrences of floodwater contamination, thereby reducing the spread of pollution and degraded water quality.	Public Works	Community Development, Engineering	Riverside County, EVMWD	General Fund; Local Budget; FEMA BRIC	Prioritize such infrastructure located in disadvantaged communities that are also hazard-prone	Coordinated improvements to sewage and waste management infrastructure, reducing flood-related contamination and improving water quality	Tracking and reporting
Strategy Flood-12: Coordinate with Riverside County Flood Control and Water Quality Management District to identify new locations suitable for multi-benefit flood control that encourage groundwater recharge and habitat restoration.	Engineering	Public Works, Community Development	Riverside County Flood Control and Water Quality Management District	General Fund; Local Budget; FEMA BRIC; APGP; FEMA FMA	N/A	Multi-benefit flood control projects implemented that enhance groundwater recharge and habitat restoration while reducing flood risks	Tracking and reporting on a regular basis
Strategy Flood-13: Retrofit and/or relocate infrastructure and critical facilities exposed to flooding and landslide hazards to make them more resilient to such hazards, based on GIS-based spatial analyses.	Public Works	Community Development, Engineering	Riverside County Flood Control and Water Quality Management District	General Fund; Local Budget; FEMA BRIC; CA DWR funds	Prioritize those located in disadvantaged communities that are also hazard-prone	GIS-based assessments guide the retrofit or relocation of at-risk facilities, reducing exposure to flooding and landslide hazards	Tracking and reporting on a regular basis
Strategy Flood-14: Ensure the regular maintenance of water and wastewater infrastructure and facilities to prepare them for extreme precipitation events.	Public Works	Engineering, Emergency Service, Fire	Riverside County Flood Control and Water Quality Management District	General Fund; Local Budget; FEMA BRIC; CA DWR funds	Prioritize those located in disadvantaged communities that are also hazard-prone	Preventive maintenance and wet-weather readiness protocols to reduce and/or avoid service disruptions during extreme precipitation events	Tracking and reporting on a regular basis
Strategy Flood-15: Assess and map areas with bare soil or significant disturbance due to natural hazards such as wildfire events and/or anthropogenic changes to prioritize restoration efforts. Implement targeted restoration activities where feasible by selecting appropriate vegetation, applying erosion control measures, and following best management practices.	Public Works	Engineering, Fire, Community Development	Riverside County; CDFW	General Fund; Local Budget; FEMA BRIC; CDFW grants	N/A	Completion of GIS-based mapping and targeted restoration activities, which reduce erosion and restore ecological functions	Tracking and reporting
Strategy Flood-16: Partner with Riverside County Flood Control and Water Quality Management District, Riverside County, and National Weather Service to deliver robust multilingual education and outreach materials accessible across multiple media forms (e.g. radio, text messaging) to publicize information regarding potential day-to-day flood risk, key terminology, emergency supplies, pet protection, electrical safety, and evacuation routes in the case of flooding.	City Manager's Office/Media Team, Emergency Services	City Manager's Office / Administrative Services, Community Services	Riverside County Flood Control and Water Quality Management District, Riverside County, National Weather Service	General Fund; Local Budget	Provide multilingual access and prioritize underrepresented groups	Regular multilingual, multi-platform outreach campaigns, which improve public awareness of flood risks and preparedness actions	Tracking and reporting on a regular basis
Strategy Fire-1: Promote programs aimed at raising public awareness of regional air quality issues and highlighting actionable solutions and improvement opportunities.	Community Operations	Public Works, Community Development, Fire	Valley Air District, Riverside County Fire Department, CAL FIRE	General Fund; Local Budget	Provide multilingual access and prioritize underrepresented groups	Increased community awareness and participation in air quality improvement programs	Tracking and reporting on a regular basis
Strategy Fire-2: Implement ongoing brush clearance requirements and establish low-fuel landscaping policies to minimize combustible vegetation near the urban-wildland interface.	Fire	Community Development, Public Works, Engineering	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants	Prioritize those located in disadvantaged communities that are also hazard-prone	Expanded brush clearance enforcement and low-fuel landscaping policies, reducing combustible vegetation near the urban-wildland interface	Tracking and reporting on a regular basis
Strategy Fire-3: Strengthen defensible space inspections in wildfire-prone areas. Create fuel modification zones around developments within high wildfire hazard areas by clearing combustible vegetation within 100 feet of such developments. The fuel modification zone size may be altered with the addition of fire-resistant building techniques.	Fire	Community Development, Public Works, Engineering	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants	Prioritize those located in disadvantaged communities that are also hazard-prone	Strengthened defensible space inspections and fuel modification zones, reducing wildfire risk near developments	Tracking and reporting on a regular basis
Strategy Fire-4: Perform fuel reduction projects throughout the city to reduce fire potential. Develop a wildfire risk reduction assessment that the City can use for new development in wildfire-prone areas.	Fire	Community Development, Public Works	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants; APGP	Prioritize projects that target disadvantaged communities that are also hazard-prone; assessment should focus on such areas as well	Implementation of fuel reduction projects; Adoption of wildfire risk reduction assessment standards, reducing fire potential	Tracking and reporting on a regular basis
Strategy Fire-5: Develop and enforce construction and design standards that ensure the development project incorporates fire prevention features. Encourage the use of fire-resistant building techniques for new developments such as non-combustible wall surfacing materials, enclosed materials and features, and automatic fire sprinklers.	Community Development	Fire	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants	Prioritize those located in disadvantaged communities that are also hazard-prone	Adoption and enforcement of construction and design standards requiring fire prevention features, reducing wildfire risk for new developments	Tracking and reporting on a regular basis
Strategy Fire-6: Promote programs that educate city residents about the threat of human wildfire origination from residential practices such as outdoor barbeques and from highway use, such as cigarette littering.	Fire	Recreation, Police	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants	Provide multilingual access and prioritize underrepresented groups	Implementation of wildfire prevention education programs, reducing human-caused ignitions	Tracking and reporting on a regular basis
Strategy Fire-7: Continue to follow Riverside County Fire Department's most current guidelines to achieve standard response times and staffing levels to prepare for wildfire events.	Fire	Police,	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget	N/A	Compliance with Riverside County Fire Department wildfire response guidelines	Tracking and reporting
Strategy Fire-8: Establish neighborhood and building design standards that minimize wildfire hazards in very high and high fire hazard severity zones. Create wildfire protection zones that reduce the risks to citizens and firefighters from fire dangers.	Community Development	Fire	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants	Prioritize disadvantaged communities that are also hazard-prone	Adoption and enforcement of neighborhood design standards; Creation of wildfire protection zones that reduce wildfire risks	Tracking and reporting on a regular basis
Strategy Fire-9: Initiate wildfire fuel management practices in parks and open spaces.	Recreation	Fire, Public Works	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants	Prioritize those located in disadvantaged communities that are also hazard-prone	Wildfire fuel management projects initiated in parks and open spaces, reducing fire risk	Tracking and reporting on a regular basis
Strategy Fire-10: Collaborate with Riverside County and regularly maintain existing fire roads throughout the city to provide fire department access.	Fire	Public Works	Riverside County Fire Department, CAL FIRE, Caltrans	General Fund; Local Budget; CAL FIRE grants; Caltrans grants	Prioritize those fire roads located in disadvantaged communities that are also hazard-prone	Regular maintenance of fire roads, ensuring reliable emergency access for fire department access	Tracking and reporting on a regular basis
Strategy Fire-11: Implement long range fire safe planning through code adoption/policies consistent with the City's General Plan Public Safety, Noise, and Air Quality Element.	Community Development	City Manager's Office / Administrative Services, Fire, Public Works	Riverside County Fire Department, CAL FIRE, Caltrans	General Fund; Local Budget	N/A	Adoption and enforcement of fire-safe codes and policies aligned with the City's General Plan, reducing long-term wildfire risk	Tracking and reporting on a regular basis
Strategy Fire-12: Work with the California Department of Forestry and Fire Protection (CAL FIRE) and the Riverside County Fire Department to map and identify locations that are newly at risk, or at risk for fire hazards because of climate change; implement wildfire mitigation best practices such as maintaining defensible spaces and fire breaks, as well as hardening structures with fire-resistant materials in these mapped and identified locations.	Community Development	Fire, Public Safety	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants	Prioritize those located in disadvantaged communities that are also hazard-prone	Updated hazard mapping identifying climate-driven wildfire risk areas; Implementation of defensible space, fire breaks, hardening measures, and other wildfire mitigation best practices	Tracking and reporting on a regular basis
Strategy Fire-13: Coordinate with CAL FIRE, California Department of Fish and Wildlife (CDFW), University of California Cooperative Extension, and other agencies and organizations to establish post-fire ecological recovery programs to support ecological restoration efforts. Such ecological restoration endeavors could include the reintroduction and establishment of native species, and ecologically-beneficial vegetation management techniques (e.g., prescribed burns, invasive species removal) that would reduce the potential for high-intensity wildfires and improve the resilience of the City's wildlands.	Fire	Community Development, Public Works, Engineering	CAL FIRE, CDFW, University of California Cooperative Extension	General Fund; Local Budget; CAL FIRE grants; CDFW grants	Prioritize such endeavors that would benefit disadvantaged communities	Establishment of post-fire ecological recovery programs that restore native habitats, reduce high intensity wildfire potential, and improve resilience of wildlands	Tracking and reporting on a regular basis
Strategy Fire-14: Retrofit and/or relocate infrastructure and critical facilities exposed to wildfire hazards to make them more resilient to wildfire, based on GIS-based spatial analyses.	Public Works	Engineering, Community Development, Fire	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants; FEMA BRIC	Prioritize those located in disadvantaged communities that are also hazard-prone	GIS-based risk analysis that guides retrofits or relocation of at-risk infrastructure and facilities	Tracking and reporting on a regular basis
Strategy Fire-15: Increase the City's water storage capacity specifically for firefighting purposes, ensuring that fire hydrants are well-distributed in vulnerable and wildfire-prone areas	Public Works	Fire, Engineering	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants	Prioritize such capacity building in disadvantaged communities that are also hazard-prone	Increased water storage capacity and improved hydrant distribution, enhancing firefighting readiness	Tracking and reporting
Strategy Fire-16: Similar to Strategy Flood-5, invest in fire detection and early warning systems such as remote sensors and surveillance technologies to detect wildfires early and notify residents and responders quickly.	Fire	Public works, Public Safety	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget; CAL FIRE grants	Provide multilingual access and prioritize underrepresented groups	Deployment of wildfire detection sensors/cameras and integrated alerting, reducing detection-to-dispatch times and speeding public warnings	Tracking and reporting
Strategy Fire-17: Adhere to Chapter 7.1 of the Fire Code pursuant to adopted High Severity Zone Maps.	Fire	Community Development	Riverside County Fire Department, CAL FIRE	N/A	N/A	Enforcement of Fire Code Chapter 7.1 pursuant to adopted High Severity Zone Maps	Tracking and reporting
Strategy Fire-18: Collaborate with CAL FIRE and the Riverside County Fire Department to support public wildfire education and prevention programs.	Fire	City Manager's Office / Administrative Services	Riverside County Fire Department, CAL FIRE	General Fund; Local Budget	Provide multilingual access and prioritize underrepresented groups	Joint education and prevention campaigns, increasing resident wildfire preparedness and reducing human-caused ignitions	Tracking and reporting on a regular basis

Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC) Grant Program	The BRIC program supports hazard mitigation efforts to strengthen infrastructure and reduce risks from natural disasters. The program aims to support communities as they build capability and capacity.	Grants	FEMA
FEMA Flood Mitigation Assistance (FMA) Program	The FMA program provides funding to eligible entities for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program (NFIP). FMA is competitive and prioritizes projects that reduce or eliminate NFIP claims.	Grants	FEMA
California Adaptation Planning Grant (APG)	The APG program funds local and tribal governments to prepare climate vulnerability assessments, adaptation plans, and resilience strategies, with emphasis on equity and the needs of vulnerable communities.	Grants	California Governor's Office of Land Use and Climate Innovation (LCI)
California Department of Water Resources (CA DWR) Funds	DWR offers competitive grant and loan programs that support climate-adaptation and water-resilience projects, such as integrated watershed management, groundwater recharge, water-energy efficiency, and flood control.	Grants/Loans	CA DWR
State Water Board Funds	The State Water Board administers grant and loan programs that support infrastructure improvements, water quality projects, and resilience to climate-driven risks like drought, flooding	Grants/Loans	State Water Board
California Department of Transportation (Caltrans) Grants	Caltrans offers planning grants (under its Sustainable Transportation Planning Grant Program) that include a specific Climate Adaptation Planning category. These funds support local and regional agencies in identifying transportation-infrastructure climate vulnerabilities and developing adaptation strategies.	Grants	Caltrans
California Department of Fish and Wildlife (CDFW) Grants	CDFW supports projects that restore ecosystems, improve habitat, and build resilience on natural and working lands. These grants intend to help communities and wildlife adapt to climate hazards and changing conditions.	Grants	CDFW

Appendix E

Greenhouse Gas Emissions Forecast, Targets, and Reduction Measures Memo

Memo

2550 Fifth Avenue, Suite 640
San Diego, CA 92103
619.219.8000

Date: December 11, 2025

To: Adam Gufarotti, Carlos Serna, Damaris Abraham, Bailey MacLean (City of Lake Elsinore)

From: Natalie Kataoka, Adam Qian, Andrew Beecher, Poonam Boparai

Subject: Greenhouse Gas Emissions Forecast, Targets, and Reduction Measures Memorandum for the City of Lake Elsinore Climate Action and Adaptation Plan

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INTRODUCTION

The City of Lake Elsinore (City) is updating its Climate Action Plan, which was first adopted in 2011. The Climate Action and Adaptation Plan (CAAP) will provide a programmatic framework for the City to reduce its greenhouse gas (GHG) emissions in alignment with State legislation and include climate resilience and adaptation strategies. The CAAP includes a baseline GHG emissions inventory, a forecast of future GHG emissions to align with growth projections of the ongoing General Plan Update, an assessment of the GHG emissions reductions that will be needed to meet State-aligned GHG reduction targets, and a set of adaptation strategies designed to make the community more resilient to current and future climate hazards. This memorandum summarizes the results of a GHG emissions forecast that aligns with the growth projections of the concurrent General Plan Update, and GHG reduction targets consistent with Senate Bill 32 (SB 32) and Assembly Bill 1279 (AB 1279). AB 1279 was signed into law in 2022, which formally adopted a long-term statewide target for reducing GHG emissions to net-zero by 2045, including an 85% reduction in anthropogenic GHG emissions below 1990 levels before 2045 (State of California 2023a). This memorandum also summarizes the quantification results for the GHG reduction strategies included in the CAAP and demonstrates a pathway for the City to reach GHG reduction targets consistent with State legislation.

The scope of the analysis presented in this memorandum is intended to maintain consistency with the growth projections associated with the City's General Plan Update (GPU). As such, the analysis includes both the Lake Elsinore City Limits and Sphere of Influence (SOI), which are collectively referred to as "Lake Elsinore" throughout this memorandum unless otherwise specified.

1.1 ORGANIZATION OF THIS MEMORANDUM

This memorandum consists of 7 parts:

- **Section 1: Introduction** presents the context for the analysis of GHG emissions forecasts, reduction targets, and reduction strategies.
- **Section 2: Background** provides an overview of the CAAP, the regulatory context for GHG reduction targets, and a summary of the 2022 GHG inventory.
- **Section 3: Greenhouse Gas Emissions Forecasts** summarizes the forecasted GHG emissions under "business-as-usual" (BAU) and legislative-adjusted BAU scenarios for years 2030 and 2045.

- **Section 4: Greenhouse Gas Reduction Targets** describes locally-specific GHG reduction targets that align with State legislation and the approach for the identification of targets.
- **Section 5: GHG Strategies Summary** introduces the GHG reduction strategies included in the CAAP and summarizes the GHG reduction potential for quantified strategies.
- **Section 6: Analysis of Targets Attainment** presents a comparison of the GHG reduction targets and the projected GHG emissions for the City with implementation of the GHG strategies.
- **Section 7: References** includes references and citations used in this memorandum.
- **Attachment A** details the methods and results for the GHG emissions forecasts.
- **Attachment B** summarizes data, methods, and assumptions used to estimate GHG emissions reductions for each quantified strategy.
- **Attachment C** details estimates of the reduction in vehicle miles traveled (VMT) that would be achieved with implementation of various strategies.

2 BACKGROUND

Climate action planning includes steps the City can take to reduce emissions to achieve specific GHG reduction targets. The City has laid out a roadmap for achieving these targets by identifying GHG reduction measures, including new policies, programs, education and outreach efforts, and other actions that, if implemented, will reduce emissions in the region. The CAAP includes GHG reduction targets that are aligned with key state legislation and are specific to local conditions and emissions.

Local governments can establish targets that are most appropriate and applicable for local conditions. The State's legislative framework around GHG goals provides guiding principles that can inform local targets. The California Air Resources Board's (CARB's) *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) recommends that local targets support the State's implementation of strategies to reach the legislative targets established by SB 32 and AB 1279, which aim to reduce statewide anthropogenic emissions to:

- 40 percent below 1990 levels by 2030 (SB 32), and
- 85 percent below 1990 levels by 2045 (AB 1279).

Achievement of these targets requires identification of a set of strategies to reduce emissions across all emissions sectors. Each strategy is supported by specific actions that can be implemented at the jurisdictional level through municipal actions, such as adoption of building codes that improve energy efficiency and regulations that reduce the amount of organic waste sent to landfill.

This memorandum analyzes local GHG reduction targets for the CAAP that are consistent with the State's goals for reducing anthropogenic emissions by 2045 and provides the future GHG emissions reduction potential of specific GHG reduction strategies included in the CAAP. To inform this analysis, the calculation of future GHG emissions is also included in this memorandum, as both a BAU and legislative-adjusted BAU forecast. Collectively, the analysis p projection of future GHG emissions for the years 2030 and 2045, including the local impacts of State and federal actions, and how GHG emissions in Lake Elsinore can be reduced to meet State-aligned targets through local action.

2.1 STATE POLICIES AND PLANS

In September 2016, Governor Jerry Brown signed SB 32, which mandates that California reduce statewide GHG emissions to 40 percent below 1990 levels by 2030. It builds upon previous legislation (AB 32), codifying ambitious

targets and driving the state's transition towards a low-carbon economy. In November 2017, the California Air Resources Board (CARB) released *California's 2017 Climate Change Scoping Plan* (2017 Scoping Plan), which outlined the State's strategy for achieving the 2030 reduction target of SB 32 (CARB 2017).

In September 2022, Governor Gavin Newsom signed AB 1279, which requires the State of California to achieve net zero GHG emissions by 2045 and reduce direct anthropogenic GHG emissions 85 percent below 1990 levels by 2045.

In December 2022, CARB released the 2022 Scoping Plan. This plan outlines the State's comprehensive strategy to achieve its climate goals under AB 1279. Building upon the 2017 Scoping Plan, the 2022 Scoping Plan demonstrates how net-zero emissions can be achieved in 2045 or sooner, consistent with AB 1279. It includes a variety of measures across different sectors to accelerate GHG emission reductions, enhance carbon sequestration, and implement new carbon capture, utilization, and storage measures consistent with SB 905 (also signed into law in 2022) to achieve net-zero emissions (sometimes also referred to by CARB as "carbon neutrality") by 2045.

2.2 GREENHOUSE GAS EMISSIONS INVENTORY

The GHG emissions inventory establishes the existing conditions for the CAAP, serving to identify the contribution of different communitywide GHG emissions sources in Lake Elsinore, and set a baseline for forecasting future emissions, setting GHG reduction targets, and monitoring progress towards reaching the target over time. The GHG emissions inventory presented here is for calendar year 2022, which provides a baseline for forecasting future emissions using most recently available data. To align with the City's General Plan Update, the baseline for 2022 includes estimates of GHG emissions for the City Limits and SOI.

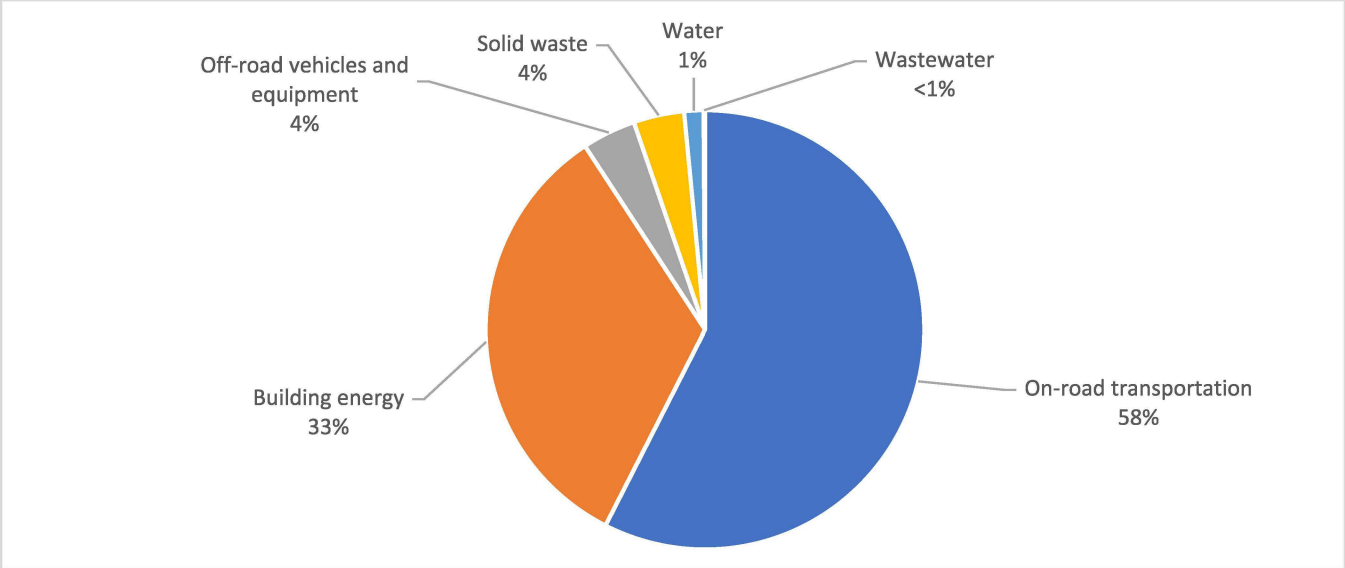
The results of the 2022 communitywide GHG emissions inventory demonstrate the contribution of different GHG emissions sources in Lake Elsinore by emissions sector. The largest contributor to total emissions was fuel combustion in on-road transportation, representing 58 percent of total emissions. The next largest emissions source was building energy, contributing 33 percent to total emissions. The remaining emissions sectors represent approximately 10 percent of total emissions, including off-road vehicles and equipment, solid waste, water, and wastewater. In total, communitywide emissions sources considered in the 2022 emissions inventory generated approximately 488,339 metric tons of carbon dioxide equivalent ($MTCO_2e$). These results are presented in Figure 1 and Table 1, showing the total emissions by sector with the representative contribution to total communitywide emissions.

Table 1 2022 GHG Emissions Inventory

Sector	GHG Emissions ($MTCO_2e$)	Percent of Total
On-road transportation	280,784	58%
Building energy	162,526	33%
Off-road vehicles and equipment	19,336	4%
Solid waste	18,224	4%
Water	6,982	1%
Wastewater	487	<1%
Total	**488,339**	**100**

Notes: GHG = greenhouse gases; $MTCO_2e$ = metric tons of carbon dioxide equivalent. Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.



Note: Totals are rounded to the nearest percent.

Data Source: Modeled by Ascent in 2025.

Figure 1 2022 GHG Emissions Inventory

3 GREENHOUSE GAS EMISSIONS FORECASTS

The GHG emissions forecast estimates how communitywide GHG emissions for Lake Elsinore may grow given population and economic growth, and how State and federal actions may help to reduce local emissions. Developing a GHG emissions forecast is an essential step for the CAAP, as it provides insight into anticipated future emissions levels and the necessary actions in each GHG emissions sector to reduce emissions within local control, in alignment with State targets. As such, a GHG emissions forecast is presented as a sector-level assessment of near-term (2030) and long-term (2045) GHG emissions projections based on current conditions under two scenarios.

Under the first scenario, GHG emissions would grow from 2022 levels at the same rates as population, employment, and vehicle travel, which is known as a *business-as-usual scenario*, or BAU, forecast. The BAU forecast serves as the basis for understanding how emissions levels may change with growth, and how far GHG emissions will need to be reduced in future years to meet GHG reduction targets without considering any future action to reduce GHG emissions. The second scenario considers the GHG reduction impact of local, state, and federal regulations, which is known as a *legislative-adjusted business-as-usual scenario*, or legislative-adjusted BAU, forecast. The legislative-adjusted BAU forecast provides a more detailed assessment of future GHG emissions by showing how currently adopted State and federal legislation and regulations will help Lake Elsinore reduce its GHG emissions. The future years selected for the GHG emissions forecasts are aligned with the GHG reduction target years for State legislation, 2030 for SB 32 and 2045 for AB 1279, and the GPU horizon year of 2045.

The BAU and ABAU forecasts presented in this memorandum incorporate the best available data and are consistent with the ongoing GPU, which analyzes growth within the Lake Elsinore City Limits and SOI. The BAU forecast utilizes growth projections consistent with the land use plan included in the GPU. Additionally, the legislative-adjusted BAU forecast incorporates State regulations such as 2022 California Building Energy Efficiency Standards and Advanced Clean Cars II regulations. Additional details on the methods for calculating the BAU and legislative-adjusted BAU forecasts are provided in Attachment A.

3.1 BUSINESS-AS-USUAL SCENARIO GREENHOUSE GAS EMISSIONS FORECAST

The BAU forecast was developed by scaling communitywide GHG emissions from the 2022 emissions inventory by the appropriate growth scaling factors. The growth scaling factors used include population, employment, and service population[1], and were applied to various emissions sources based on their relationship to the GHG emissions source. For example, growth in residential building electricity consumption would be expected to scale with an increase in population size, and commercial energy consumption would be expected to scale with the number of employees at businesses in Lake Elsinore. More details on the approach for applying growth scaling factors to specific GHG emissions sectors are provided in Attachment A. VMT for on-road transportation is also essential for understanding how future GHG emissions may change in Lake Elsinore. VMT data was estimated using the Riverside County Transportation Model (RIVCOM). The growth scaling factors and VMT used for the BAU forecast were obtained from the land use plan included in the GPU and are provided in Table 2.

Table 2 Historical and Projected Development from 2018 to 2045

Data	2018	2022	2030	2045
Population[1]	79,669	81,746	106,131	151,892
Total Employment[1]	16,066	16,694	24,309	40,795
Service Population[2]	95,735	98,440	130,440	192,687
Vehicle Miles Traveled (Annual)[3]	612,836,946	688,689,384	840,393,807	1,124,840,501

Notes:

[1] Population and total employment data source: Hermann, pers. comm., 2025.

[2] Service population is the sum of population and total employment.

[3] Vehicle miles traveled data for years 2022 and 2030 are interpolated between base year of the Riverside County Transportation Model (2018) and General Plan Update horizon year (2045) model data. See Attachment C for vehicle miles traveled estimates, which were converted from daily to annual vehicle miles traveled using an annualization factor of 353 travel days per year.

The results of the BAU forecast show that communitywide GHG emissions would be expected to grow, given no further GHG reduction efforts beyond 2022, as shown in Table 3. While a more realistic scenario for future GHG emissions can be provided with a legislative-adjusted BAU forecast, the BAU scenario provides the basis for understanding the GHG impacts of growth in Lake Elsinore.

Table 3 Business-as-Usual Scenario Forecast Results ($MTCO_2e$)

Sector	2022	2030	2045
On-road transportation	280,784	350,215	470,410
Building energy	162,526	211,710	307,658
Off-road vehicles and equipment	19,336	25,244	41,180
Solid waste	18,224	24,090	33,439
Water	6,982	8,749	12,252
Wastewater	487	615	864
Total	**488,339**	**620,623**	**865,804**
Percent Change from 2022 Levels	*NA*	*27%*	*77%*

Notes: Totals may not sum exactly due to rounding.

Modeled by Ascent in 2025.

1 Service population refers to the sum of population and employment in Lake Elsinore.

3.2 LEGISLATIVE-ADJUSTED BUSINESS-AS-USUAL SCENARIO GREENHOUSE GAS EMISSIONS FORECAST

The legislative-adjusted BAU forecast was developed by accounting for the reductions in communitywide GHG emissions in Lake Elsinore that are expected to occur as a result of adopted State and federal legislation and regulations. The GHG reductions considered in the legislative-adjusted BAU forecast fall into six categories: building efficiency standards, off-road equipment regulations, solar policies and mandates, fuel efficiency standards and electric vehicle sale requirements, renewable natural gas requirements, and renewable electricity requirements. The full list of regulations considered in the legislative-adjusted BAU forecast is provided in Attachment A.

The legislative-adjusted BAU forecasts show that emissions are expected to decline from 2022 levels through 2045, as shown in Table 4.

Table 4 Legislative-Adjusted Business-as-Usual Scenario Forecast Results ($MTCO_2e$)

Sector	2022	2030	2045
On-road transportation	280,784	258,720	86,072
Building energy	162,526	130,739	51,908
Off-road vehicles and equipment	19,336	23,380	35,938
Solid waste	18,224	24,090	33,439
Water	6,982	6,931	0
Wastewater	487	580	622
Total	488,339	444,439	207,979
Percent Change from 2022 Levels	*NA*	*-9%*	*-57%*

Notes: Totals may not sum exactly due to rounding.

Modeled by Ascent in 2025.

The primary drivers of the emissions reductions are increased renewable electricity from the requirements of SB 100 and SB 1020 and fuel-efficiency and electric vehicle sales requirements for on-road vehicles. Senate Bills 100 and 1020 establish renewable and carbon-free electricity retail sales requirements for electricity providers. Senate Bill 100 establishes a 2030 target of 60 percent renewable or carbon-free electricity retail sales by 2030, and a 100 percent target for 2045 (State of California 2023b). The GHG reductions from all legislative adjustments considered in the forecast are summarized in Table 5.

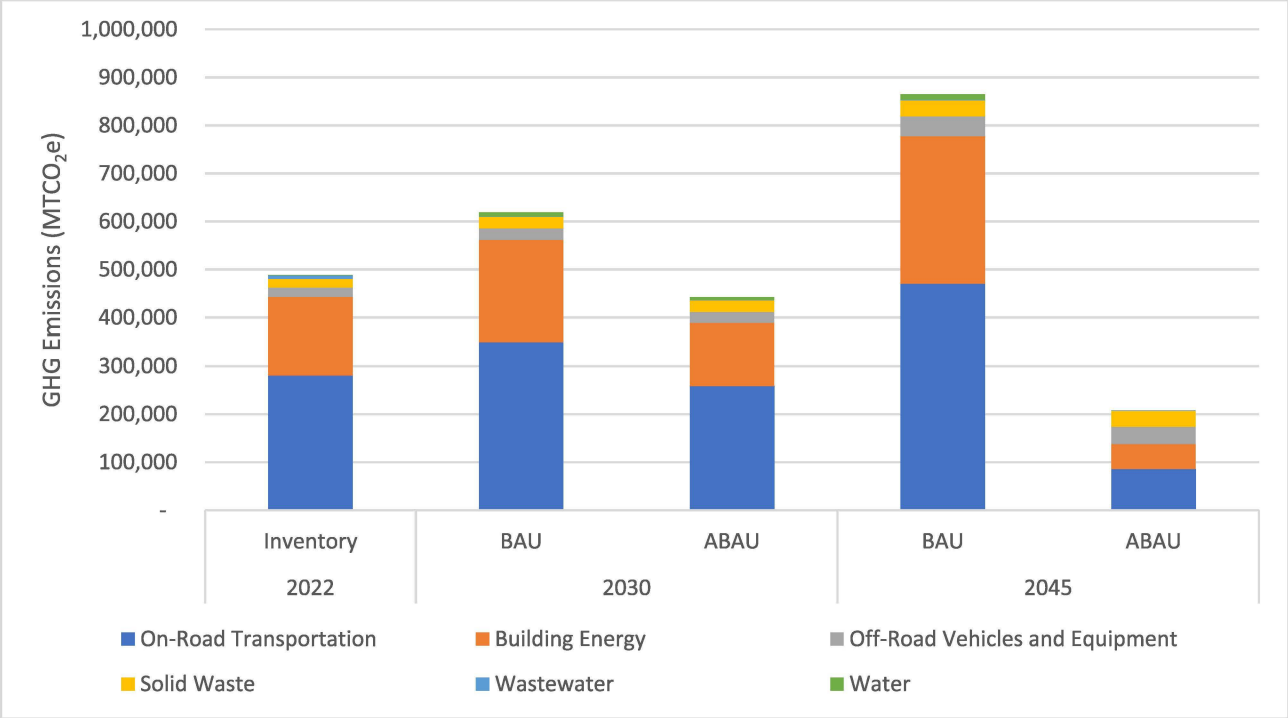
Table 5 GHG Reductions Considered in Legislative Adjusted Business-as-Usual Scenario Forecast ($MTCO_2e$)

Reductions from Legislative/Regulatory Actions	2030	2045
Building Efficiency Standards	19,227	30,986
Off-road Equipment Regulations	1,865	5,243
Solar Policies and Mandates	15,649	0
Fuel Efficiency Standards and Electric Vehicle Sales	91,495	384,338
Renewable Natural Gas Standards	6,547	11,155
Renewable Electricity Requirements	41,397	226,035
Total	**176,180**	**657,757**

Notes: Totals may not sum exactly due to rounding.

Modeled by Ascent in 2025.

The BAU and ABAU forecast results presented together demonstrate the impact of State and federal legislation and regulations on Lake Elsinore's GHG emissions profile over time, as shown in Figure 2.



Notes: ABAU = legislative-adjusted business-as-usual; BAU = business-as-usual; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Modeled by Ascent in 2025.

Figure 2 BAU and Legislative-Adjusted BAU GHG Emissions Forecasts

4 GREENHOUSE GAS REDUCTION TARGETS

A primary purpose of the CAAP is to align the City's GHG reduction targets with State goals. Since the 2011 CAP was adopted, SB 32 and AB 1279 were signed into law codifying near- and long-term GHG reduction targets. The CAAP establishes GHG reduction targets in alignment with SB 32 and AB 1279. All GHG reduction targets have been translated to be measured from the baseline of the 2022 GHG emissions inventory.

4.1 ALIGNMENT WITH STATEWIDE TARGETS

The primary statewide GHG reduction targets that are relevant to the CAAP are those established by SB 32 of 2016 and AB 1279 of 2022, which include:

- Reducing statewide GHG emissions 40 percent below 1990 levels by 2030 (SB 32), and
- Reducing statewide anthropogenic GHG emissions 85 percent below 1990 levels before 2045 (AB 1279).

With the State's adoption of these legislative targets, CARB was directed to develop and implement strategies to reduce statewide emissions consistent with the targets through a Climate Change Scoping Plan (Scoping Plan). The Scoping Plan outlines the State's strategy to reduce GHG emissions in each economic sector (referred to as "AB emissions sectors") and is regularly updated to reflect the most recent trends, technology, and legislative reduction targets. The 2017 Scoping Plan outlines the State's strategy for achieving the 2030 reduction target of SB 32 (CARB 2017), and the 2022 Scoping Plan builds upon this strategy to demonstrate how net-zero emissions will be achieved in 2045 or sooner, consistent with AB 1279 (CARB 2022). GHG reduction targets at the local level can be informed by statewide targets and the strategies outlined in the appropriate Scoping Plan.

In the Scoping Plan, statewide GHG emissions scenarios are modeled by AB 32 emissions sector for the State to achieve the corresponding target. Lake Elsinore can align GHG reduction targets in the CAAP with the Scoping Plan's GHG emission scenarios for only the AB 32 emissions sectors that are relevant to local conditions. For example, the State's forecasts for reducing emissions in the "Industrial" sector are not applicable to Lake Elsinore's GHG reduction target, as facilities that fall under this State categorization do not exist in Lake Elsinore. This target-setting approach is consistent with the legal precedence established by the California Supreme Court decision in *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming (2015) 62 Cal.4th 204* and the recommendations of the California Association of Environmental Professionals' *Final White Paper Beyond 2020 and Newhall* (AEP 2016).

4.1.1 Statewide Sectors Applicable to Lake Elsinore

A review of the AB 32 emissions sectors demonstrates that the City can have direct or indirect jurisdiction, control, or influence over activities that generate emissions and can reasonably contribute to reductions in four of the seven emissions sectors included in the statewide sectors emissions inventory: commercial and residential, electric power, recycling and waste, and transportation. This review is summarized in Table 6, showing the seven AB 32 emissions sectors and if they are applicable to Lake Elsinore, as well as the related sector in the Lake Elsinore GHG emissions inventory.

Table 6 Assembly Bill 32 Emissions Sectors Applicable to Lake Elsinore

Assembly Bill 32 Emissions Sectors	Applicable to Lake Elsinore?	Related Sector in Lake Elsinore GHG Inventory
Agriculture	No	NA
Commercial and Residential	Yes	Building Energy
Electric Power	Yes	Building Energy, Water
High Global Warming Potential (GWP) Gases	No	NA
Industrial	No	NA
Recycling and Waste	Yes	Solid Waste, Wastewater
Transportation	Yes	On-road Transportation, Off-road Equipment

Notes: NA = not applicable.

Four of the seven sectors listed in Table 6 apply to Lake Elsinore. Recycling and Waste, as well as Transportation, are all active economic sectors that directly produce emissions within Lake Elsinore. The Residential and Commercial sector, as characterized by CARB, includes only emissions from on-site fuel combustion (e.g., natural gas), which occurs at residential and commercial land uses. The Electric Power sector relates to emissions generated by electric power plants. Although major power plants are not active within Lake Elsinore, the grid-based electricity used by local buildings and facilities indirectly results in emissions at power plants that may be outside the region.

The agriculture, high global warming potential (GWP) gases, and industrial sectors are excluded for the following reasons. First, Lake Elsinore has no notable agricultural land uses or operations. Secondly, the City has limited to no ability to control or influence emissions of high GWP gases because it has limited or no jurisdiction or influence over the following activities in Lake Elsinore: substitution of ozone-depleting substances with high GWP gas substitutes; emissions of sulfur hexafluoride (SF_6) from electricity transmission lines; and semiconductor manufacturing processes. Thirdly, the City does not have jurisdiction to affect GHG emissions sources from industrial facilities that are covered entities under the State's Cap-and-Trade program.

The 2022 Scoping Plan also considers the need for the expansion of carbon dioxide removal (CDR) to meet the AB 1279 target of achieving statewide net-zero GHG emissions by 2045, through natural carbon sequestration and deployment of mechanical carbon capture. The State's CDR strategy identifies significant reductions from engineered strategies to remove significant levels of emissions from the atmosphere using technologies like direct air capture and carbon capture and sequestration (CCS). Constructing and operating direct air capture facilities to remove GHG

emissions from the atmosphere is currently outside the scope of local governments in California, including Lake Elsinore. In addition, Lake Elsinore does not include large-scale petroleum refineries, GHG-emitting electric power plants, cement manufacturing facilities, or other industrial facilities that could have their GHG emissions reduced using CCS technologies. To achieve statewide net-zero emissions by 2045, the 2022 Scoping Plan relies on the deployment of CCS technologies and CDR strategies. However, the City government does not have the jurisdiction or other ability to construct and operate CCS and mechanical CDR strategies. Therefore, the CAAP focuses on targets to reduce anthropogenic emissions from sectors that are within the City's jurisdiction or influence.

By excluding these sectors under this approach, GHG reduction targets for Lake Elsinore can be established in proportion with statewide reductions for all sectors relevant to the city to the extent feasible using available data. This target-setting approach is consistent with CARB's 2022 Scoping Plan guidance for setting locally-based targets. It is also consistent with the California Supreme Court decision in *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming (2015) 62 Cal.4th 204*, which determined that the approach of assessing a project's consistency with statewide emissions reduction goals must include a "reasoned explanation based on substantial evidence" that links the project's emissions (in this case, the project is the CAAP, which covers emissions within the Lake Elsinore City Limits and SOI) to statewide emissions included in achieving statewide GHG reduction goals.

4.1.2 Basis for the 2030 GHG Reduction Target

For 2030, the CAAP's target is aligned with SB 32 and the statewide GHG emissions pathways towards reaching this target. The 2030 target for the CAAP is consistent with a 40 percent reduction in statewide GHG emissions below 1990 levels, by applying the sector-specific targets of relevant AB 32 emissions sectors to the Lake Elsinore's emissions profile as outlined in the 2017 Scoping Plan. This reduction equivalent is translated to be measured from a 2022 baseline, assuming that GHG emissions in Lake Elsinore have generally followed statewide emissions trends in relevant GHG emissions sectors since 1990.

4.1.3 Basis for the 2045 GHG Reduction Target

For 2045, the CAAP's target is aligned with AB 1279 and the statewide GHG emissions pathway towards reaching this target, as outlined in the 2022 Scoping Plan. AB 1279 requires that the State's net-zero emissions target by 2045 be achieved by reducing statewide anthropogenic emissions by at least 85 percent below 1990 levels before 2045, which includes the AB 32 emissions sectors. Anthropogenic emissions include the primary sources and activities within the Lake Elsinore GHG emissions sectors, including on-road transportation, building energy, solid waste, off-road transportation, water, and wastewater. The 2045 target for the CAAP is consistent with an 85 percent reduction in statewide anthropogenic GHG emissions below 1990 levels, by applying the sector-specific targets of relevant AB 32 emissions sectors to the Lake Elsinore's emissions profile as outlined in the 2022 Scoping Plan. This reduction equivalent is translated to be measured from a 2022 baseline, assuming that GHG emissions in Lake Elsinore have generally followed statewide emissions trends in relevant GHG emissions sectors since 1990.

4.1.4 Statewide GHG Emissions for Applicable Sectors

To develop a local GHG reduction target for Lake Elsinore that represents a percent reduction below 2022 GHG inventory levels, statewide GHG emissions for the year 2022 were compared to statewide target GHG emissions levels for applicable sectors within the 2017 Scoping Plan (SB 32) and 2022 Scoping Plan (AB 1279). CARB publishes annual statewide GHG emissions inventories for AB 32 emissions sectors, which allows for comparison of recent statewide GHG emissions levels with target levels needed to achieve regulatory targets under SB 32 and AB 1279. Comparing current and future GHG emissions for each AB 32 emissions sector applicable to Lake Elsinore, a total percent reduction in GHG emissions for the 2030 and 2045 target years can be derived. Table 7 provides the 2022 statewide emissions levels for sectors applicable to Lake Elsinore, and target levels outlined in the 2017 Scoping Plan for the

State's 2030 target under SB 32 and the 2022 Scoping Plan for the State's 2045 target levels under AB 1279. CDR targets are excluded from this analysis as Lake Elsinore does not have substantial opportunity for enhancing CDR through mechanical capture or enhanced sequestration in natural and working lands.

Table 7 Assembly Bill 32 Emissions Sector Targets Under 2017 and 2022 Scoping Plans

Assembly Bill 32 Emissions Sectors	2022 Statewide GHG Emissions Levels ($MMTCO_2e$)	2030 Statewide GHG Emissions Target Levels Under 2017 Scoping Plan ($MMTCO_2e$)[1]	2045 Statewide GHG Emissions Target Levels Under 2022 Scoping Plan ($MMTCO_2e$)
Commercial and Residential	40	39	4
Electric Power	60	42	9
Recycling and Waste	8	9	8
Transportation	140	107	8
Total	**247**	**197**	**29**
Percent Reduction Below 2022 Levels	—	*21%*	*88%*

Notes: Totals may not sum due to rounding. $MMTCO_2e$ = million metric tons of carbon dioxide equivalent.

[1] The 2017 Scoping Plan includes ranges of GHG emissions levels that must be met for each AB 32 emissions sector for the State to reach SB 32 GHG reduction target levels. Values presented in this table are the mid-point of the target level ranges presented in the 2017 Scoping Plan.

Sources: CARB 2017, CARB 2022, CARB 2025.

4.2 CAAP GREENHOUSE GAS REDUCTION TARGETS

The GHG reduction targets for the CAAP demonstrate consistency with State legislation through locally-specific GHG target levels based on the 2022 GHG emissions inventory. The Lake Elsinore GHG reduction targets for the years 2030 and 2045 are provided in Table 8.

Table 8 Lake Elsinore Greenhouse Gas Reduction Targets

Year	CAAP GHG Reduction Target (relative to 2022 levels)	Target Emissions Levels ($MTCO_2e$)
2022	—	488,339
2030	21%	388,224
2045	88%	57,278

Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent.

5 GHG REDUCTION STRATEGIES

The CAAP proposes 14 GHG emissions reduction strategies to reduce emissions from the sectors evaluated in the 2022 inventory and forecasts, including on-road transportation, building energy use, off-road equipment, solid waste, and water supply. The strategies will be implemented through 27 GHG reduction measures that include corresponding implementation actions. In addition to reducing sources of emissions in Lake Elsinore, certain strategies would also increase local carbon sequestration potential through expansion of the urban tree canopy.

The strategies are organized by emissions sector and are identified by numbers corresponding to each emissions sector (e.g., BE-1 for the first strategy under the building energy emissions sector). Of the 14 strategies, 10 are analyzed for a numeric GHG reduction potential. Other strategies were not quantified due to available data and methods limitations, or limited local impact to GHG emissions. The GHG strategies and associated measures are provided in Table 9 along with their estimated annual GHG reductions in 2030 and 2045, corresponding to the

forecast milestone years and targets. The annual estimated GHG reductions are shown relative to future forecasted emissions in each respective year (e.g., a 1,000 $MTCO_2e$ reduction in 2030 would be subtracted from the forecasted emissions in 2030). Table 9 also shows the percentage of total annual reductions across all sectors associated with each measure (e.g., BE-2 accounts for 57 percent of the total reductions in 2030 from all strategies). The estimated GHG emissions reductions shown are in positive units that are understood to be subtracted from future legislative-adjusted BAU emissions. Information on the quantification assumptions and methods used to estimate these quantified emissions is provided in Attachment B. The estimated reduction in VMT associated with strategies TR-1, TR-2, TR-4 is available in Attachment C.

Table 9 CAAP GHG Reductions by Strategy ($MTCO_2e$/year)

Strategy	Measure Number	Measure Name	2030	2045
Building Energy				
BE-1: Energy Efficiency and Decarbonization	BE-1.1	Encourage building operations that minimize electricity use.	5,207 (9%)	38,726 (26%)
	BE-1.2	Support efforts to reduce energy burden and track energy consumption.		
	BE-1.3	Develop building performance standards that adhere to or go beyond CALGreen Tier 1 values.		
	BE-1.4	Retrofit existing residential and non-residential buildings to use electric heating and cooling technology.		
	BE-1.5	Replace fixtures with energy efficient options.		
BE-2: Renewable Energy	BE-2.1	Facilitate the transition of residential electricity use to 100% renewable energy sources.	31,430 (52%)	0 (0%)
BE-3: Energy Education	BE-3.1	Develop educational campaigns and programs that inform community members about renewable energy and electrification benefits and opportunities.	Not quantified	Not quantified
Sector Sub-Total			**36,547**	**38,726**
Transportation				
TR-1: Active Transportation	TR-1.1	Expand active transportation infrastructure by implementing the infrastructure, programmatic, and policy recommendations included in the Active LE Plan.	110 (<1%)	451 (<1%)
TR-2: Transit	TR-2.1	Increase opportunities for residents to access alternative transportation and reduce financial barriers to transit ridership.	1,588 (3%)	2,399 (2%)
	TR-2.2	Upgrade transit facilities and operations to better accommodate residents.		
TR-3: Zero-Emission Vehicles and Equipment	TR-3.1	Increase the adoption of EV's through financial incentives and vehicle replacement policies.	0 (0%)	78,322 (52%)
	TR-3.2	Expand EV charging infrastructure.		
	TR-3.3	Transition away from fossil-fuel powered equipment.		
TR-4: Smart Growth	TR-4.1	Encourage smart-growth strategies that increase connectivity and density.	853 (1%)	1,254 (1%)
	TR-4.2	Reduce the space dedicated to vehicles.		
Sector Sub-Total			**2,551**	**82,426**

Strategy	Measure Number	Measure Name	2030	2045
Water				
W-1: Water Conservation	W-1.1	Reduce water consumption through regulation and assisting residents to upgrade to efficient fixtures.	7 (<1%)	0 (0%)
	W-1.2	Increase awareness of water loss through education and audits.		
	W-1.3	Replace lawn irrigation equipment to prevent water loss.		
W-2: Recycled Water	W-2.1	Encourage the use of recycled water by increasing access to recycled water systems and informational materials.	849 (1%)	0 (0%)
Sector Sub-Total			**856**	**0**
Solid Waste				
SW-1: Recycling and Composting	SW-1.1	Increase the diversion of organic waste for commercial, residential, and municipal facilities.	20,475 (34%)	29,856 (20%)
	SW-1.2	Support the use of sustainable materials.		
	SW-1.3	Expand access to recycling and compost materials and programs.		
	SW-1.4	Enable the proper disposal of non-organic waste.		
SW-2: Local Produce	SW-2.1	Improve access to local healthy produce.	Not quantified	Not quantified
Sector Sub-Total			**20,475**	**29,856**
Green Community				
GC-1: Green Jobs	GC-1.1	Enhance economic resilience by investing in green job development.	Not quantified	Not quantified
GC-2: Urban Tree Canopy	GC-2.1	Expand urban canopy to reduce the urban heat island effect.	133 (<1%)	323 (<1%)
GC-3: Green Construction Materials	GC-3.1	Reduce emissions associated with construction by requiring materials be low-carbon or recycled.	Not quantified	Not quantified
Sector Sub-Total			**133**	**323**
Total GHG Reductions			**60,653**	**151,331**

Notes: EV = electric vehicle, GHG = greenhouse gas, LE = Lake Elsinore, $MTCO_2e$ = metric tons of carbon dioxide equivalent.

[a] The percentage of total annual reductions across all sectors associated with each strategy are shown in the parentheses in each cell of estimated reductions (e.g., BE-1 accounts for 26 percent of the total reductions in 2045 from all strategies).

Source: Modeled by Ascent in 2025.

Between 2030 and 2045, four of the 14 strategies (BE-1, BE-2, TR-3, and SW-1) would account for between 94 and 98 percent of annual emissions reductions across the quantified measures. The relative proportion of the contribution of the four measures to total annual reductions is shown above in Table 9. Building energy related strategies account for 26 to 61 percent of total reductions, highlighting the potential from improving efficiency in existing buildings and limiting the expansion of natural gas infrastructure. The expansion of zero-emissions vehicle (ZEV) charging and fueling infrastructure to support a local ZEV fleet is also a key opportunity area, with the limited ability for VMT reduction strategies to substantially influence GHG emissions from on-road transportation.

6 ANALYSIS OF TARGETS ATTAINMENT

The purpose of the CAAP is to develop strategies that the City can implement to reduce communitywide GHG emissions in proportion with State GHG reduction targets. With the GHG emissions forecast, reduction targets, and analysis of GHG strategies presented in this memorandum, the City can assess if it can meet its GHG reduction targets

or bridge the "emissions gap." The emissions gap analysis demonstrates the future expected GHG emissions levels from the legislative-adjusted BAU forecast for each GHG emissions sector, and additional GHG reductions that will need to be achieved by the reduction strategies of the CAAP to align with State GHG reduction targets.

Based on the modeling conducted and the assumptions made, the 10 quantified strategies have the potential to help the City meet the 2030 and 2045 targets that align with SB 32 and AB 1279 statewide GHG emissions targets. As shown in Table 9, implementation of the strategies would help reduce emissions in Lake Elsinore by 21 percent below 2022 levels by 2030 and 88 percent below 2022 levels by 2045. This would meet the GHG reduction targets for AB 32 emissions sectors that are applicable to Lake Elsinore under the 2017 Scoping Plan and 2022 Scoping Plan, i.e., 21 percent below 2022 levels by 2030 and 88 percent below 2022 levels by 2045.

6.1 EMISSIONS GAP ANALYSIS

Table 10 contains the gap analysis, which shows the future GHG emissions levels that would be achieved in Lake Elsinore with implementation of all quantified GHG strategies for the years 2030 and 2045. These emissions levels are compared to the 2030 and 2045 GHG reduction targets, showing that the targets can be feasibly achieved with continued implementation of State and federal regulations considered in the legislative-adjusted BAU forecast, and implementation of the GHG strategies by the City. Figure 3 shows the anticipated future emissions levels for each GHG emissions sector with implementation of GHG strategies, in comparison to target levels for 2030 and 2045.

Table 10 Comparison of GHG Projections with Strategy Implementation and Reduction Targets ($MTCO_2e$)

Data	2022	2030	2045
Legislative-Adjusted Business-as-Usual Forecast			
On-road transportation	280,784	258,720	86,072
Building energy	162,526	130,739	51,908
Off-road vehicles and equipment	19,336	23,380	35,938
Solid waste	18,224	24,090	33,439
Water	6,982	6,931	0
Wastewater	487	580	622
Total Emissions	**488,339**	**444,439**	**207,979**
GHG Emissions Reductions from Implementation of Strategies[1]			
On-road transportation	0	2,551	54,156
Building energy	0	36,638	38,726
Off-road vehicles and equipment	0	0	28,270
Solid waste	0	20,475	29,856
Water	0	856	0
Emissions removals through increased carbon sequestration	0	133	323
Total Emissions Reductions	**0**	**60,653**	**151,331**
GHG Emissions with Implementation of GHG Strategies[2]			
On-road transportation	280,785	256,169	31,916
Building energy	162,526	94,102	13,182
Off-road vehicles and equipment	19,336	23,380	7,668
Solid waste	18,224	3,615	3,583
Water	6,982	6,075	0

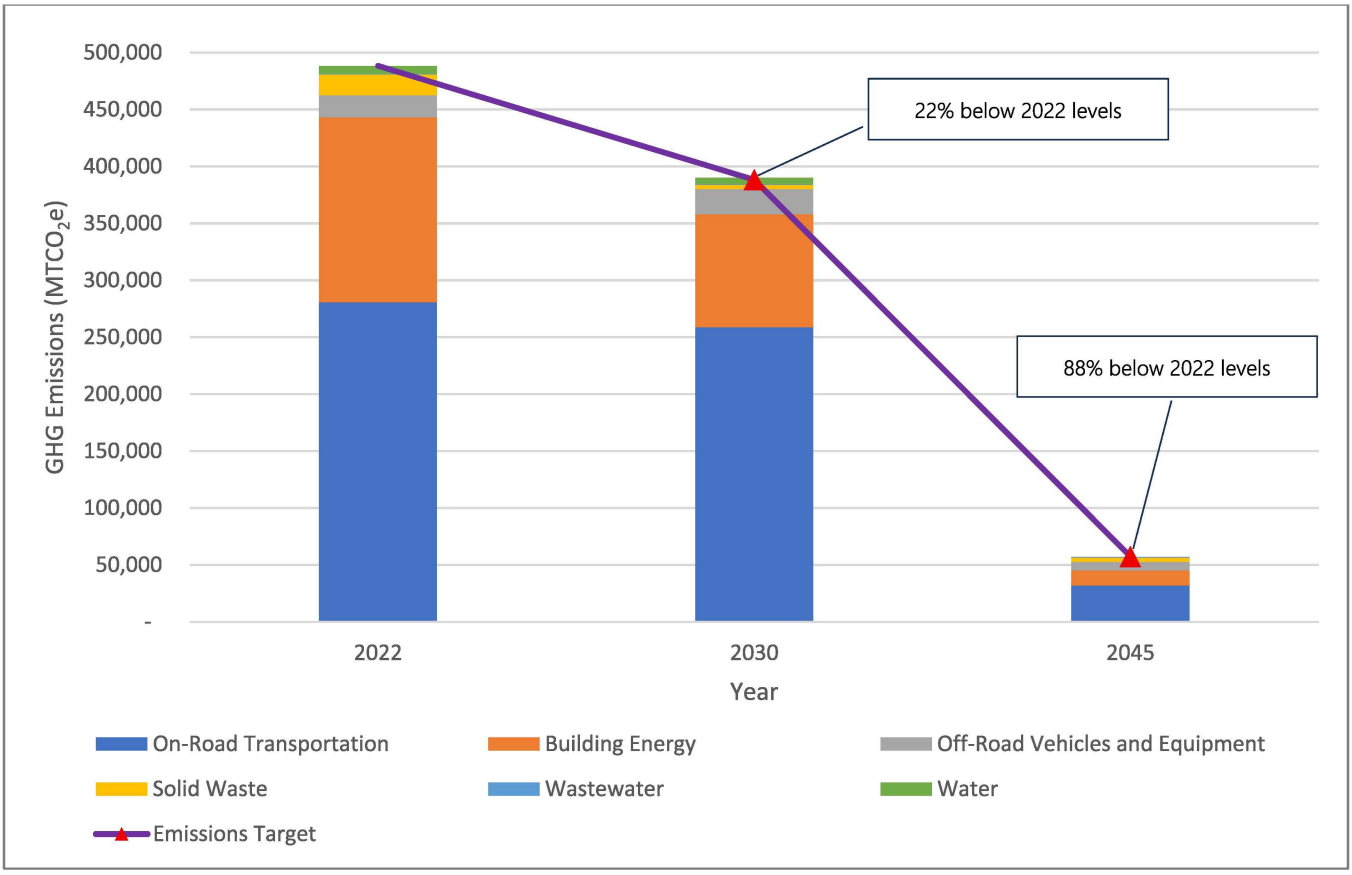
Data	2022	2030	2045
Wastewater	487	580	622
Total Emissions	488,339	383,919	56,971
Emissions removals through increased carbon sequestration	0	-133	-323
Effective total emissions, including carbon sequestration reductions	**488,339**	**383,786**	**56,648**
Percent Change from 2022 Levels	**NA**	**-21%**	**-88%**
Comparison of Projected GHG Emissions to CAAP Targets			
CAAP Target Emissions Levels	NA	388,224	57,278
CAAP Targets (percent reduction from 2022 levels)	NA	21%	88%
Difference between CAAP Targets and GHG Emissions with Implementation of GHG Strategies	NA	-4,438	-630
Target Met?	**NA**	**Yes**	**Yes**

Note: Totals may not sum exactly due to rounding. NA = Not applicable.

[1] GHG emissions sectors where there are zero emissions reductions from implementation of GHG strategies are not shown.

[2] GHG Emissions with Implementation of GHG Strategies shows the GHG Emissions Reductions from Implementation of Strategies subtracted from the Legislative-Adjusted Business-as-Usual Forecast.

Source: Modeled by Ascent in 2025.



Note: GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Modeled by Ascent in 2025.

Figure 3 CAAP GHG Emissions Levels with Implementation of Strategies

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Attachment A

GHG Emissions Forecast

Detailed Methods and Results

INTRODUCTION

This document is an attachment to the City of Lake Elsinore's (City's) *Greenhouse Gas Emissions Forecast, Targets, and Reduction Measures Memorandum* (hereafter referred to as "GHG Memorandum"). This document presents detailed results of the greenhouse gas (GHG) emissions forecasts and explains the forecast methodology.

1 GREENHOUSE GAS EMISSIONS FORECASTS METHODOLOGY

The GHG emissions forecasts were developed by projecting the Lake Elsinore 2022 GHG emissions to the years 2030 and 2045 based on growth scaling factors and adjusting future emissions for the known impacts of currently adopted legislation on GHG emissions (e.g., adopted federal and California regulations, policies, and programs affecting fuels and energy efficiency). The growth scaling factors (e.g., population, employment, and service population[1]) were applied to activity growth factors (electricity consumption per housing unit and waste generation per service population) and then converted to future GHG emissions using the most appropriate GHG emissions factors.

The following section describes the methodology behind forecasting *business-as-usual scenario* (BAU) and *legislative-adjusted business-as-usual scenario* (legislative-adjusted BAU) emissions for each emissions sector included in the Lake Elsinore 2022 inventory. The BAU emissions forecast provides an assessment of how emissions generated by activities in Lake Elsinore will change over time without further State or federal action. The legislative-adjusted BAU emissions forecast includes adopted legislative and regulatory actions at the State and federal levels that would affect emissions without additional local action.

The scope of the analysis is intended to maintain consistency with the growth projections associated with the City's General Plan Update (GPU). As such, the analysis includes both the Lake Elsinore City Limits and Sphere of Influence (SOI), which are collectively referred to as "Lake Elsinore" throughout this memorandum unless otherwise specified. Table A-1 provides the growth projections for both the City Limits, SOI, and combined City Limits and SOI (e.g., Lake Elsinore). Values for 2022 and 2030 were interpolated between the 2018 baseline and 2045 horizon year.

1 Service population is the sum of population and number of employees in the city.

Table A-1 Population, Employment, and Service Population for City Limits and Sphere of Influence

Demographic Factor	2018	2022	2030	2045
Lake Elsinore City Limits				
Population	58,684	64,915	81,724	113,240
Employment	14,067	15,863	20,995	30,617
Service Population	72,751	80,789	102,726	143,857
Lake Elsinore Sphere of Influence (SOI)				
Population	20,985	23,043	28,103	38,652
Employment	1,999	2,598	4,831	10,178
Service Population	22,984	25,818	33,165	48,830
Lake Elsinore City Limits + SOI				
Population	79,669	87,958	109,827	151,892
Employment	16,066	18,461	25,826	40,795
Service Population	95,735	106,607	135,891	192,687

Notes: service population = population + employment; SOI = sphere of influence.

Data Source: Hermann, pers. comm., 2025.

1.1 BUSINESS-AS-USUAL ACTIVITY FORECAST

The following sections outline the different methods used to forecast emissions generating activity data (activity) for GHG emissions sectors included in the Lake Elsinore 2022 inventory.

1.1.1 On-road Transportation

On-road transportation activity is in the format of vehicle miles traveled (VMT) for different vehicle categories, including: autos, light trucks, medium trucks, and heavy trucks. Future VMT was modeled by Fehr and Peers using the Riverside County Transportation Model (RIVCOM), which provides daily VMT for four distinct trip types, listed below and converted to annual VMT assuming 353 travel days per year (Poss, pers. comm., 2024).

1) external-internal (the trip starts outside the boundaries of Lake Elsinore and ends inside the boundaries),
2) internal-external (the trip starts inside the boundaries of Lake Elsinore and ends outside the boundaries),
3) internal-internal (the trip both starts and ends inside the boundaries of Lake Elsinore), and
4) external-external (the trip both starts and ends outside the boundaries of Lake Elsinore).

To apportion VMT from the trips to Lake Elsinore, the VMT values for each of the trip types described above were assigned weights of 50, 50, 100, and 0 percent, respectively. This approach follows guidance from the Regional Targets Advisory Committee (RTAC). RTAC was formed by the California Air Resources Board (CARB) pursuant to Senate Bill (SB) 375 (Sustainable Communities and Climate Protection Act). SB 375 mandates that CARB work in consultation with the metropolitan planning organizations to set targets for vehicle emissions reductions, and that RTAC recommend methodologies for setting those targets.

The land use assumptions used to generate VMT estimates from RIVCOM were adjusted to align with the GPU. Annual VMT for the years 2030 and 2045 is provided in Table A-2.

Table A-2 On-road Transportation Activity for 2030 and 2045 (VMT)

RIVCOM Vehicle Category	2030	2045
City Limits		
Autos	624,391,695	852,589,604
Light Trucks	4,697,371	8,392,222
Medium Trucks	5,906,043	10,677,897
Heavy Trucks	13,585,205	24,621,044
City Limits Total	**648,580,314**	**896,280,767**
Sphere of Influence (SOI)		
Autos	184,402,964	228,559,734
Light Trucks	1,485,777	2,197,072
Medium Trucks	1,791,828	2,845,180
Heavy Trucks	4,132,924	6,738,064
SOI Total	**191,813,493**	**240,340,050**
City Limits + SOI		
Autos	808,794,659	1,081,149,338
Light Trucks	6,183,148	8,392,222
Medium Trucks	7,697,871	10,677,897
Heavy Trucks	17,718,129	24,621,044
City Limits + SOI Total	**840,393,807**	**1,124,840,501**

Notes: RIVCOM = Riverside County Transportation Model; RTAC = Regional Targets Advisory Committee; SOI = Sphere of Influence; VMT = vehicle miles traveled.

Totals may not sum exactly due to rounding.

Data Source: VMT analysis by Fehr and Peers in 2025, with summary available in Attachment C.

1.1.2 Off-road Equipment

The CARB Off-Road Web Query Tool was used to obtain data on the quantity of fuel used by off-road equipment for the entire Riverside County (including all cities and unincorporated areas) for the relevant off-road equipment categories (CARB 2025b). These fuel quantities were then downscaled to the city limits and SOI based on each equipment category's relevant scaling factor (employment, population, or service population [the sum of employment and population] expressed as a percentage of the corresponding demographic data for Riverside County). Employment data was sourced from the California Employment Development Department (2024) and population data from the California Department of Finance (2024). The downscaled fuel quantity results for the years 2030 and 2045 are provided in Table A-3. The Off-Road Web Query Tool incorporates the impacts of State regulations for off-road equipment for most equipment categories. Additional information on these regulations is included in Section 2.

Table A-3 Off-Road Equipment Activity for 2030 and 2045 (gallons)

		2030				2045			
Equipment Category	County-to-City Scaler	Scaler Value	Diesel	Gasoline	Natural Gas	Scaler Value	Diesel	Gasoline	Natural Gas
City Limits									
Industrial	Employment	1.84%	18,108	29,256	76,532	2.51%	24,339	44,705	135,063
Light commercial equipment	Employment	1.84%	10,834	109,948	9,126	2.51%	16,188	89,720	13,938
Portable equipment	Employment	1.84%	354,490	0	0	2.51%	649,768	0	0
Lawn and garden equipment	Population	3.67%	4,335	77,387	0	6.12%	8,271	22,282	0
Recreational equipment	Population	3.67%	0	54,295	0	6.12%	0	108,723	0
Pleasure craft	Population	3.67%	0	94,092	0	6.12%	0	186,506	0
Construction and mining	Service population	3.05%	902,654	13,890	0	4.68%	1,379,593	22,343	0
Transport refrigeration units	Service population	3.05%	198,827	0	0	4.68%	386,363	0	0
City Limits Total	**NA**	**NA**	**1,489,248**	**378,868**	**85,659**	**NA**	**2,464,521**	**474,280**	**149,001**
SOI									
Industrial	Employment	0.42%	4,166	6,731	17,609	0.83%	8,091	14,861	44,899
Light commercial equipment	Employment	0.42%	2,493	25,297	2,100	0.83%	5,381	29,826	4,633
Portable equipment	Employment	0.42%	81,561	0	0	0.83%	216,002	0	0
Lawn and garden equipment	Population	1.26%	1,491	26,611	0	2.09%	2,823	7,606	0
Recreational equipment	Population	1.26%	0	18,671	0	2.09%	0	37,110	0
Pleasure craft	Population	1.26%	0	32,356	0	2.09%	0	63,660	0
Construction and mining	Service population	0.98%	291,420	4,484	0	1.59%	468,281	7,584	0
Transport refrigeration units	Service population	0.98%	64,191	0	0	1.59%	131,145	0	0
SOI Total	**NA**	**NA**	**445,322**	**114,150**	**19,708**	**NA**	**831,724**	**160,647**	**49,532**
City Limits + SOI Total	***NA***	***NA***	***1,934,570***	***493,017***	***105,367***	***NA***	***3,296,245***	***634,927***	***198,533***

Notes: CO_2e = kilograms of carbon dioxide equivalent; kg = kilograms; MT = metric tons; NA = not applicable; SOI = Sphere of Influence.

Totals may not sum exactly due to rounding.

Data Source: Modeled by Ascent in 2025.

1.1.3 Building Energy, Water, Solid Waste, and Wastewater

The BAU forecasted activity for the Building Energy, Water, Solid Waste, and Wastewater sectors are estimated by scaling the 2022 baseline activity data by population, employment, and service population. The scaling factors are used as a basis for the forecasts of activity for most emissions sectors, with the exception of on-road transportation and off-road equipment, which are estimated using appropriate forecasting models. The scaling factors are assigned to different activities for emissions sectors and sub-sectors, depending on how each sector or sub-sector is affected.

These assignments are shown in Table A-4. For example, the activity for both the residential building energy sector and the nonresidential building energy sector is in kilowatt-hours (kWh) of electricity and therms of natural gas. Increases in residential building energy (in kWh and therms) are assumed to be proportional to the growth in population, whereas increases in nonresidential building energy (also in kWh and therms) are assumed to be proportional to the growth in employment.

Table A-4 BAU Growth Scaling Methods by Emissions Sector for Lake Elsinore Forecast

Sector	Sub-Sector	Activity Growth Method
Building Energy	Nonresidential	Employment
	Residential	Population
Solid Waste	Waste Generation	Service Population
Wastewater	Wastewater Treatment Plant (WWTP)	Service Population
Water	Local Deliveries	Service Population
	Imported (CRA)	Service Population
	Imported (SWP)	Service Population
	Groundwater	Service Population

Notes: BAU = business-as-usual; CRA = Colorado River Aqueduct; SWP = State Water Project.

Source: Compiled by Ascent in 2025.

The resulting scaled activity data used to calculate GHG emissions in the BAU forecast are shown in Table A-5.

Table A-5 BAU Activity Data Forecast by Emissions Sector

Sector	Source	Quantity Type	Quantity Units	Quantity	
				2030	2045
Building Energy	Residential	Electricity	MWh	298,917	413,409
	Nonresidential	Electricity	MWh	246,000	388,594
	Commercial (Nonresidential)	Natural Gas	therms	2,494,626	3,940,638
	Industrial (Nonresidential)	Natural Gas	therms	13,752	21,723
	Single-Family Residential	Natural Gas	therms	9,990,348	13,816,879
	Multi-Family Residential	Natural Gas	therms	1,480,902	2,048,121
	Backup Generation (Nonresidential)	Diesel	gallons	37,645	59,465
	Backup Generation (Nonresidential)	Gasoline	gallons	2,908	4,593
Solid Waste	Community-Generated Solid Waste	Waste	tons	106,552	151,086
Water	Groundwater	Electricity	MWh	2,552	3,574
	Imported (CRA)	Electricity	MWh	5,183	7,258
	Imported (SWP)	Electricity	MWh	29,227	40,929
	Local Deliveries	Electricity	MWh	1,200	1,681
Wastewater [1]	Centralized WWTP	Service Population	Service Population	135,890	192,687
	Septic Tanks	Service Population	Service Population	135,890	192,687
	Wastewater Treatment Energy	Electricity	MWh	766	1,067

Notes: BAU = business-as-usual; CRA = Colorado River Aqueduct; gal = gallon; MWh = megawatt-hours; NA = not applicable; SWP = State Water Project; VMT = vehicle miles traveled; WWTP = wastewater treatment plant.

[1] Activity data has not been scaled for Wastewater Treatment. Forecast emissions are estimated by scaling 2022 inventory emissions directly with service population.

Source: Data modeled by Ascent in 2025.

1.2 BUSINESS-AS-USUAL FORECAST DETAILED RESULTS

The combined results for each GHG emissions sector and source in Lake Elsinore are provided in Table A-6. GHG emissions were calculated by applying the GHG emissions factors that were used to calculate emissions in the Lake Elsinore 2022 GHG inventory to forecasted activity. The GHG emission factors used are available in Appendix B of the Lake Elsinore Climate Action and Adaptation Plan, *GHG Emissions Inventory Methodology*. Under the BAU scenario, it is assumed that baseline emission factors will remain unchanged in the future.

Table A-6 BAU GHG Emissions Forecast by Emissions Sector ($MTCO_2e$)

Sector	Source	Fuel Type/Emissions Detail	2030	2045
Building Energy	Residential	Electricity	75,101	103,867
	Nonresidential	Electricity	61,806	97,632
	Commercial (Nonresidential)	Natural Gas	13,275	20,970
	Industrial (Nonresidential)	Natural Gas	73	116
	Single-Family Residential	Natural Gas	53,163	73,525
	Multi-Family Residential	Natural Gas	7,881	10,899
	Backup Generation (Nonresidential)	Diesel	386	609
	Backup Generation (Nonresidential)	Gasoline	26	40
On-Road Transportation	Auto	Annual VMT	305,216	407,994
	Light Trucks	Annual VMT	31,771	44,149
	Medium Trucks	Annual VMT	2,752	3,735
	Heavy Trucks	Annual VMT	10,476	14,531
Off-Road Vehicles and Equipment	Diesel	Diesel	19,994	34,040
	Gasoline	Gasoline	4,531	5,787
	Natural Gas	Natural Gas	719	1,354
Solid Waste	Community-Generated Solid Waste	Waste	24,090	33,439
Water	Groundwater	Electricity	641	898
	Imported (CRA)	Electricity	1,176	1,647
	Imported (SWP)	Electricity	6,630	9,285
	Local Deliveries	Electricity	302	422
Wastewater	Centralized WWTP	Direct Emissions	345	489
	Septic Tanks	Direct Emissions	94	133
	Wastewater Treatment Energy	Electricity	176	242
Total			620,623	865,804

Notes: Totals in this table may not sum due to rounding. BAU = business-as-usual; CRA = Colorado River Aqueduct; SWP = State Water Project; VMT = vehicle miles traveled; WWTP = wastewater treatment plant.

Source: Data modeled by Ascent in 2025.

2 LEGISLATIVE-ADJUSTED BUSINESS-AS-USUAL FORECAST

The legislative-adjusted BAU scenario accounts for the effect of adopted legislative and regulatory actions at the State and federal levels on local emissions without additional action by the City. Table A-7 presents a summary of the legislative adjustments applied to Lake Elsinore's emissions under the legislative-adjusted BAU scenario. This is not an exhaustive list but is a list of the key actions considered in this analysis that would result in expected local GHG reductions.

Table A-7 Federal and State Legislative Adjustments Applied under the Legislative-Adjusted BAU Scenario

Source	Legislation/ Regulation	Description	Application to Legislative-Adjusted BAU
State	California's Building Energy Efficiency Standards (2022 and 2025 Title 24, Part 6)	Effective January 1, 2026, new residential and nonresidential buildings in California are required to comply with energy efficiency standards established by the California Energy Commission. The 2025 standards establish energy performance requirements that encourage energy-efficient approaches to building decarbonization by emphasizing electric heat pumps for space heating and water heating and extending the benefits of photovoltaic and battery storage systems and other demand flexible technology to work in combination with heat pumps.	Applied to the Building Energy sector, new growth in the Building Energy sector has reduced fuel consumption and increased solar photovoltaic installations compared to the existing building stock.
State	SB 100 (California Renewables Portfolio Standard Program, 2017)	Requires that 60 percent of retail electricity sold in California must come from renewable or zero-carbon resources by 2030 and 100 percent by 2045.	Applied to the Building Energy, Water, and Wastewater sectors; future grid-supplied electricity has a reduced carbon intensity based on SB 100 compliance.
State	SB 1020 (Clean Energy, Jobs, and Affordability Act of 2022)	Requires that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by December 31, 2035, 95 percent of all retail sales of electricity to California end-use customers by December 31, 2040, 100 percent of all retail sales of electricity to California end-use customers by December 31, 2045, and 100 percent of electricity procured to serve all state agencies by December 31, 2035.	Applied to the Building Energy, Water, and Wastewater sectors; future grid-supplied electricity has a reduced carbon intensity based on SB 1020 compliance.
State	AB 1440 (Biomethane Procurement Goals, 2018)	Requires that natural gas utilities procure and deliver a proportionate share of a statewide total of 32 billion cubic feet of biomethane from sources that have a first point of interconnection with the pipeline system in California.	Applied to the Building Energy sector, future natural gas consumption has a reduced carbon intensity consistent with utility procurement targets.
State	California Solar Policies and Programs	There are numerous incentive programs for the installation of solar available in California, including net energy metering (NEM), Disadvantaged Communities Single-family Solar Homes program, property tax exclusions, Self-Generation Incentive Program, and other financial incentives offered by utility providers. Additionally, California's Building Energy Efficiency Standards require solar installations on nearly all newly constructed buildings.	Applied to the Building Energy sector, increased solar photovoltaic installations reduce consumption of grid-supplied electricity.
State	Advanced Clean Car Standards I and II	Requires all new passenger cars, trucks, and Sports Utility Vehicles (SUVs) sold in California to meet increasingly stringent requirements regarding zero emissions technologies and emissions standards.	Applied to the On-road Transportation sector, increased zero-emissions vehicle penetration reduces fleetwide emissions.

Source	Legislation/ Regulation	Description	Application to Legislative-Adjusted BAU
State	Advanced Clean Fleets	Starting in 2036, all medium and heavy-duty trucks sold in California must be zero emissions with limited exceptions. In addition to this sales mandate, fleet owners must also purchase electric trucks on an accelerated timeline (CARB 2023). As of 2025, some components of the Advanced Clean Fleets are not currently being enforced. However, CARB has committed to continue to try to meet the zero emissions truck goals through programs such as the Clean Truck Partnership. (CARB 2025a)	Applied to the On-road Transportation sector, increased zero-emissions vehicle penetration reduces fleetwide emissions.
State	Truck and Bus Regulation	Requires diesel trucks and buses that operate in California to be upgraded to reduce GHG emissions.	Applied to the On-road Transportation sector, increased fuel efficiency reduces fleetwide emissions.
Federal	Fuel Efficiency Standards for Medium- and Heavy-Duty Vehicles	Establishes fuel efficiency standards for medium- and heavy-duty engines and vehicles.	Applied to the On-road Transportation sector, increased zero-emissions vehicle penetration reduces fleetwide emissions.
State	Off-Road Vehicle & Equipment Regulations	Establishes standards for air emissions from diesel off-road equipment, including the Regulation for In-Use Off-Road Diesel-Fueled Fleets and Off-Road Large Spark-Ignition Engine Fleet Requirements Regulation.	Applied to the Off-road Equipment sector, increased efficiency in the diesel-fueled off-road equipment reduces fleetwide emissions.
State	Small Off-road Equipment (SORE) Regulations	Establishes standards for air emissions from spark-ignition engines rated at or below 19 kilowatts, such as lawn and garden equipment, and sets bans on the sale of certain gas-fueled equipment.	Applied to the Off-road Equipment sector, increased efficiency and electrification of gasoline-fueled off-road equipment reduces fleetwide emissions.
State	Ultra-Low Emissions for Transportation Refrigeration Units (TRUs)	Requires that fleets with TRUs use either the cleanest TRU engines, retrofit TRUs, or use plug-in electric systems.	Applied to the Off-road Equipment sector, increased efficiency and electrification of TRUs reduces fleetwide emissions.

2.1 LEGISLATIVE-ADJUSTED BUSINESS-AS-USUAL FORECAST DETAILS BY EMISSIONS SECTOR

The following sections detail the legislative adjustments that were applied to the Lake Elsinore BAU scenario forecast. In cases where GHG emissions are unchanged from the BAU forecast, no additional information is provided. GHG emissions for the following sectors and sources of emissions are the same in both the BAU and legislative-adjusted BAU forecasts and are not discussed further:

- Building Energy – Backup Generation (Nonresidential)
- Solid Waste – Community-Generated Solid Waste
- Wastewater – Centralized WWTP
- Wastewater – Septic Tanks

BUILDING EFFICIENCY STANDARDS

The legislative-adjusted BAU forecast considers the effects of legislation on energy use in new residential and nonresidential buildings pursuant to California's Building Energy Efficiency Standards (California Code of Regulations Title 24 Part 6, hereafter referred to as "Title 24"), which affects emissions in the Building Energy emissions sector. For new buildings, BAU energy use is adjusted to reflect increased energy efficiency requirements under Title 24 between the 2019 and 2025 Title 24 standards. BAU Building Energy activity forecasts were developed based on energy consumption of the existing building stock, which is assumed to have been constructed primarily prior to 2020, when the 2019 Title 24 standards went into effect. Adjustment factors that compare the energy consumption of model buildings that meet the minimum standards between the 2019 and 2025 Title 24 standards were applied to growth above 2022 baseline levels to develop legislative-adjusted energy consumption forecasts.

To estimate adjusted future energy consumption resulting from Title 24 requirements in new residential and nonresidential building construction, electricity- and natural gas-specific adjustment factors are calculated using the difference in the average energy use in residential and nonresidential buildings between those built to 2019 Title 24 standards and those built to 2025 Title 24 standards. Adjustment factors are calculated using data available from the California Energy Commission (CEC) that were developed for the 2022 Title 24 standards and adjusted to account for an increased number of buildings constructed as all-electric under the 2025 Title 24 standards, which is assumed as 25 percent of new residential construction being all-electric. Residential energy use adjustments are further disaggregated by whether buildings are single-family or multi-family. Based on review of the existing conditions and growth forecasts, it is assumed that nearly all growth in the SOI will be multi-family, and 59% of growth in the city limits will be single-family and 41% multi-family.

The adjustment factors applied to new growth in natural gas and electricity use above 2022 levels are shown in A-8, for both the city limits and SOI. They are presented in terms of the percent change in energy use for buildings compliant with the 2025 Title 24 standards compared to those built to meet the 2019 Title 24 standards. Positive values indicate an anticipated increase in energy use (e.g., increased electrical demand from electrification of natural gas appliances), while negative values indicate an anticipated decrease in energy use (e.g., more energy efficiency, shifting away from natural gas appliances).

Table A-8 Title 24 Building Energy Adjustment Factors for 2025 Standards Compared to 2019 Standards

Building Type	Electricity	Natural Gas
City Limits		
Residential Buildings	19%	-40%
Nonresidential Buildings	-10%	-11%
Sphere of Influence (SOI)		
Residential Buildings	11%	-30%
Nonresidential Buildings	-10%	-11%

Source: Compiled by Ascent in 2025.

Applying the adjustment factors to new residential and nonresidential growth in the BAU forecast shows an increase in electricity use above the BAU, and a decrease in natural gas consumption. The legislative-adjusted BAU Building Energy sector energy use forecast is provided in Table A-9, including BAU energy use, growth above 2022 levels, and adjusted energy use.

Table A-9 Legislative-Adjusted Energy Consumption Forecast for Building Energy Sector

Building Type/Calculation Factor	2022	2030	2045
City Limits			
Residential – Electricity (MWh)			

Building Type/Calculation Factor	2022	2030	2045
BAU Forecast	176,681	222,429	308,208
BAU Growth Above 2022	0	45,749	131,528
Adjusted Growth Above 2022	0	64,434	185,246
Legislative-Adjusted BAU Forecast	176,681	274,112	394,925
Difference Between BAU and Legislative Adjusted BAU	0	-51,683	-86,717
Residential – Natural Gas (therms)			
BAU Forecast	6,780,306	8,535,966	11,827,829
BAU Growth Above 2022	0	1,755,660	5,047,523
Adjusted Growth Above 2022	0	641,907	1,845,482
Legislative-Adjusted BAU Forecast	6,780,306	4,741,729	5,945,304
Difference Between BAU and Legislative Adjusted BAU	0	3,794,237	5,882,525
Nonresidential – Electricity (MWh)			
BAU Forecast	151,104	199,987	291,644
BAU Growth Above 2022	0	48,883	140,540
Adjusted Growth Above 2022	0	40,002	115,005
Legislative-Adjusted BAU Forecast	151,104	176,690	251,693
Difference Between BAU and Legislative Adjusted BAU	0	23,297	39,950
Nonresidential – Natural Gas (therms)			
BAU Forecast	1,540,751	2,039,198	2,973,786
BAU Growth Above 2022	0	498,447	1,433,035
Adjusted Growth Above 2022	0	394,942	1,135,458
Legislative-Adjusted BAU Forecast	1,540,751	1,766,422	2,506,938
Difference Between BAU and Legislative Adjusted BAU	0	272,776	466,848
Sphere of Influence (SOI)			
Residential – Electricity (MWh)			
BAU Forecast	62,716	76,487	105,200
BAU Growth Above 2022	0	13,771	42,484
Adjusted Growth Above 2022	0	16,945	52,273
Legislative-Adjusted BAU Forecast	62,716	86,512	121,841
Difference Between BAU and Legislative Adjusted BAU	0	-10,025	-16,641
Residential – Natural Gas (therms)			
BAU Forecast	2,406,793	2,935,284	4,037,171
BAU Growth Above 2022	0	528,491	1,630,378
Adjusted Growth Above 2022	0	258,666	797,976
Legislative-Adjusted BAU Forecast	2,406,793	1,942,462	2,481,772

Building Type/Calculation Factor	2022	2030	2045
Difference Between BAU and Legislative Adjusted BAU	0	992,822	1,555,399
Nonresidential – Electricity (MWh)			
BAU Forecast	24,751	46,013	96,951
BAU Growth Above 2022	0	21,262	72,200
Adjusted Growth Above 2022	0	17,399	59,081
Legislative-Adjusted BAU Forecast	24,751	39,789	81,472
Difference Between BAU and Legislative Adjusted BAU	0	6,224	15,479
Nonresidential – Natural Gas (therms)			
BAU Forecast	252,382	469,180	988,575
BAU Growth Above 2022	0	216,798	736,193
Adjusted Growth Above 2022	0	171,779	583,319
Legislative-Adjusted BAU Forecast	252,382	396,433	807,973
Difference Between BAU and Legislative Adjusted BAU	0	72,747	180,602
City Limits + SOI			
Residential – Electricity (MWh)			
Legislative-Adjusted BAU Forecast	239,397	360,624	516,766
Difference Between BAU and Legislative Adjusted BAU	0	-61,708	-103,357
Residential – Natural Gas (therms)			
Legislative-Adjusted BAU Forecast	9,187,099	6,684,191	8,427,076
Difference Between BAU and Legislative Adjusted BAU	0	4,787,059	7,437,924
Nonresidential – Electricity (MWh)			
Legislative-Adjusted BAU Forecast	175,855	216,479	333,165
Difference Between BAU and Legislative Adjusted BAU	0	29,521	55,430
Nonresidential – Natural Gas (therms)			
Legislative-Adjusted BAU Forecast	1,793,133	2,162,855	3,314,911
Difference Between BAU and Legislative Adjusted BAU	0	345,523	647,450

Notes: Totals may not sum due to rounding. BAU = business-as-usual; MWh = megawatt-hour; SOI = Sphere of Influence.

Source: Compiled by Ascent in 2025.

Legislative reductions in emissions from the adjustment for Building Efficiency Standards are calculated by applying the BAU GHG emissions factor to the total change in energy consumption for between the BAU and legislative-adjusted BAU forecasts for both electricity and natural gas. This calculation and the results are provided in Table A-10, for the city limits and SOI combined.

Table A-10 Legislative Reductions from Building Efficiency Standards

Building Type/Calculation Factor	2030	2045
Residential – Electricity		
Difference Between BAU and Legislative Adjusted BAU (MWh)	-61,708	-103,357
GHG Emissions Factor ($MTCO_2e$/MWh)	0.251	0.251
GHG Reductions ($MTCO_2e$)	-15,504	-25,968
Residential – Natural Gas		
Difference Between BAU and Legislative Adjusted BAU (therms)	4,787,059	7,437,924
GHG Emissions Factor ($MTCO_2e$/therm)	0.00532	0.00532
GHG Reductions ($MTCO_2e$)	25,474	39,580
Nonresidential – Electricity		
Difference Between BAU and Legislative Adjusted BAU (MWh)	29,521	55,430
GHG Emissions Factor ($MTCO_2e$/MWh)	0.251	0.251
GHG Reductions ($MTCO_2e$)	7,417	13,926
Nonresidential – Natural Gas		
Difference Between BAU and Legislative Adjusted BAU (therms)	345,523	647,450
GHG Emissions Factor ($MTCO_2e$/therm)	0.00532	0.00532
GHG Reductions ($MTCO_2e$)	1,839	3,445
Total GHG Reductions ($MTCO_2e$)	**19,227**	**30,986**

Notes: Totals may not sum due to rounding. BAU = business-as-usual; MWh = megawatt-hour; SOI = Sphere of Influence.

Source: Compiled by Ascent in 2025.

RENEWABLE ELECTRICITY REQUIREMENTS

The legislative-adjusted BAU forecast considers changes to the carbon intensity of electricity generation under SB 100 and SB 1020 that would affect future electricity emission factors for grid-supplied electricity. These requirements, known as the Renewables Portfolio Standards (RPS), apply to all retail sales of electricity in California which must meet the following requirements:

- 60% of electricity is from carbon-free sources by 2030,
- 90% of electricity is from carbon-free sources by 2035,
- 95% of electricity is from carbon-free sources by 2040,
- 100% of electricity is from carbon-free sources by 2045.

As future grid-supplied electricity consumption in Lake Elsinore is procured from an increased percentage of carbon-free sources, the GHG emissions factor used to calculate emissions is expected to be reduced proportionally. This applies to electricity consumption in the following emissions sectors:

- Building Energy,
- Water, and

- Wastewater.

Electricity consumption accounted for in the GHG emissions inventory and forecast includes electricity delivered by Southern California Edison (SCE) and electricity delivered by unknown providers. Where it is known that SCE is the electricity provider, the SCE 2022 Power Content Label is used as reference to develop a baseline GHG emissions factor and percentage of electricity generated by carbon-free sources for forecasting future RPS-compliant emissions factors (SCE 2023). Where the electricity provider is unknown, the Emissions & Generation Resource Integrated Database (eGRID) emissions factor and percentage of electricity generated by carbon-free sources for the Western Electricity Coordinating Council California (CAMX) grid subregion is used (EPA 2024).

To calculate future emission factors, the SCE and CAMX 2022 electricity supply emissions factors were adjusted to reflect the additional carbon-free electricity mix percentage to meet the minimum RPS standards. The emission factors and carbon-free mix of electricity and associated GHG emissions factors for the legislative-adjusted BAU forecast are presented in A-11.

Table A-11 Electricity Emission Factors and Carbon-Free Mix of Electricity Used in the City of Lake Elsinore

Utility	Calculation Factor	2022	2030	2045
Southern California Edison	Emission Factor ($MTCO_2e$/MWh)	0.251	0.183	0.0
	Carbon-Free Electricity Mix (%)	45%	60%	100%
Western Electricity Coordinating Council California (CAMX) Subregion	Emission Factor ($MTCO_2e$/MWh)	0.226	0.181	0.0
	Carbon-Free Electricity Mix (%)	50%	60%	100%

Notes: $MTCO_2e$/MWh = metric tons of carbon dioxide equivalent per megawatt-hour.

Source: Analysis by Ascent in 2025.

The GHG emissions reductions for Lake Elsinore from renewable electricity requirements under SB 100 and SB 1020 are calculated by subtracting the projected electricity emissions with RPS-compliant emissions factors from projected electricity emissions without RPS-compliant emissions factors. To avoid double counting with reductions considered under the building efficiency standards, the projected electricity consumption used in this calculation is after adjustments of activity under the building efficiency standards. The calculations and results for the renewable electricity requirements legislative reductions are provided in Table A-12.

Table A-12 Renewable Electricity Requirements Legislative Adjustments Calculations and Results

Utility	Emissions Sector	Calculation Factor	2030	2045
Southern California Edison	All	Legislative-Adjusted Emission Factor ($MTCO_2e$/MWh)	0.183	0
		BAU Emission Factor ($MTCO_2e$/MWh)	0.251	0.251
	Building Energy	Legislative-Adjusted Consumption (MWh)	577,103	849,931
		Legislative Emissions Reductions ($MTCO_2e$)	39,544	213,540
	Water	Legislative-Adjusted Consumption (MWh)	3,753	5,255
		Legislative Emissions Reductions ($MTCO_2e$)	257	1,320
Western Electricity Coordinating Council California (CAMX) Subregion	All	Legislative-Adjusted Emission Factor ($MTCO_2e$/MWh)	0.181	0
		BAU Emission Factor ($MTCO_2e$/MWh)	0.227	0.227
	Water	Legislative-Adjusted Consumption (MWh)	34,409	48,187
		Legislative Emissions Reductions ($MTCO_2e$)	1,561	10,932
	Wastewater	Legislative-Adjusted Consumption (MWh)	776	1,067
		Legislative Emissions Reductions ($MTCO_2e$)	35	242
Total GHG Reductions ($MTCO_2e$)			**41,397**	**226,035**

Notes: BAU = business-as-usual; $MTCO_2e$ = metric tons of carbon dioxide equivalent; MWh = megawatt-hour.

Source: Analysis by Ascent in 2025.

RENEWABLE NATURAL GAS REQUIREMENTS

The legislative-adjusted BAU forecast considers changes to the carbon intensity of natural gas under SB 1440 that would affect future natural gas emission factors. Known as the Renewable Gas Standards (RGS), SB 1440 requires that natural gas utilities procure and deliver a proportionate share of a statewide total of 32 billion cubic feet (bcf) of biomethane from sources that have a first point of interconnection with the pipeline system in California. This shift to increased biomethane is expected to reduce the GHG emissions associated with natural gas used by residential, commercial, and some industrial customers (known as "core customers"). This reduction applies to the Building Energy GHG emissions sector.

The proportion of renewable natural gas delivered to core customers was derived from the 2024 California Gas Report and the RGS targets for the year 2030. The California Public Utilities Commission (CPUC) established a RGS biomethane target of 72.8 bcf per year statewide by 2030 and continuing thereafter (CPUC 2022). Based on review of the statewide projections for natural gas deliveries for core customers for the years 2030 and 2040, this represents 13.96 percent and 18.02 percent of total projected deliveries, respectively (California Gas and Electric Utilities 2024).

The natural gas emissions factor used in the legislative-adjusted BAU forecast was adjusted to account for the increased proportion of biomethane delivered to core customers under the RGS. The carbon dioxide emissions factor used in the BAU forecast was reduced proportionately to account for increased biomethane, while the methane and nitrous oxide emissions factors remained constant. This method is based on the recommendations of the World Resources Institute for accounting for biomethane (WRI 2023). The emission factors and biomethane mix of natural gas and associated GHG emissions factors for the legislative-adjusted BAU forecast are presented in A-13.

Table A-13 Natural Gas Emission Factors and Renewable Natural Gas Mix Used in Lake Elsinore

Utility	Calculation Factor	2022	2030	2045
Southern California Gas Company	Emission Factor ($MTCO_2e$/therm)	0.00532	0.00458	0.00437
	Biomethane Mix (%)	0%	13.96%	18.02%

Notes: $MTCO_2e$/therm = metric tons of carbon dioxide equivalent per therm.

Source: Analysis by Ascent in 2025.

The GHG emissions reductions for Lake Elsinore from renewable natural gas requirements under SB 1440 are calculated by subtracting the projected natural gas emissions with RGS-compliant emissions factors from projected natural emissions without RGS-compliant emissions factors. To avoid double counting with reductions considered under the building efficiency standards, the projected natural gas consumption used in this calculation is after adjustments of activity under the building efficiency standards. The calculations and results for the renewable natural gas requirements legislative reductions are provided in Table A-14.

Table A-14 Renewable Electricity Requirements Legislative Adjustments Calculations and Results

Utility	Emissions Sector	Calculation Factor	2030	2045
Southern California Gas Company	All	Legislative-Adjusted Emission Factor ($MTCO_2e$/therm)	0.00458	0.00437
		BAU Emission Factor ($MTCO_2e$/therm)	0.00532	0.00532
	Building Energy	Legislative-Adjusted Consumption (therms)	8,847,046	11,741,987
		Legislative Emissions Reductions ($MTCO_2e$)	6,547	11,155
Total GHG Reductions ($MTCO_2e$)			**6,547**	**11,155**

Notes: BAU = business-as-usual; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Analysis by Ascent in 2025.

SOLAR POLICIES AND MANDATES

There are numerous incentive programs for the installation of solar energy systems available in California, including net energy metering (NEM), Disadvantaged Communities Single-family Solar Homes program, property tax exclusions, Self-Generation Incentive Program, and other financial incentives offered by utility providers. Additionally, California's 2022 and 2025 Building Energy Efficiency Standards (Title 24) require solar installations on nearly all newly constructed buildings. With continued implementation of these programs, and nearly all new construction being required to incorporate solar, the reduction in grid-supplied electricity consumption associated with increased solar deployment can be accounted for in the legislative-adjusted BAU forecast. These reductions are applied to the Building Energy emissions sector.

Projections of future solar installations are estimated based on the historical average percentage of the regional total that installations in Lake Elsinore represent, and scaling percentage to projected future installations. The California Distributed Generation Statistics database includes capacities of behind-the-meter PV systems interconnected in a jurisdiction for each of the three Investor-Owned Utility planning areas, including SCE (CPUC 2025). The total cumulative solar installations in the Lake Elsinore city limits for the years 2020 through 2025 were compiled and converted into an estimated annual generation. These totals were then compared to the total installations in the SCE service territory, which was obtained from California Energy Demand, 2024-2040, published by California Energy Commission (CEC 2024). The results of this analysis show that solar generation in the Lake Elsinore city limits represents on average 1.06% of the total SCE service territory. Data used to calculate this average are provided in Table A-15.

Table A-15 Lake Elsinore Historical Solar Installations Compared to Regional Totals

Year	Lake Elsinore City Limits		Southern California Edison Planning Area	
	Cumulative Solar Capacity (kW)[1]	Estimated Annual Generation (GWh)[2]	Estimated Annual Generation (GWh)[3]	Percent of Planning Area Total in Lake Elsinore
2020	28,968	51.31	5,043	1.02%
2021	34,548	61.20	5,857	1.04%
2022	43,289	76.68	7,156	1.07%
2023	51,360	90.98	8,220	1.11%
2024	57,277	101.46	9,483	1.07%
2025	61,688	109.27	10,233	1.07%
Average over analysis time period				**1.06%**

Notes: GWh = gigawatt-hour; kW = kilowatt.

[1] Lake Elsinore city limits solar capacity obtained from the California Distributed Generation Statistics database (CPUC 2025).

[2] Lake Elsinore city limits estimated annual generation was estimated using the National Renewable Energy Laboratory PVWatts Calculator, available: https://pvwatts.nrel.gov/.

[3] Southern California Edison Planning Area estimated annual generation was obtained from California Energy Demand, 2024-2040, published by California Energy Commission (CEC 2024).

Source: Analysis by Ascent in 2025.

The California Energy Demand 2024–2040 Forecast, also has projections for solar capacity in the SCE planning area through 2040, including the impact of the residential and nonresidential solar mandates. By applying the average percent of the total generation in Lake Elsinore, compared to the total projected solar generation in the SCE planning area, estimates of future solar installations can be made to account for the impact of increased solar generation to reduce GHG emissions from grid-supplied electricity. To account for additional solar installations in the Lake Elsinore SOI, the total solar capacity for Lake Elsinore was increased by the ratio of SOI and city limits population. Additionally,

projections of installations were projected forward from 2040 to 2045 based on the change in solar installations between 2030 and 2040. The calculation of future solar capacity installations and results are provided in Table A-17.

Table A-17 Projected Lake Elsinore Solar Installations

Year	Southern California Edison Planning Area	Lake Elsinore City Limits[2]		Lake Elsinore City Limits + Sphere of Influence[3]	
	Estimated Annual Generation (GWh)[1]	Cumulative Solar Capacity (kW)	Estimated Annual Generation (GWh)	Cumulative Solar Capacity (kW)	Estimated Annual Generation (GWh)
2030	13,055	78,972	139.89	107,005	189.54
2040	16,507	99,854	176.87	135,299	239.66
2045[4]	NA	120,735	213.86	163,592	289.78

Notes: GWh = gigawatt-hour; kW = kilowatt; NA = not applicable; SOI = sphere of influence.

[1] Southern California Edison Planning Area estimated annual generation was obtained from California Energy Demand, 2024-2040, published by California Energy Commission (CEC 2024).

[2] Lake Elsinore city limits solar capacity and estimated annual generation were calculated by applying the 1.06% factor for the regional capacity installed in Lake Elsinore to the projected annual generation for the Southern California Edison Planning Area.

[3] Estimates for the Lake Elsinore city limits + SOI were calculated based on the population in the SOI compared to the city limits, which results in a factor of 1.35 being applied to the Lake Elsinore city limits values for solar capacity and generation.

[4] Values for the estimated annual solar generation are not available for 2045 in the California Energy Demand, 2024-2040 report. Estimated values for Lake Elsinore were developed by linear extrapolation from 2030 and 2040.

Source: Analysis by Ascent in 2025.

The GHG emissions reductions from increased solar installations are calculated by estimating the cumulative solar generation above 2022 levels and applying the legislative-adjusted GHG emissions factor for grid supplied electricity from SCE. The calculations and GHG reduction results of the solar adjustments for the years 2030 and 2045 are provided in Table A-17.

Table A-17 Solar Adjustments Results

Calculation Factor	2030	2045
Annual solar generation above 2022 baseline (MWh)	85,644	185,879
Southern California Edison legislative-adjusted emissions factor (MTO_2e/MWh)	0.181	0.0
Annual emissions reductions from increased solar generation ($MTCO_2e$)	**15,649**	**0**

Notes: MWh = megawatt-hour; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Analysis by Ascent in 2025.

FUEL EFFICIENCY STANDARDS AND ELECTRIC VEHICLE SALES

For the legislative-adjusted BAU forecast, the future vehicle emission factors are based on those from the CARB EMFAC2025 v2.0.0 webtool, which includes legislative adjustments from state and federal policies and regulations, including the Pavley Clean Car Standards, Advanced Clean Car II (ACC II) regulation, and the Advanced Clean Fleets (ACF) and Advanced Clean Trucks (ACT) regulations for medium- and heavy-duty trucks. The fleetwide average emissions factors by vehicle category for Riverside County, as obtained from EMFAC2025, are provided in Table A-18. These emissions factors are used to calculated the legislative-adjusted GHG emissions from the on-road transportation sector.

Table A-18 On-Road Transportation Legislative-Adjusted Emissions Factors (gCO_2e/VMT)

Vehicle Category	2022	2030	2045
Autos	377	273	62
Light Trucks	445	332	72
Medium Trucks	1,361	1,188	319
Heavy Trucks	1,793	1,522	594

Notes: gCO2e/VMT = grams of carbon dioxide equivalent per vehicle miles traveled; VMT= vehicle miles traveled.

Source: Compiled by Ascent in 2025.

The GHG emissions factors in Table A-18 were applied to the BAU scenario forecast VMT to estimate future GHG emissions in a legislative-adjusted scenario from the on-road transportation sector. The legislative-adjusted on-road transportation emissions for 2030 and 2045 are provided in Table A-19, including the total emissions reductions from the fuel efficiency standards and electric vehicle sales legislative adjustments.

Table A-19 On-Road Transportation Legislative-Adjusted BAU Forecasts and Total Legislative Reductions ($MTCO_2e$)

Source	2030	2045
Autos	220,561	67,436
Light Trucks	2,055	606
Medium Trucks	9,144	3,411
Heavy Trucks	26,959	14,619
Total Legislative-Adjusted Emissions	**258,720**	**86,072**
Total BAU Emissions	**350,215**	**470,410**
Total Emissions Reductions from Legislative Adjustments	**91,495**	**384,338**

Notes: BAU = business-as-usual; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Analysis by Ascent in 2025.

2.1.1 Off-road Equipment Regulations

The Off-Road Web Query Tool used to estimate GHG emissions for the BAU scenario forecast already incorporates several regulations that will reduce future fuel consumption and emissions from off-road vehicles and equipment. Some of the key regulations included in the model that are relevant to Lake Elsinore include:

- Regulation for In-Use Off-Road Diesel-Fueled Fleets,
- Off-Road Large Spark-Ignition Engine Fleet Requirements Regulation, and
- Small Off-road Equipment (SORE) Regulations.

Additional adjustments are not performed to account for these regulations.

One regulation that is not included in the Off-Road Web Query Tool that will result in GHG emissions reductions in Lake Elsinore is the Ultra-Low Emissions for Transportation Refrigeration Units (TRUs). This regulation requires that fleets with TRUs use either the cleanest TRU engines, retrofit TRUs, or use plug-in electric systems.

To calculate the GHG emissions reductions associated with this regulation, data on the projected reduction in diesel fuel consumption by TRUs in Southern California was used to reduce diesel fuel consumption allocated to Lake Elsinore in the BAU forecast. Under the DRAFT Mobile Emissions Toolkit for Analysis (META), CARB projects that

diesel fuel consumption by TRUs will be reduced below project fuel consumption in the Off-Road Web Query Tool by:

- 69.3 percent in 2030, and
- 98.9 percent in 2045.

These projected reductions in future diesel fuel consumption were applied to BAU scenario emissions projections for diesel fuel use by TRUs, to estimate legislative-adjusted scenario emissions and the associated emissions reductions. Table A-20 provides the legislative reductions from the Ultra-Low Emissions for TRUs regulations and the resulting legislative-adjusted emissions for the Off-road Vehicle and Equipment emissions sector.

Table A-20 Off-Road Vehicle and Equipment Legislative-Adjusted BAU Forecasts and Total Legislative Reductions ($MTCO_2e$)

Source	2030	2045
TRUs – Diesel GHG Emissions under BAU Scenario	2,694	5,301
Adjustment for Ultra-Low Emissions for TRUs regulations	-69.3%	-98.9%
Emissions Reductions from Legislative Adjustments	**1,865**	**5,243**
Total Legislative-Adjusted Emissions for Off-road Vehicle and Equipment	**23,380**	**35,938**

Notes: BAU = business-as-usual; $MTCO_2e$ = metric tons of carbon dioxide equivalent; TRUs = transportation refrigeration units.

Source: Analysis by Ascent in 2025.

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CARB. *See* California Air Resources Board.

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Attachment B

GHG Strategies Calculation

Methods and Assumptions

INTRODUCTION

This document is an attachment to the City of Lake Elsinore's (City's) Greenhouse Gas Emissions Forecast, Targets, and Reduction Measures Memorandum (hereafter referred to as "GHG Memorandum"). It provides technical documentation for quantification of the GHG reduction strategies. This attachment supports the substantiation of the estimated reductions summarized in Section 5 of the GHG Memorandum.

Table B-1 summarizes the quantification methods, assumptions, and data sources used to quantify the GHG reductions from the 10 quantified strategies identified in Section 5 of the GHG Memorandum. Detailed calculations and assumptions are available in spreadsheets included in this Attachment. Analysis of the vehicle miles traveled (VMT) reductions for Strategies TR-1, TR-2, and TR-4 was conducted by Fehr & Peers, and is available in Attachment C.

Table B-1 Summary of GHG Reduction Strategy Primary Assumptions, Methods, and Data

Strategy Number	Strategy Name	Assumptions/Measure Targets	Methods	Data Sources
BE-1	Energy Efficiency and Decarbonization	▶ Measure BE-1.3: 75% of new single-family residential units are constructed as all-electric with CALGreen Tier 1 efficiency standards. 25% of new single-family residential units assumed to be all-electric from the 2025 building code. ▶ Measure BE-1.4, Action BE-1.4.1: Implement CALGreen voluntary standards Section A4.204.1.1 by 2031. 70% of existing single-family residential units have replaced AC with heat pumps by 2045. 5% annual unit replacement from Cost Effectiveness Explorer assumptions. ▶ Measure BE-1.4, Action BE-1.4.2: 16% of existing single-family and multi-family residential units have electric water heaters and HVAC units by 2030, 74% by 2045. This target is 16% by 2030 for existing nonresidential retail building square footage, and 74% by 2045. Implementation is assumed to start in 2026. 3.9% replacement rate from American Council for Energy-Efficient Economy (ACEEE).	▶ BE-1.3: Adjustment factors used to develop the legislative-adjusted BAU forecast to account for building efficiency requirements (See Attachment A), were adjusted such that 75% of new construction is all-electric. This resulted in an increase in electricity consumption for new units and a decrease in natural gas consumption. ▶ BE-1.4.1: Annual gas savings and increased electricity use estimated from Cost Effectiveness Explorer model for a heat pump space conditioner policy. ▶ BE-1.4.2: Annual gas savings and increased electricity use estimated from Cost Effectiveness Explorer model for a heat pump space conditioner and electric heat pump water heater policy.	Local Energy Codes (n.d.) ACEEE (2016)
BE-2	Renewable Energy	▶ By 2030, there will be 35% participation in a 100% renewable or carbon-free electricity program through a Community Choice Aggregator, Southern California Edison, or a combination thereof.	Measure target for renewable and carbon-free energy supply was multiplied by forecasted building energy electricity emissions to obtain community-wide GHG reductions.	None
TR-1	Active Transportation	▶ Emissions factor for vehicles categorized as automobiles is 274 $MTCO_2e$/VMT in 2030 and 63 $MTCO_2e$/VMT in 2045.	Estimated VMT reductions for the following Fehr & Peers measures were accounted for under this strategy: AT.1 RD.2 RD.1 Vehicles in EMFAC2025 were categorized in in accordance with RIVCOM vehicle categories. "Automobiles" included the following EMFAC2025 vehicle types: LDA, MCY, MDV, and MH. To calculate the emissions factor, g CO_2e/VMT was averaged for all automobiles for the years 2030 and 2045.	CARB (2025) See Attachment C

Strategy Number	Strategy Name	Assumptions/Measure Targets	Methods	Data Sources
TR-2	Transit	▶ Emissions factor for vehicles categorized as automobiles is 274 $MTCO_2e$/VMT in 2030 and 63 $MTCO_2e$/VMT in 2045.	Estimated VMT reductions for the following Fehr & Peers measures were accounted for under this strategy: CM.1 CM.3 CM.4 CM.5 PT.1 PT.2 PT.3 ND.1 PT.6 PT.7 Vehicles in EMFAC2025 were categorized in accordance with RIVCOM vehicle categories. "Automobiles" included the following EMFAC2025 vehicle types: LDA, MCY, MDV, and MH. To calculate the emissions factor, g CO_2e/VMT was averaged for all automobiles for the years 2030 and 2045.	CARB (2025) See Attachment C
TR-3	Zero-Emission Vehicles and Equipment	▶ Measures TR-3.1 and TR-3-2: 90% of the vehicle fleet will be zero-emission vehicles (ZEVs). ZEVs included the EMFAC2025 categories of EVs, PHEVs, and fuel cell vehicles. ▶ Measure TR-3.3: 100% of construction equipment will be zero-emission by 2045.	▶ TR-3.1 and TR-3-2: Vehicles in EMFAC2025 were categorized in accordance with RIVCOM vehicle categories. To calculate the emissions factor, g CO_2e/VMT was averaged for each vehicle category for the years 2030 and 2045. 2045 emissions factors were calculated by taking the difference between existing ZEVs in the 2022 fleet and target ZEVs in 2045, multiplied by the existing emissions factor. Fehr & Peers 2045 VMT estimates were multiplied by the new emissions factors to calculate emissions reductions, after accounting for the reductions in VMT from implementation of measures. ▶ TR-3.3: Measure target was multiplied by legislative-adjusted forecasted GHG emission for construction equipment under the off-road vehicles and equipment sector.	CARB (2025) See Attachment C

Strategy Number	Strategy Name	Assumptions/Measure Targets	Methods	Data Sources
TR-4	Smart Growth	▶ Estimated Emissions factor for vehicles categorized as automobiles is 274 $MTCO_2e$/VMT in 2030 and 63 $MTCO_2e$/VMT in 2045.	Estimated VMT reductions for the following Fehr & Peers measures were accounted for under this strategy: LU.1 LU.2 LU.4 Vehicles in EMFAC2025 were categorized in accordance with RIVCOM vehicle categories. "Automobiles" included the following EMFAC2025 vehicle types: LDA, MCY, MDV, and MH. To calculate the emissions factor, g CO2e/VMT was averaged for all automobiles for the years 2030 and 2045.	CARB (2025) See Attachment C
W-1	Water Conservation	▶ Reduce water consumption to 44 gallons per capita per day (GCPD) 2030, and 20 GCPD by 2045. ▶ Reductions were applied to imported water first, as it is the costliest and highest energy intensity water source in Lake Elsinore.	Target water savings are from subtracting the GCPD savings from Elsinore Valley Municipal Water District's (EVMWD) 2018 Water Conservation Business Plan Program B and forecasted water use.	EVMWD (2018)
W-2	Recycled Water	▶ 17% increase in recycled water use by 2030, 50% increase by 2045. ▶ 1% increase in graywater use by 2030, 15% increase by 2045. Graywater has an intensity (kWh/AF) factor of 0. ▶ Reductions were applied to imported water first, as it is the costliest and highest energy intensity water source in Lake Elsinore.	Measure target was multiplied by forecasted imported water emissions to get community-wide reductions. The California Public Utilities Commission (CPUC) intensity factor of recycled water was subtracted from the intensity factor of imported water to calculate reduced fuel use. This was also applied to graywater.	CPUC (2014)
SW-1	Recycling and Compost.	▶ 30,000 tons of organic waste diverted from landfills by 2030, 44,200 tons of organic waste diverted from landfills by 2045.	2022 diversion rates were calculated using data from CalRecycle. Target was calculated by estimating 25% of 2014 organic waste tonnage that was landfilled, and dividing by forecasted organic waste landfilled in 2030 and 2045. Measure target was multiplied by forecasted solid waste emissions to get community-wide reductions.	CalRecycle (2025)
GC-2	Urban Tree Canopy	▶ 9% increase in canopy percent coverage by 2030, 20% by 2045. ▶ Average carbon stored per tree is 0.02 tons of CO_2.	Target tree canopy coverage estimated according to the Tree Equity Score tool. Targets allow Lake Elsinore to achieve a score of 65 out of 100.	American Forests (2025)

ACEEE = American Council for Energy-Efficient Economy, AF = acre-foot, CalRecycle = California Department of Resources Recycling and Recovery, CARB = California Air Resources Board, CPUC = California Public Utilities Commission, CO_2 = carbon dioxide, EVMWD = Elsinore Valley Municipal Water District, GCPD = gallons per capita per day, GHG = greenhouse gas, HVAC = heating, ventilation, and air conditioning, kWh = kilowatt hours, $MTCO_2e$ = metric tons of carbon dioxide equivalent, RIVCOM = Riverside County Model; VMT = Vehicle Miles Traveled; ZEV = zero-emission vehicle.

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BE-1.3

Develop building performance standards that adhere to or go beyond CALGreen Tier 1 values.

		2030	2045
CALGreen Tier 1 for single-family residential shifts more new construction to all-electric through increased efficiency requirements (only applies to City Limits after 2030, as growth in SOI is expected to be primarily multifamily)			
Proportion of new single family units assumed to be all-electric from 2025 building code	0.25		
Proportion of new single family units with CALGreen Tier 1 efficiency standards	0.75		
New Growth Building Energy Adjustment Factors			
Residential Natural Gas with 2025 building code (applied to 2022 residential energy to develop Legislative Adjusted forecast)	0.60		
Residential Natural Gas with CALGreen Tier 1 (applied to growth between 2030 and 2045)	0.39		
Projected Natural Gas Consumption			
Residential Natural Gas with 2025 building code (therms)		4,741,729	5,945,304
Residential Natural Gas with CALGreen Tier 1 (after 2030) (therms)		4,741,729	5,454,895
Annual Gas Savings (therms)		-	490,410
Natural gas emissions factor - RGS adjusted (MTCO2e/therm)		0.00435	0.00435
GHG Reductions from natural gas savings (MTCO2e)		-	**2,132**

GHG emissions from increased electricity are not calculated, as they have zero emissions impact

BE-1.4
Retrofit existing residential and nonresidential buildings to use electric heating and cooling technology.

	2025	2030	2045
Calculations for CALGreen AC Replacements with heat pump at time-of-replacement, single-family			
Affected Units by Build Year(Existing Single Family Homes)			
Total City Limits	19,520		
Total SOI	4,198		
Total City Limits +SOI	**23,718**		
Local Energy Code Input Assumptions			
Average Age of A/C Units (years)	15		
Percentage of units replaced per year (Penetration Rate)	5%		
Installation Time (years)	1		
Applicability Rate (Percent of eligible homes that will actually install the required measure.)	50%		
Measure Start Year	2031		
Annual target replacement rate due to CALGreen measures			5%
Cumulative percentage of existing units replaced starting in 2031 [1]			70%
Number of units with heat pump replacement city limits			13,664
Number of units with heat pump replacement SOI			2,939
Total number of units with heat pump replacements City Limits + SOI			16,603
Annual Gas Savings City Limits (therms) [2]			1,560,000
Annual Gas Savings (therms) SOI [2]			336,478
Annual Gas Savings (therms) City Limits + SOI [2]			1,896,478
Natural gas emissions factor (MTCO2e/therm)			0.00435
GHG Reductions from natural gas savings (MTCO2e)			8,246
Annual Electricity Savings (kWh) [2]			(3,220,000)
Electricity emissions factor (MTCO2e/MWh)			-
Electricity-related Emissions reductions from Heat Pump HVAC Replacements (MTCO2e) (negative reduction = increased emissions)			-
Net GHG Reductions (MTCO2e)			**8,246**

	2025	2030	2045
Calculations for heat pump HVAC and water heating replacements through voluntary replacements, single-family and multifamily.			
Affected Units Existing Single and Multi Family Homes	55,157		
Measure Start Year	2026		
Annual replacement rate due to participation in loan/rebate program		3.9%	3.9%
Cumulative percentage of existing units replaced starting in 2026 [3]		16%	74%
Number of units with heat pump replacement		8,604	40,871
Annual Gas Savings per unit (therms)		158	158
Natural gas emissions factor (MTCO2e/therm)		0.00435	0.00435
GHG Reductions from natural gas savings (MTCO2e)		5,908	28,061
Annual Electricity Savings per unit (kWh)		(417)	(417)
Electricity emissions factor (MTCO2e/MWh)		0.18	-
Electricity-related Emissions reductions from Heat Pump Water Heater Replacements (MTCO2e) (negative reduction = increased emissions)		(656)	-

Net GHG Reductions (MTCO2e)		**5,251**	**28,061**
	2025	**2030**	**2045**
Calculations for heat pump HVAC and water heating replacements through voluntary replacements, nonresidential.			
Affected Existing Buildings Nonresidential (Retail)	205		
Square footage of affected nonresidential retail	3,280,000		
Local Energy Code Input Assumptions			
Annual Gas Savings (therms) [4]	667		
Retail average square footage [5]	24,563		
Annual gas savings per square foot (therms)	0.03		
Measure Start Year	2026		
Annual replacement rate due to participation in loan/rebate program		3.9%	3.9%
Cumulative percentage of existing units replaced starting in 2026 [3]		16%	74%
Number of units with heat pump replacement		32	152
Total square footage with heat pump replacement		511,680	2,430,480
Annual Gas Savings per unit (therms)		0.03	0.03
Natural gas emissions factor (MTCO2e/therm)		0.00435	0.00435
Total therms reduced		13,894.5	65,998.9
GHG Reductions from natural gas savings (MTCO2e)		60	287
Annual Electricity Savings per sq ft (kWh)		(0)	(0)
Electricity emissions factor (MTCO2e/MWh)		0.18	-
Electricity-related Emissions reductions from Heat Pump Water Heater Replacements (MTCO2e) (negative reduction = increased emissions)		(105)	-
Net GHG Reductions (MTCO2e)		**(44)**	**287**
Total GHG Reductions (MTCO2e)		**5,207**	**36,594**

Notes:

[1] Assumes that implementation starts in 2026 with a 3.5% achievable rate per year, based on the Mozingo study Table 59.https://www.researchgate.net/publication/359931845_Zero-Carbon_Buildings_in_California_A_Feasibility_Study

[2] Modeled in LocalEnergyCodes.com for the City of Lake Elsinore.

[3] Assumes a participation rate of 3.9% to 2016 ACEEE Summer Study on Energy Efficiency in Buildings Table 2. https://www.aceee.org/files/proceedings/2016/data/papers/2_765.pdf

Sources:

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[5] Nonresidential AC to HP Study Data.(RE HP-DCV v3 SCE) https://localenergycodes.com/download/2052/file_path/fieldList/2025%20NR%20AC%20to%20HP%20Study%20Data.xlsx

BE-1.4

Facilitate the transition of residential electricity use to 100% renewable energy sources.

	2030	2045
Building energy electricity consumption (MWh)	491,459	664,052
Southern California Edison Grid emissions factor (MTCO2e/MWh)	0.18	0
GHG Emissions from electricity consumption with SCE	89,801	-
Participation Rate in 100% carbon-free Program	35%	135%
Electricity purchased via carbon-free options	172,011	896,470
Carbon-free emissions factor (MTCO2e/MWh) [1]	-	-
Total GHG Emissions (MTCO2e)	**31,430**	**-**

TR-3.3
Transition away from fossil-fuel powered equipment.

	2045
Projected construction equipment emissions per fuel type:	
Conventional Diesel (MTCO2e)	19,194
Gasoline (MTCO2e)	207
Natural Gas (MTCO2e)	-
Projected portable equipment emissions per fuel type:	
Conventional Diesel (MTCO2e)	8,869
Target electric and renewable fuel usage rate for construction equipment	100%
Reduced GHG Emissions (MTCO2e)	**28,270**

Notes: Related electricity emissions from equipment charging are assumed to be zero in 2045.

TR-3.1 and TR-3.2

Increase the adoption of EVs through financial incentives and vehicle replacement policies.

Expand EV charging infrastructure.

	2045			
	Auto	Light Trucks	Medium Trucks	Heavy Trucks
Percent of total fleet EV, PHEV or Fuel Cell	75%	73%	67%	63%
Legislative-Adjusted Forecast Emissions Factor (gCO2e/VMT)	62.4	72.3	319.4	593.8
City Vehicle Miles Traveled	852,589,604	6,195,150	7,832,717	17,882,980
SOI Vehicle Miles Traveled	228,559,734	2,197,072	2,845,180	6,738,064
Total VMT	1,081,149,338	8,392,222	10,677,897	24,621,044
Target percent electrification for Fleet	90%	90%	90%	90%
New EF	24.71	26.53	96.73	160.20
GHG Emissions with updated ZEV target (MTCO2e)	**26,717**	**223**	**1,033**	**3,944**
Legislative-Adjusted GHG Emissions (MTCO2e)	**67,436**	**606**	**3,411**	**14,619**
GHG Reductions with updated ZEV target (MTCO2e)	**40,719**	**384**	**2,378**	**10,675**
Sum of GHG Emissions Reduced (MTCO2e)	**54,156**			

GHG Emissions (MTCO2e) from TR Strategies	**4,104**
Total GHG Emissions (MTCO2e)	**50,052**

CAP Measure	2030	2045
	MTCO2e Reductions	
TR-1.1	110	451
TR-4.1	853	1,254
TR-2.1	1,116	1,447
TR-2.2	471	952
Total	2,551	4,104

Leg-Adjusted Auto Emissions Factor	
Year	MTCO2e / VMT
2030	273.99
2045	62.72

Annualization Factor
353

Year	Level of Implementation	Measure ID	Measure Name	Daily VMT Reduction	Annual VMT Reduction	MTCO2e Reduction	CAP Measure
2030	Low	AT.1	End of Trip Bike Facilities	56	19,768	5	TR-1.1
2030	Low	LU.1	Increase Residential Density	2,619	924,507	253	TR-4.1
2030	Low	LU.2	Increase Job Density	1,667	588,451	161	TR-4.1
2030	Low	LU.4	Integrate Affordable Housing Development	1,595	563,035	154	TR-4.1
2030	Low	RD.2	Improved Pedestrian Network	626	220,978	61	TR-1.1
2030	Low	CM.1	Commute Trip Reduction Program (Voluntary)	1,139	402,067	110	TR-2.1
2030	Low	CM.3	Commute Trip Reduction Marketing	1,139	402,067	110	TR-2.1
2030	Low	CM.4	Employee Ridesharing Program	1,139	402,067	110	TR-2.1
2030	Low	CM.5	Employee Vanpool	3,847	1,357,991	372	TR-2.1
2030	Low	PT.1	Subsidized Transit Pass Program	259	91,427	25	TR-2.1
2030	Low	PT.2	Expanded Local Transit Coverage	660	232,980	64	TR-2.2
2030	Low	PT.3	Expanded Local Transit Frequency	486	171,558	47	TR-2.2
2030	Low	ND.1	Community-Based Travel Planning	649	229,097	63	TR-2.2
2030	Low	PT.6	Provide Transit Shelters	381	134,493	37	TR-2.2
2030	Low	PT.7	Park and Ride Expansion	1,288	454,664	125	TR-2.2
2030	Low	RD.1	Improve Bike Facilities	37	13,061	4	TR-1.1
2030	High	AT.1	End of Trip Bike Facilities	226	79,778	22	TR-1.1
2030	High	LU.1	Increase Residential Density	5,238	1,849,014	507	TR-4.1
2030	High	LU.2	Increase Job Density	3,333	1,176,549	322	TR-4.1
2030	High	LU.4	Integrate Affordable Housing Development	3,190	1,126,070	309	TR-4.1
2030	High	RD.2	Improved Pedestrian Network	1,251	441,603	121	TR-1.1
2030	High	CM.1	Commute Trip Reduction Program (Voluntary)	2,278	804,134	220	TR-2.1
2030	High	CM.3	Commute Trip Reduction Marketing	2,278	804,134	220	TR-2.1
2030	High	CM.4	Employee Ridesharing Program	2,278	804,134	220	TR-2.1
2030	High	CM.5	Employee Vanpool	7,647	2,699,391	740	TR-2.1
2030	High	PT.1	Subsidized Transit Pass Program	1,083	382,299	105	TR-2.1
2030	High	PT.2	Expanded Local Transit Coverage	1,320	465,960	128	TR-2.2
2030	High	PT.3	Expanded Local Transit Frequency	973	343,469	94	TR-2.2
2030	High	ND.1	Community-Based Travel Planning	1,298	458,194	126	TR-2.2
2030	High	PT.6	Provide Transit Shelters	762	268,986	74	TR-2.2
2030	High	PT.7	Park and Ride Expansion	1,932	681,996	187	TR-2.2
2030	High	RD.1	Improve Bike Facilities	73	25,769	7	TR-1.1
2045	Low	AT.1	End of Trip Bike Facilities	226	79,778	22	TR-1.1
2045	Low	LU.1	Increase Residential Density	3,505	1,237,265	339	TR-4.1
2045	Low	LU.2	Increase Job Density	2,231	787,543	216	TR-4.1
2045	Low	LU.4	Integrate Affordable Housing Development	2,910	1,027,230	281	TR-4.1
2045	Low	RD.2	Improved Pedestrian Network	1,674	590,922	162	TR-1.1
2045	Low	CM.1	Commute Trip Reduction Program (Voluntary)	1,473	519,969	142	TR-2.1
2045	Low	CM.3	Commute Trip Reduction Marketing	1,473	519,969	142	TR-2.1
2045	Low	CM.4	Employee Ridesharing Program	1,473	519,969	142	TR-2.1
2045	Low	CM.5	Employee Vanpool	4,977	1,756,881	481	TR-2.1
2045	Low	PT.1	Subsidized Transit Pass Program	335	118,255	32	TR-2.1
2045	Low	PT.2	Expanded Local Transit Coverage	1,766	623,398	171	TR-2.2
2045	Low	PT.3	Expanded Local Transit Frequency	1,302	459,606	126	TR-2.2
2045	Low	ND.1	Community-Based Travel Planning	840	296,520	81	TR-2.2
2045	Low	PT.6	Provide Transit Shelters	510	180,030	49	TR-2.2
2045	Low	PT.7	Park and Ride Expansion	2,576	909,328	249	TR-2.2
2045	Low	RD.1	Improve Bike Facilities	98	34,594	9	TR-1.1
2045	High	AT.1	End of Trip Bike Facilities	1,119	395,007	108	TR-1.1
2045	High	LU.1	Increase Residential Density	7,010	2,474,530	678	TR-4.1
2045	High	LU.2	Increase Job Density	4,461	1,574,733	431	TR-4.1
2045	High	LU.4	Integrate Affordable Housing Development	5,821	2,054,813	563	TR-4.1
2045	High	RD.2	Improved Pedestrian Network	3,348	1,181,844	324	TR-1.1
2045	High	CM.1	Commute Trip Reduction Program (Voluntary)	2,947	1,040,291	285	TR-2.1
2045	High	CM.3	Commute Trip Reduction Marketing	2,947	1,040,291	285	TR-2.1
2045	High	CM.4	Employee Ridesharing Program	2,947	1,040,291	285	TR-2.1

2045	High	CM.5	Employee Vanpool	9,892	3,491,876	957	TR-2.1
2045	High	PT.1	Subsidized Transit Pass Program	1,449	511,497	140	TR-2.1
2045	High	PT.2	Expanded Local Transit Coverage	3,533	1,247,149	342	TR-2.2
2045	High	PT.3	Expanded Local Transit Frequency	2,605	919,565	252	TR-2.2
2045	High	ND.1	Community-Based Travel Planning	1,680	593,040	162	TR-2.2
2045	High	PT.6	Provide Transit Shelters	1,020	360,060	99	TR-2.2
2045	High	PT.7	Park and Ride Expansion	3,864	1,363,992	374	TR-2.2
2045	High	RD.1	Improve Bike Facilities	195	68,835	19	TR-1.1
2030	Average	AT.1	End of Trip Bike Facilities	226	79,778	14	TR-1.1
2030	Average	LU.1	Increase Residential Density	3,505	1,237,265	380	TR-4.1
2030	Average	LU.2	Increase Job Density	2,231	787,543	242	TR-4.1
2030	Average	LU.4	Integrate Affordable Housing Development	2,910	1,027,230	231	TR-4.1
2030	Average	RD.2	Improved Pedestrian Network	1,674	590,922	91	TR-1.1
2030	Average	CM.1	Commute Trip Reduction Program (Voluntary)	1,473	519,969	165	TR-2.1
2030	Average	CM.3	Commute Trip Reduction Marketing	1,473	519,969	165	TR-2.1
2030	Average	CM.4	Employee Ridesharing Program	1,473	519,969	165	TR-2.1
2030	Average	CM.5	Employee Vanpool	4,977	1,756,881	556	TR-2.1
2030	Average	PT.1	Subsidized Transit Pass Program	335	118,255	65	TR-2.1
2030	Average	PT.2	Expanded Local Transit Coverage	1,766	623,398	96	TR-2.2
2030	Average	PT.3	Expanded Local Transit Frequency	1,302	459,606	71	TR-2.2
2030	Average	ND.1	Community-Based Travel Planning	840	296,520	94	TR-2.2
2030	Average	PT.6	Provide Transit Shelters	510	180,030	55	TR-2.2
2030	Average	PT.7	Park and Ride Expansion	2,576	909,328	156	TR-2.2
2030	Average	RD.1	Improve Bike Facilities	98	34,594	5	TR-1.1
2045	Average	AT.1	End of Trip Bike Facilities	1,119	395,007	65	TR-1.1
2045	Average	LU.1	Increase Residential Density	7,010	2,474,530	509	TR-4.1
2045	Average	LU.2	Increase Job Density	4,461	1,574,733	324	TR-4.1
2045	Average	LU.4	Integrate Affordable Housing Development	5,821	2,054,813	422	TR-4.1
2045	Average	RD.2	Improved Pedestrian Network	3,348	1,181,844	243	TR-1.1
2045	Average	CM.1	Commute Trip Reduction Program (Voluntary)	2,947	1,040,291	214	TR-2.1
2045	Average	CM.3	Commute Trip Reduction Marketing	2,947	1,040,291	214	TR-2.1
2045	Average	CM.4	Employee Ridesharing Program	2,947	1,040,291	214	TR-2.1
2045	Average	CM.5	Employee Vanpool	9,892	3,491,876	719	TR-2.1
2045	Average	PT.1	Subsidized Transit Pass Program	1,449	511,497	86	TR-2.1
2045	Average	PT.2	Expanded Local Transit Coverage	3,533	1,247,149	256	TR-2.2
2045	Average	PT.3	Expanded Local Transit Frequency	2,605	919,565	189	TR-2.2
2045	Average	ND.1	Community-Based Travel Planning	1,680	593,040	122	TR-2.2
2045	Average	PT.6	Provide Transit Shelters	1,020	360,060	74	TR-2.2
2045	Average	PT.7	Park and Ride Expansion	3,864	1,363,992	311	TR-2.2
2045	Average	RD.1	Improve Bike Facilities	195	68,835	14	TR-1.1

W-1 **Water Conservation**		
	2030	**2045**
Population	81,724	113,240
Forecast MG/year	1,770	1,770
MG to Gallons	1,770,190,427	1,770,190,427
Days in a Year	365	365
GPCD Forecast	59	43
EVMWD 2022 GPCD	27	35
EVMWD 2030 GPCD	12	12
EVMWD 2022 GPCD - EVMWD 2030 GPCD	15	23
EVMWD GPCD (subtract this from our GPCD Forecast)	44	20
GPCD to AF	11.34	5.07
Total Imported Water-related Fuel Use (kWh) [1]	29,507,568	46,382,231
Annual potable water consumption (AF/year)	7,817	12,287
Rate of Fuel Use (kWh/AF/year)	3,775	3,775
Reduced Fuel Use (kWh)	42,826.75	19,149.48
kWh / MWH factor	1,000	1,000
Reduced Fuel Use (MWh)	43	19
Leg-Adjusted Average electricity emissions factor for imported water usage (MTCO2e/MWh)	0.17	0
Reduced GHG Emissions (MTCO2e)	**7.17**	**0**

Notes:

[1] Assuming reduction in imported water with efficiency savings.

Sources:

[2] EVMWD 2018 Water Conservation Business Plan Final Draft.Figure ES-2. Available: https://evmwd.com/wp-content/uploads/2022/09/Water-Conservation-Busines.pdf

W-2 **Recycled Water**			
	2022	**2030**	**2045**
Imported Water (AF) [1]	5,433	7,817	12,287
Intensity factor (kWh/AF)	6,852	4,469	0
Recycled Water (AF)	0		
Intensity factor (kWh/AF) [2]	1200.4	782.87	0
Target Percent Increase in Recycled Water	0	17%	50%
Reduced Water Related Consumption (AF/year)		1,359	6,143
Difference Between Intensity Factors (kWh/AF)		3,686	-
kWh / MWH factor		1000	1000
Reduced Fuel Use (MWh)		5,011	-
Leg-Adjusted Electricity emissions factor (MTCO2e/MWh)		0.17	-
Reduced GHG Emissions (MTCO2e)		838.68	-
Graywater (AF)	0	0	0
Intensity factor (kWh/AF)	0	0	0
Target Percent Increase in Graywater		1%	15%
Total Number of Residents	71,586	108,833	201,949
Target Number of Residents with Graywater Systems		1,088	30,292
Reduced Water Related Consumption (AF/year)		78	1,843
Difference Between Intensity Factors		782.87	-
kWh / MWH factor		1,000	1,000
Reduced Fuel Use (MWh)		61	-
Leg-Adjusted Electricity emissions factor (MTCO2e/MWh)	0.23	0.17	-
Reduced GHG Emissions (MTCO2e)		10.24	-
Total Reduced GHG Emissions (MTCO2e)		**848.92**	**-**

Notes:

[1] Assuming reduction in imported water with increased recycled water.

Sources:

[2] Navigant CPUC Water/Energy Cost-Effectiveness Analysis 2015.

SW-1
Recycling and Composting

	2014	2022	2030	2045
Organics Landfilled (From 2014 and 2021 State Waste Characterization)				
Paper	14%	15.50%	15.50%	15.50%
Other Organic	37.40%	28.40%	28.40%	28.40%
Total Organic	**51.40%**	**43.90%**	**43.90%**	**43.90%**
Organics in Elsinore Waste Stream				
Total waste landfilled	41,290	63,347	80,547	112,789
Organic waste landfilled	21,223	27,809	35,360	49,514
Target landfilled organics	5,306	5,306	5,306	5,306
Organic waste reduction to meet target			30,054	44,209
% reduction in organics landfilled			0.85	0.89
Solid waste emissions from ABAU forecast (MTCO2e)			24,090	33,439
Reduced GHG Emissions (MTCO2e)			**20,475**	**29,856**

Notes:

From Cal Recycle 2021: Cal Recycle estimates that California's overall waste generation in 2021 was about 76.7 million tons. Of that total

Disposal = All solid waste disposed into landfill, incinerated, or other means [4]

Diversion = Generated - Disposed = Waste that is diverted from the waste stream through existing source reduction, recycling, and compostin

Sources:

[1] State of Disposal and Recycling for Calendar Year 2022. Cal Recycle 2023. Available: https://calrecycle.ca.gov/reports/stateof/

[2] Cal Recycle Jurisdiction Diversion/Disposal Rate Summary

[3] 2022 values calculated by scaling the Lake Elsinore rate by the disposal rates between Statewide and Lake Elsinore in 2022.

GC-2
Urban Tree Canopy

	2022	2030	2045
Target Number of Trees	66,044	71,614	79,571
Target Canopy Percent Coverage	8%	9%	10%
Number of Trees Equivalent to 1% Canopy	7,957		
Target Number of Trees to Plant		5,570	13,527
Total carbon sequestered (tons CO2)	1,579		
Carbon stored per tree (tons CO2/tree)	0.02		
Reduced GHG Emissions (MTCO2e)		**133**	**323**

Sources:

[1] Tree Equity Score. Tree Equity Score Location Insights: Lake Elsinore, CA. Available: https://www.treeequityscore.org/insights/place/lake-elsinore-ca

Fehr & Peers

Memo

Date: November 11th, 2025

To: Poonam Boparai – Ascent

From: Paul Herrmann, TE, Trevor Lien, Andre Pham – Fehr & Peers

Subject: Lake Elsinore Climate Action Plan (CAP) Vehicle Miles Traveled (VMT) Reduction Summary

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Fehr & Peers analyzed and quantified Vehicle Miles Traveled (VMT) reduction measures to support the City of Lake Elsinore's Climate Action Plan (CAP). Our analysis quantifies the VMT reduction potential of various transportation-related measures and forecasts these reductions for the CAP scenario years 2030 and 2045.

This memorandum summarizes our methodology and calculations and provides two implementation level scenarios for the city to consider.

Baseline VMT Inventory

Fehr & Peers used the latest version of the RIVCOM model to estimate VMT for the City and City's sphere of influence (SOI). The RIVCOM model is the most appropriate travel demand model for forecasting traffic volumes and VMT in the City and SOI as it reflects updated land use assumptions and is consistent with the latest City of Lake Elsinore 2045 general plan update and the 2020 Southern California Association of Governments Regional Transportation Plan and Sustainable Communities Strategy (SCAG RTP/SCS). The RTAC half-accounting method assigns 100% of the VMT for trips that begin and end within the city and 50% of the VMT for trips with one trip ending in Lake Elsinore and the other in a neighboring jurisdiction. **Table 1** summarizes daily average City and SOI VMT estimates and VMT per service population (VMT/SP) for years 2018, 2025, 2030, and 2045. Further details of the VMT inventory are provided in a separate memorandum (Lake Elsinore CAP VMT Inventory Memorandum).

Table 1: Lake Elsinore and SOI Daily Average Origin-Destination (OD) VMT Estimates

Year	Total (Full-Accounting) VMT			RTAC VMT[1]			Service Population[2]	RTAC VMT/SP		
		i	x	Total	Auto	Truck		Total	Auto	Truck
2018	i	215,033	1,566,607	1,736,082	1,673,969	62,113	95,735	18.13	17.49	0.65
	x	1,475,491	-							
2025	i	287,755	1,866,012	2,112,121	2,034,022	78,099	120,871	17.47	16.83	0.65
	x	1,782,721	-							
2030	i	339,699	2,079,872	2,380,720	2,291,203	89,517	138,825	17.15	16.50	0.64
	x	2,002,170	-							
2045	i	495,532	2,721,453	3,186,518	3,062,746	123,771	192,687	16.54	15.89	0.64
	x	2,660,519	-							

Notes: RTAC VMT = 100% internal-internal + 50% internal-external + 50% external-internal. Service Population = Population + Total Employment.
Source: RIVCOM; Fehr & Peers, 2025.

VMT Reduction Measures

VMT reduction measures aim to decrease reliance on single-occupancy vehicles by providing transportation alternatives and/or reducing the need for longer trip lengths. Some examples of reduction measures include:

- Promoting higher-density, mixed-use development
- Improving public transit
- Enhancing active transportation infrastructure
- Implementing telecommuting policies
- Encouraging carpooling or ride-sharing programs

In consultation with City staff, Fehr & Peers identified 16 VMT mitigation measures applicable to the City of Lake Elsinore related to:

- Land Use
- Trip Reduction Program
- Parking Management
- Transit
- Neighborhood Design

These measures were grouped into two scenarios based on scalability and ease of implementation, with one scenario representing a more conservative, low-level implementation and another representing a more aggressive, high-level implementation. VMT reductions were calculated for 2030 and 2045. **Table 2** presents the selected mitigation measures analyzed for VMT reduction and the two scenarios.

Table 2: VMT Reduction Measures Descriptions

Measure ID	Measure Name	Category	Low-Level Implementation Alternative	High-Level Implementation Alternative
AT.1	End of Trip Bike Facilities	Active Transportation	Provide secure bike parking and repair stations at all new workplaces.	Provide secure bike parking and repair stations with personal lockers and showers at all new workplaces.
LU.1	Increase Residential Density	Land Use	Modify zoning / land use to increase residential density by 10% in 5% of the City.	Modify zoning / land use to increase residential density by 20% in 5% of the City.
LU.2	Increase Job Density	Land Use	Modify zoning code / land use to increase employment by 10% across 10% of City.	Modify zoning code / land use to increase employment by 20% across 10% of City.
LU.4	Integrate Affordable Housing Development	Land Use	Provide 5% additional low and very-low-income housing additional to the SCAG RHNA Allocation.	Provide 10% additional low and very-low-income housing additional to the SCAG RHNA Allocation.
RD.2	Improved Pedestrian Network	Roadway Infrastructure	Fill 50% of sidewalk gap length identified in ATP.	Fill 100% of sidewalk gap length identified in ATP.
CM.1	Commute Trip Reduction Program (Voluntary)	Commuter Trips	Provide voluntary commute trip reduction programs for 5% of employees in City.	Provide voluntary commute trip reduction programs for 10% of employees in City.
CM.3	Commute Trip Reduction Marketing	Commuter Trips	Implement commute trip reduction marketing targeting 5% of employees in City.	Implement commute trip reduction marketing targeting 10% of employees in City.
CM.4	Employee Ridesharing Program	Commuter Trips	Provide rideshare program for 5% of employees in City.	Provide rideshare program for 10% of employees in City.
CM.5	Employee Vanpool	Commuter Trips	Provide vanshare program utilized by 0.5% of employees.	Provide vanshare program utilized by 1% of employees.
PT.1	Subsidized Transit Pass Program	Public Transportation	Implement program that subsidizes transit passes for 5% of employees via collaboration with large employers and RTA.	Implement program that subsidizes transit passes for 5% of employees and residents via collaboration with large employers, developers, and RTA.
PT.2	Expanded Local Transit Coverage	Public Transportation	Increase transit route coverage in the city by 10% (11.2 miles).	Increase transit route coverage in the city by 20% (22.4 miles).
PT.3	Expanded Local Transit Frequency	Public Transportation	Increase transit frequency by 20% across 50% of routes/service hours.	Increase transit frequency by 20% across 100% of routes/service hours.
ND.1	Community-Based Travel Planning	Neighborhood	Implement Community-Based Travel Planning program aimed towards 5% of residents.	Implement Community-Based Travel Planning program aimed towards 10% of residents.
PT.6	Provide Transit Shelters	Public Transportation	Improve bus stops with shelters and additional amenities only at the most-used stops.	Improve bus stops with shelters and additional amenities at stops across the City.
PT.7	Park and Ride Expansion	Public Transportation	Construct 100 Parking spaces to be used as a Park and Ride lot.	Construct 150 parking spaces to be used as a Park and Ride lot.
RD.1	Improve Bike Facilities	Roadway Infrastructure	Build out 50% of bikeway projects identified in the ATP.	Build out 100% of bikeway projects identified in the ATP.

Note: Further details on 2030 interim year assumptions and calculations are provided in **Appendix A**.

Methodology

Fehr & Peers quantified reduction estimates for each measure using the RIVCOM VMT estimates in conjunction with calculation methodologies detailed in the *Handbook for Analyzing Greenhouse Gas Emission Reduction, Assessing Climate Vulnerabilities, and Advancing Health and Equity (California Air Pollution Control Officers Association* (CAPCOA), 2024) report. This report provides a statewide standard for quantifying VMT and greenhouse gas (GHG) reductions from general mitigation strategies. For measures not included in the CAPCOA report, Fehr & Peers completed calculations using the RIVCOM VMT estimates and socioeconomic data along with off-model measurements and factors, such as review of published city documents.

Multiplicative dampening (the lessened effectiveness of VMT reductions to avoid double-counting when multiple measures are implemented together) was calculated using TDM+, a tool developed by Fehr & Peers that leverages regional data to estimate percent reductions in VMT from mitigation measures while accounting for decreased effectiveness when similar measures are implemented together. Full calculations including assumptions are presented in spreadsheet format in **Appendix A**.

VMT Reduction Estimates

Expected VMT reductions and post-reduction daily average VMT per alternative are presented for the interim year 2030 and future year 2045. **Table 3** presents VMT reductions per mitigation measure and level of implementation for the 2030 year. **Table 4** presents VMT reductions per mitigation measure and level of implementation for the 2045 year.

Table 3: 2030 Estimated Daily City and SOI VMT Reduction

Measure ID	Measure Name	Low-Level Implementation		High-Level Implementation	
		VMT Reduction	% VMT Reduction	VMT Reduction	% VMT Reduction
Pre-Reduction Daily Average VMT		**2,380,720**			
AT.1	End of Trip Bike Facilities	(56)	-0.0017%	(226)	-0.007%
LU.1	Increase Residential Density	(2,619)	-0.082%	(5,238)	-0.164%
LU.2	Increase Job Density	(1,667)	-0.052%	(3,333)	-0.105%
LU.4	Integrate Affordable Housing Development	(1,595)	-0.050%	(3,190)	-0.100%
RD.2	Improved Pedestrian Network	(626)	-0.020%	(1,251)	-0.039%
CM.1	Commute Trip Reduction Program (Voluntary)	(1,139)	-0.036%	(2,278)	-0.071%
CM.3	Commute Trip Reduction Marketing	(1,139)	-0.036%	(2,278)	-0.071%
CM.4	Employee Ridesharing Program	(1,139)	-0.036%	(2,278)	-0.071%
CM.5	Employee Vanpool	(3,847)	-0.121%	(7,647)	-0.240%
PT.1	Subsidized Transit Pass Program	(259)	-0.008%	(1,083)	-0.034%
PT.2	Expanded Local Transit Coverage	(660)	-0.021%	(1,320)	-0.041%
PT.3	Expanded Local Transit Frequency	(486)	-0.015%	(973)	-0.031%
ND.1	Community-Based Travel Planning	(649)	-0.020%	(1,298)	-0.041%
PT.6	Provide Transit Shelters	(381)	-0.012%	(762)	-0.024%
PT.7	Park and Ride Expansion	(1,288)	-0.040%	(1,932)	-0.061%
RD.1	Improve Bike Facilities	(37)	-0.001%	(73)	-0.002%
Multiplicative Dampening[2]		*1,139*	*0.036%*	*2,278*	*0.071%*
Total Reduction		**(16,447)**	**-0.516%**	**(32,881)**	**-1.032%**
Post-Reduction Daily Average VMT		**2,364,273**		**2,347,840**	

Notes:

1. VMT reduction calculations are rounded to the nearest whole number.
2. CM.1 typically incorporates multiple other measures presented (CM.3, CM.4, CM.5 and PT.1). Thus, it is a "conflicting" measure, and its reductions must be nulled to accurately reflect multiplicative dampening.

Source: Fehr & Peers, 2025.

Table 4: 2045 Estimated Daily City and SOI VMT Reduction

Measure ID	Measure Name	Low-Level Implementation		High-Level Implementation	
		VMT Reduction	% VMT Reduction	VMT Reduction	% VMT Reduction
Pre-Reduction Daily Average VMT		**3,186,518**			
AT.1	End of Trip Bike Facilities	(226)	-0.007%	(1,119)	-0.035%
LU.1	Increase Residential Density	(3,505)	-0.110%	(7,010)	-0.220%
LU.2	Increase Job Density	(2,231)	-0.070%	(4,461)	-0.140%
LU.4	Integrate Affordable Housing Development	(2,910)	-0.091%	(5,821)	-0.183%
RD.2	Improved Pedestrian Network	(1,674)	-0.053%	(3,348)	-0.105%
CM.1	Commute Trip Reduction Program (Voluntary)	(1,473)	-0.046%	(2,947)	-0.092%
CM.3	Commute Trip Reduction Marketing	(1,473)	-0.046%	(2,947)	-0.092%
CM.4	Employee Ridesharing Program	(1,473)	-0.046%	(2,947)	-0.092%
CM.5	Employee Vanpool	(4,977)	-0.156%	(9,892)	-0.310%
PT.1	Subsidized Transit Pass Program	(335)	-0.011%	(1,449)	-0.045%
PT.2	Expanded Local Transit Coverage	(1,766)	-0.055%	(3,533)	-0.111%
PT.3	Expanded Local Transit Frequency	(1,302)	-0.041%	(2,605)	-0.082%
ND.1	Community-Based Travel Planning	(840)	-0.026%	(1,680)	-0.053%
PT.6	Provide Transit Shelters	(510)	-0.016%	(1,020)	-0.032%
PT.7	Park and Ride Expansion	(2,576)	-0.081%	(3,864)	-0.121%
RD.1	Improve Bike Facilities	(98)	-0.003%	(195)	-0.006%
Multiplicative Dampening[2]		*1,473*	*0.046%*	*2,947*	*0.092%*
Total Reduction		**(25,897)**	**-0.813%**	**(51,889)**	**-1.628%**
Post-Reduction Daily Average VMT		**3,160,621**		**3,134,629**	

Note:
1. VMT reduction calculations are rounded to the nearest whole number.
2. CM.1 typically incorporates multiple other measures presented (CM.3, CM.4, CM.5, and PT.1). Thus, it is a "conflicting" measure, and its reductions must be nulled to accurately reflect multiplicative dampening.

Source: Fehr & Peers, 2025.

Conclusion

Implementation of VMT reduction measures in the City of Lake Elsinore and SOI could reduce daily VMT in 2030 by 32,881 VMT per day with full measure implementation or 16,447 VMT per day with more minimal measure implementation. By 2045, the city could reduce 51,889 VMT per day with full measure implementation or 25,897 VMT per day with partial measure implementation.

Attachments:

Appendix A: Lake Elsinore and SOI VMT CAP Quantification Spreadsheet

Click on GREEN cells to go to individual measure calculations.

Measure ID	Measure Name	Category	Low-Level Implementation	High-Level Implementation
AT.1	End of Trip Bike Facilities	Active Transportation	Provide secure bike parking and repair stations at all new workplaces.	Provide secure bike parking and repair stations with personal lockers and showers at all new workplaces.
LU.1	Increase Residential Density	Land Use	Modify zoning / land use to increase residential density by 10% in 5% of the City.	Modify zoning / land use to increase residential density by 20% in 5% of the City.
LU.2	Increase Job Density	Land Use	Modify zoning code / land use to increase employment by 10% across 10% of City.	Modify zoning code / land use to increase employment by 20% across 10% of City.
LU.4	Integrate Affordable Housing Development	Land Use	Provide 5% additional low and very-low income housing additional to the SCAG RHNA Allocation.	Provide 10% additional low and very-low income housing additional to the SCAG RHNA Allocation.
RD.2	Improved Pedestrian Network	Roadway Infrastructure	Fill 50% of sidewalk gap length identified in ATP.	Fill 100% of sidewalk gap length identified in ATP.
CM.1	Commute Trip Reduction Program (Voluntary)	Commuter Trips	Provide voluntary commute trip reduction programs for 5% of employees in City.	Provide voluntary commute trip reduction programs for 10% of employees in City.
CM.3	Commute Trip Reduction Marketing	Commuter Trips	Implement commute trip reduction marketing targeting 5% of employees in City.	Implement commute trip reduction marketing targeting 10% of employees in City.
CM.4	Employee Ridesharing Program	Commuter Trips	Provide rideshare program for 5% of employees in City.	Provide rideshare program for 10% of employees in City.
CM.5	Employee Vanpool	Commuter Trips	Provide vanshare program utilized by 0.5% of employees.	Provide vanshare program utilized by 1% of employees.
PT.1	Subsidized Transit Pass Program	Public Transportation	Implement program that subsidizes transit passes for 5% of employees via collaboration with large employers and RTA.	Implement program that subsidizes transit passes for 5% of employees and residents via collaboration with large employers, developers, and RTA.
PT.2	Expanded Local Transit Coverage	Public Transportation	Increase transit route coverage in the city by 10% (11.2 miles).	Increase transit route coverage in the city by 10% (22.4 miles).
PT.3	Expanded Local Transit Frequency	Public Transportation	Increase transit frequency by 20% across 50% of routes/service hours.	Increase transit frequency by 20% across 100% of routes/service hours.
ND.1	Community-Based Travel Planning	Neighborhood	Implement Community-Based Travel Planning program aimed towards 5% of residents.	Implement Community-Based Travel Planning program aimed towards 10% of residents.
PT.6	Provide Transit Shelters	Public Transportation	Improve bus stops with shelters and additional amenities only at the most-used stops.	Improve bus stops with shelters and additional amenities at stops across the City.
PT.7	Park and Ride Expansion	Public Transportation	Construct 100 parking spaces to be used as a PnR Lot.	Construct 150 parking spaces to be used as a PnR Lot.
RD.1	Improve Bike Facilities	Roadway Infrastructure	Build out 50% of bikeway projects identified in the ATP.	Build out 100% of bikeway projects identified in the ATP.

2030 VMT Reductions

VMT Without Reduction									2,380,720
			Low-Level Implementation VMT Reduction			High-Level Implementation VMT Reduction			
Measure ID	Measure Name	Category	Description	VMT Reduction	% Reduction	Description	VMT Reduction	% Reduction	
AT.1	End of Trip Bike Facilities	Active Transportation	Provide secure bike parking and repair stations at all new workplaces.	(56)	-0.0017%	Provide secure bike parking and repair stations with personal lockers and showers at all new workplaces.	(226)	-0.007%	
LU.1	Increase Residential Density	Land Use	Modify zoning / land use to increase residential density by 10% in 5% of the City.	(2,619)	-0.082%	Modify zoning / land use to increase residential density by 20% in 5% of the City.	(5,238)	-0.164%	
LU.2	Increase Job Density	Land Use	Modify zoning code / land use to increase employment by 10% across 10% of City.	(1,667)	-0.052%	Modify zoning code / land use to increase employment by 20% across 10% of City.	(3,333)	-0.105%	
LU.4	Integrate Affordable Housing Development	Land Use	Provide 5% additional low and very-low income housing additional to the SCAG RHNA Allocation.	(1,595)	-0.050%	Provide 10% additional low and very-low income housing additional to the SCAG RHNA Allocation.	(3,190)	-0.100%	
RD.2	Improved Pedestrian Network	Roadway Infrastructur	Fill 50% of sidewalk gap length identified in ATP.	(626)	-0.020%	Fill 100% of sidewalk gap length identified in ATP.	(1,251)	-0.039%	
CM.1	Commute Trip Reduction Program (Voluntary)	Commuter Trips	Provide voluntary commute trip reduction programs for 5% of employees in City.	(1,139)	-0.036%	Provide voluntary commute trip reduction programs for 10% of employees in City.	(2,278)	-0.071%	
CM.3	Commute Trip Reduction Marketing	Commuter Trips	Implement commute trip reduction marketing targeting 5% of employees in City.	(1,139)	-0.036%	Implement commute trip reduction marketing targeting 10% of employees in City.	(2,278)	-0.071%	
CM.4	Employee Ridesharing Program	Commuter Trips	Provide rideshare program for 5% of employees in City.	(1,139)	-0.036%	Provide rideshare program for 10% of employees in City.	(2,278)	-0.071%	
CM.5	Employee Vanpool	Commuter Trips	Provide vanshare program utilized by 0.5% of employees.	(3,847)	-0.121%	Provide vanshare program utilized by 1% of employees.	(7,647)	-0.240%	
PT.1	Subsidized Transit Pass Program	Public Transportation	Implement program that subsidizes transit passes for 5% of employees via collaboration with large employers and RTA.	(259)	-0.008%	Implement program that subsidizes transit passes for 5% of employees and residents via collaboration with large employers, developers, and RTA.	(1,083)	-0.034%	
PT.2	Expanded Local Transit Coverage	Public Transportation	Increase transit route coverage in the city by 10% (11.2 miles).	(660)	-0.021%	Increase transit route coverage in the city by 20% (22.4 miles).	(1,320)	-0.041%	
PT.3	Expanded Local Transit Frequency	Public Transportation	Increase transit frequency by 20% across 50% of routes/service hours.	(486)	-0.015%	Increase transit frequency by 20% across 100% of routes/service hours.	(973)	-0.031%	
ND.1	Community-Based Travel Planning	Neighborhood	Implement Community-Based Travel Planning program aimed towards 5% of residents.	(649)	-0.020%	Implement Community-Based Travel Planning program aimed towards 10% of residents.	(1,298)	-0.041%	
PT.6	Provide Transit Shelters	Public Transportation	Improve bus stops with shelters and additional amenities only at the most-used stops.	(381)	-0.012%	Improve bus stops with shelters and additional amenities at stops across the City.	(762)	-0.024%	
PT.7	Park and Ride Expansion	Public Transportation	Construct 100 parking spaces to be used as a PnR Lot.	(1,288)	-0.040%	Construct 150 parking spaces to be used as a PnR Lot.	(1,932)	-0.061%	
RD.1	Improve Bike Facilities	Roadway Infrastructur	Build out 50% of bikeway projects identified in the ATP.	(37)	-0.001%	Build out 100% of bikeway projects identified in the ATP.	(73)	-0.002%	
		Pre-Dampening Reduction		**(17,586)**	**-0.552%**		**(35,158)**	**-1.103%**	
		Multiplicative Dampening		**1,139**	**0.036%**		**2,278**	**0.071%**	
		Total Reduction		**(16,447)**	**-0.516%**		**(32,881)**	**-1.032%**	
		Post-Reduction VMT			**2,364,273**			**2,347,840**	

2045 VMT Reductions

VMT Without Reduction									3,186,518
			Low-Level Implementation VMT Reduction			High-Level Implementation VMT Reduction			
Measure ID	Measure Name	Category	Description	VMT Reduction	% Reduction	Description	VMT Reduction	% Reduction	
AT.1	End of Trip Bike Facilities	Active Transportation	Provide secure bike parking and repair stations at all new workplaces.	(226)	-0.007%	Provide secure bike parking and repair stations with personal lockers and showers at all new workplaces.	(1,119)	-0.035%	
LU.1	Increase Residential Density	Land Use	Modify zoning / land use to increase residential density by 10% in 5% of the City.	(3,505)	-0.110%	Modify zoning / land use to increase residential density by 20% in 5% of the City.	(7,010)	-0.220%	
LU.2	Increase Job Density	Land Use	Modify zoning code / land use to increase employment by 10% across 10% of City.	(2,231)	-0.070%	Modify zoning code / land use to increase employment by 20% across 10% of City.	(4,461)	-0.140%	
LU.4	Integrate Affordable Housing Development	Land Use	Provide 5% additional low and very-low income housing additional to the SCAG RHNA Allocation.	(2,910)	-0.091%	Provide 10% additional low and very-low income housing additional to the SCAG RHNA Allocation.	(5,821)	-0.183%	
RD.2	Improved Pedestrian Network	Roadway Infrastructur	Fill 50% of sidewalk gap length identified in ATP.	(1,674)	-0.053%	Fill 100% of sidewalk gap length identified in ATP.	(3,348)	-0.105%	
CM.1	Commute Trip Reduction Program (Voluntary)	Commuter Trips	Provide voluntary commute trip reduction programs for 5% of employees in City.	(1,473)	-0.046%	Provide voluntary commute trip reduction programs for 10% of employees in City.	(2,947)	-0.092%	
CM.3	Commute Trip Reduction Marketing	Commuter Trips	Implement commute trip reduction marketing targeting 5% of employees in City.	(1,473)	-0.046%	Implement commute trip reduction marketing targeting 10% of employees in City.	(2,947)	-0.092%	
CM.4	Employee Ridesharing Program	Commuter Trips	Provide rideshare program for 5% of employees in City.	(1,473)	-0.046%	Provide rideshare program for 10% of employees in City.	(2,947)	-0.092%	
CM.5	Employee Vanpool	Commuter Trips	Provide vanshare program utilized by 0.5% of employees.	(4,977)	-0.156%	Provide vanshare program utilized by 1% of employees.	(9,892)	-0.310%	
PT.1	Subsidized Transit Pass Program	Public Transportation	Implement program that subsidizes transit passes for 5% of employees via collaboration with large employers and RTA.	(335)	-0.011%	Implement program that subsidizes transit passes for 5% of employees and residents via collaboration with large employers, developers, and RTA.	(1,449)	-0.045%	
PT.2	Expanded Local Transit Coverage	Public Transportation	Increase transit route coverage in the city by 10% (11.2 miles).	(1,766)	-0.055%	Increase transit route coverage in the city by 20% (22.4 miles).	(3,533)	-0.111%	
PT.3	Expanded Local Transit Frequency	Public Transportation	Increase transit frequency by 20% across 50% of routes/service hours.	(1,302)	-0.041%	Increase transit frequency by 20% across 100% of routes/service hours.	(2,605)	-0.082%	
ND.1	Community-Based Travel Planning	Neighborhood	Implement Community-Based Travel Planning program aimed towards 5% of residents.	(840)	-0.026%	Implement Community-Based Travel Planning program aimed towards 10% of residents.	(1,680)	-0.053%	
PT.6	Provide Transit Shelters	Public Transportation	Improve bus stops with shelters and additional amenities only at the most-used stops.	(510)	-0.016%	Improve bus stops with shelters and additional amenities at stops across the City.	(1,020)	-0.032%	
PT.7	Park and Ride Expansion	Public Transportation	Construct 100 parking spaces to be used as a PnR Lot.	(2,576)	-0.081%	Construct 150 parking spaces to be used as a PnR Lot.	(3,864)	-0.121%	
RD.1	Improve Bike Facilities	Roadway Infrastructur	Build out 50% of bikeway projects identified in the ATP.	(98)	-0.003%	Build out 100% of bikeway projects identified in the ATP.	(195)	-0.006%	
		Pre-Dampening Reduction		**(27,370)**	**-0.859%**		**(54,836)**	**-1.721%**	
		Multiplicative Dampening		**1,473**	**0.046%**		**2,947**	**0.092%**	
		Total Reduction		**(25,897)**	**-0.813%**		**(51,889)**	**-1.628%**	
		Post-Reduction VMT			**3,160,621**			**3,134,629**	

TAZ ID	RTAC VMT				HBW VMT				SED											HB VMT			
	2018	2025	2030	2045	2018	2025	2030	2045	!018 Populatio	!025 Populatio	!030 Populatio	!045 Populatio	018 Employee	025 Employee	030 Employee	045 Employee	018 Household	025 Household	030 Household	045 Household	Acreage	2018	2025	2030	2045
Citywide	1,736,082	2,112,121	2,380,720	3,186,518	435,705	513,723	569,451	736,634	79,669	94,177	106,131	151,892	16,066	20,456	24,309	40,795	23,377	27,957	31,768	46,610	24,474	########	3,249,351	3,593,090	4,624,306

HB VMT / Res				HBW VMT / Emp				HB VMT / SP			
2018	2025	2030	2045	2018	2025	2030	2045	2018	2025	2030	2045
34.75	34.50	33.86	30.44	27.12	25.11	23.43	18.06	28.91	28.35	27.55	24.00

Variables	Meaning	Unit	Value	Upgraded	Source
B	Bike mode adjustment factor		1.78	4.86	CAPCOA
C	Existing bicycle trip length for all trips in region	miles	2.2		CAPCOA
D	Existing vehicle trip length for all trips in region	miles	11.7		CAPCOA
E	Existing bicycle mode share for work trips in region	%	0.4%		CAPCOA
F	Existing vehicle mode share for work trips in region	%	95.3%		CAPCOA

Back to Measures Summary

Equation CAPCOA * HBW VMT * (New Workers / Total Workers)

CAPCOA Equation $\frac{C \times (E - (B \times E))}{D \times F}$

EOT Bike Faciliites for all new employers / employees

Implementation Level	Employees 2025 (Interpolated)	New Employees 2030	New Employees 2045	CAPCOA	2030 Reduction	2045 Reduction
Standard EOT Bike Faciliti	20,456	3,853	20,339	-0.06%	(56)	(226)
Upgraded EOT Bike Facilit	20,456	3,853	20,339	-0.30%	(275)	(1,119)

ID	Variable	Value	Unit	Source
B	Proposed Density	Density Table	du/acre	Model
C	Existing Density	Density Table	du/acre	Model
D	Elasticity of VMT with respect to residential density	-0.22	unitless	CAPCOA

Back to Measures Summary

Equation CAPCOA * RTAC VMT

CAPCOA Formula $\frac{B-C}{C} \times D$

Increasing Residential Density by 10% in 5% of the City:

TAZ Acreage	2030 TAZ Households	2045 TAZ Households	2025 Density (Model)	2030 Density	2045 Density	2030 Proposed Density	2045 Proposed Density	CAPCOA	CAPCOA	2030 Reduction	2045 Reduction
24,473.60	31,768	46,610	1.14	1.30	1.90	1.3045	1.9140	-0.11%	-0.11%	(2,619)	(3,505)

Increasing Residential Density by 20% in 5% of the City

TAZ Acreage	2030 TAZ Households	2045 TAZ Households	2025 Density (Model)	2030 Density	2045 Density	2030 Proposed Density	2045 Proposed Density	CAPCOA	CAPCOA	2030 Reduction	2045 Reduction
24,473.60	31,768	46,610	1.14	1.30	1.90	1.3110	1.9235	-0.22%	-0.22%	(5,238)	(7,010)

ID	Variable	Value	Unit	Source
B	Increased Job Density	See Table Below	emp/acre	Model
C	BAU City Job Density	See Table Below	emp/acre	Model
D	Elasticity of VMT with respect to job density	-0.07	unitless	CAPCOA

Back to Measures Summary

Equation CAPCOA * RTAC VMT

CAPCOA Formula $\frac{B-C}{C} \times D$

Implementation Level	Acreage	2030 Employees	2045 Employees	2030 Density	2045 Density	2030 Proposed Density	2045 Proposed Density	CAPCOA	CAPCOA	2030 Reduction	2045 Reduction
10% more employees across 10% of city	24,474	24,309	40,795	0.993290324	1.666898209	1.0032	1.6836	-0.07%	-0.07%	(1,667)	(2,231)
20% more employees across 10% of the City	24,474	24,309	40,795	0.993290324	1.666898209	1.0132	1.7002	-0.14%	-0.14%	(3,333)	(4,461)

ID	Variable	Value	Unit	Source
B	**Percent of new multifamily units dedicated as affordable (additional affordable requirement over total requirement)**	**5-10%**	**%**	**Assumption**
C	Percent reduction in VMT for qualified units compared to market rate units	-28.6%	%	CAPCOA

Back to Measures

Equation
CAPCOA Equation

CAPCOA * RTAC VMT per HH * RHNA Allocated Units
B × C

Notes: **Assumes half completion of target by 2030.**

Increasing affordable for new units, on top of RHNA Allocation:

Implementation Level	SCAG RHNA Allocated Units	SCAG RHNA Allocated Low and Very Low	Proposed Additional Allocation	CAPCOA	2030 Reduction	2045 Reduction
5% additional affordable housing requirement	6,681	2,977	149	-0.64%	(1,595)	(2,910)
10% additional affordable housing requirement	6,681	2,977	298	-1.27%	(3,190)	(5,821)

Variables	Meaning	Unit	Value	Upgraded	Source
B	Existing Sidewalk Length	miles	211.90		LE Centerline Assumption
C	**Sidewalk Length with Measure**	**miles**	**236.64**	**261.38**	**Assumption**
D	Elasticity of household VMT with respect to ratio of sidewalk to streets	miles	-0.05		CAPCOA
E	Sidewalk Infill Length	miles	49.48		LE ATP

Fill sidewalk infill goal identified in ATP: 49.48

Implementation Level	2030 CAPCOA	2045 CAPCOA	2030 Reduction	2045 Reduction
Fill 50% of gap length (24.74 m	-0.29%	-0.58%	(626)	(1,674)
Fill 100% of gap length (49.48 r	-0.58%	-1.17%	(1,251)	(3,348)

Back to Measures Summary

Equation: CAPCOA * RTAC VMT * % People that Live and Work in

CAPCOA Equation

$$A = \left(\frac{C}{B} - 1\right) \times D$$

Notes: that live and work in City as CAPCOA research reveals pedestrian network

Assumes half completion of target by 2030.

Variables	Meaning	Unit	Value	Upgraded Value	Source
B	**% employees eligible**	**%**	**5.0%**	**10.0%**	**Assumption**
C	% reduction in commute VMT from eligible employees	%	-4%		CAPCOA

Implementation Level	CAPCOA	2030 Reduction	2045 Reduction
5% of Employees	-0.20%	(1,139)	(1,473)
10% of Employee	-0.40%	(2,278)	(2,947)

Back to Measures

Equation CAPCOA * HBW VMT

CAPCOA Formula $B \times C$

Variables	Meaning	Unit	Value	Upgraded Value	Source
B	**% employees eligible**	**%**	**5.0%**	**10.0%**	**Assumption**
C	% reduction in commute VMT from eligible employees	%	-4%		CAPCOA

Implementation Level	CAPCOA	2030 Reduction	2045 Reduction
5% of Employees	-0.20%	(1,139)	(1,473)
10% of Employee	-0.40%	(2,278)	(2,947)

Back to Measures

Equation CAPCOA * HBW VMT

CAPCOA Formula $B \times C$

Rideshare

Variable	Meaning	Value	Column1	Unit	Source
B	**Percent of employees eligible for program**	**5%**	**10%**	**%**	**Assumption**
C	Percent reduction in employee commute vehicle trips	-4%		%	CAPCOA

Vanpool

Variable	Meaning	Value	Column1	Unit	Source
B	**Percent of employees that participate**	**0.50%**	**1.000%**	**%**	**Assumption**
C	Avg length of one-way vehicle commute trip in region	18.62		miles	CAPCOA
D	Avg length of one-way vanpool commute trip	42		miles	CAPCOA
E	Avg Vanpool Occupancy + Driver	6.25		occupants	CAPCOA
F	Avg emission factor of employee vehicle	307.5		g CO2e per π	CAPCOA
G	Vanpool emission factor	763.4		g CO2e per π	CAPCOA

Back to Measures Summary

Equation CAPCOA Formula * HBW VMT

Rideshare CAPCOA Formula $B \times C$

Vanpool CAPCOA Formula $\frac{((1-B)\times C\times F)+\left(B\times\frac{D}{E}\times G\right)}{((1-B)\times C\times F)+(B\times D\times F)}-1$

Implementation Level	% Participating Vanpool Employees in City	% Employees Eligible	Rideshare CAPCOA	Vanpool CAPCOA	2030 Rideshare Reduction	2045 Rideshare Reduction	2030 Vanpool Reduction	2045 Vanpool Reduction
0.5% Vanpool Users, 5% Rideshare Eligible	0.50%	5%	-0.20%	-0.68%	(1,139)	(1,473)	(3,847)	(4,977)
1% Vanpool Users, 10% Rideshare Eligible	1.00%	10%	-0.40%	-1.34%	(2,278)	(2,947)	(7,647)	(9,892)

ID	Variable	Value	Unit	Column1	Source
B	Average transit fare without subsidy	60	$		RTA Monthly
C	Subsidy amount	60	$		RTA Monthly
D	**Percent eligible for subsidy**	**5%**	**%**	**10.0%**	**Assumption**
E	Percent of project-generated VMT from employees and residents	100%	%		Assumption
F	Transit mode share of all trips	4.23%	%		CAPCOA
G	Elasticity of transit boardings with respect to transit fare price	-0.43	unitless		CAPCOA
H	Percent of transit trips that would otherwise be made in a vehicle	50%	%		CAPCOA
I	Conversion factor of vehicle trips to VMT	1	unitless		CAPCOA

Implementation Level	% Employees Eligible	CAPCOA	2030 Reduction	2045 Reduction
Subsidize transit passes for 5% of employees	5.0%	-0.045%	(259)	(335)
Subsidize transit passes for 5% of employees AND residents	5.0%	-0.045%	(1,083)	(1,449)

Back to Measures

Employee Only Equation	CAPCOA * HBW VMT
Equation	CAPCOA * RTAC VMT
CAPCOA Formula	$A = \frac{C}{B} \times G \times D \times E \times F \times H \times I$

Variables	Meaning	Unit	Value	Upgraded	Source
B	Total transit service miles in city	miles	111.54		RTA GTFS
C	**Total transit miles in city after expansion**	**miles**	**122.694**	**141.0981**	**Assumption**
D	Transit mode share in community (All trips)	%	1.37%		CAPCOA
E	Elasticity of transit with respect to service miles	unitless	0.7		CAPCOA
F	Statewide mode shift factor	%	57.80%		CAPCOA
G	Ratio of trip reduction to VMT	unitless	1		CAPCOA

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Equation CAPCOA * RTAC VMT

CAPCOA Equation $A = -1 \times \frac{C - B}{B} \times D \times E \times F \times G$

Notes: **Assumes half completion of target by 2030.**

Implementation Level	Existing Transit Miles	% Increase	Transit Miles After Increase	CAPCOA	2030 Reduction	2045 Reduction
10% increase in total route coverage (11.2 miles)	111.54	10%	122.694	-0.06%	(660)	(1,766)
20% increase in total route coverage (22.4 miles)	111.54	20%	133.848	-0.11%	(1,320)	(3,533)

Variables	Meaning	Unit	Value	Upgraded	Source
B	**% increase in transit service frequency**	**%**	**20.00%**		**Assumption**
C	**Level of implementation**	**%**	**50.00%**	**100.00%**	**Assumption**
D	Elasticity of transit ridership with respect to frequency of service	unitless	0.5		CAPCOA
E	Transit mode share in Area	%	1.37%		CAPCOA
F	Vehicle mode share in Area	%	96.88%		CAPCOA
G	Statewide mode shift factor	%	57.80%		CAPCOA

Implementation Level	Level of Implementation	% Increase	CAPCOA	2030 Reduction	2045 Reduction
20% increase in frequency across 50% of routes/service hours	50%	20%	-0.04%	(486)	(1,302)
20% increase in frequency across 100% of routes/service hours	100%	20%	-0.08%	(973)	(2,605)

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Equation CAPCOA * RTAC VMT

CAPCOA Equation $-C \times \frac{B \times E \times D \times G}{F}$

Notes: **Assumes half completion of target by 2030.**

Variables	Meaning	Unit	Value	Upgraded	Source
B	Total Residences	%	100.00%		Assumption
C	**Residences targeted with CBTP %**	**%**	**5.00%**	**10.00%**	**Assumption**
D	Percent targeted residences that will participate	%	19.00%		CAPCOA
E	Percent vehicle trip reduction from participating residents	%	12.00%		CAPCOA
F	Trips to VMT adjustment factor	unitless	1.00		CAPCOA

Implementation Level	CAPCOA	2030 Reduction	2045 Reduction
Target 5% Residences	-0.11%	(649)	(840)
Target 10% Residences	-0.23%	(1,298)	(1,680)

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Equation CAPCOA * HBW VMT

CAPCOA Equation $A = \frac{C}{B} \times D \times -E \times F$

Variables	Meaning	Unit	Value	Source
B	CAPCOA Reduction Range from Transit Shelter Construction	%	-0.01% - 0.32%	CAPCOA

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Equation B * RTAC VMT

Implementation Level	Assumed Reduction	2030 Reduction	2045 Reduction
Low Implementation	-0.02%	(380.92)	(509.84)
High Implementation	-0.03%	(761.83)	(1,019.69)

Notes: **Assumes half completion of target by 2030.**
Lack of transit ridership information to provide more detailed quantification

Variables	Meaning	Unit	Value	Source
B	Average Trip Length Using Public Transit	miles	11.45	2017 NHTS
C	Average Trip Length to PnR Lot	miles	16.50	RivCo Streetlight Analysis
D	Proposed Number of Spaces	spaces	100-150	CAPCOA
E	Vehicle Occupancy	people per car	1.50	2017 NHTS
F	Parking Occupancy of PNR Lots	%	75.00%	Assumption

Implementation Level	PnR Spaces Added	2030 Reduction	2045 Reduction
100 PnR Spaces Added	100.00	(1,288.13)	(2,576.25)
150 PnR Spaces Added	150.00	(1,932.19)	(3,864.38)

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Equation (D*F*E)*(((B+C)*2)-(C*2))

Notes: **Assumes half completion of target by 2030.**

Variables	Meaning	Unit	Value	Upgraded	Source
B	Existing bikeway miles in plan/community	miles	31.38		LE ATP
C	**Bikeway miles in plan/community with measure**	**miles**	**64.44**	**97.50**	**Assumption**
D	Bicycle mode share in plan/community	%	0.06%		CAPCOA
E	Vehicle mode share in plan/community	%	96.88%		CAPCOA
F	Average one-way bicycle trip length in plan/community	miles per trip	2.2		CAPCOA
G	Average one-way vehicle trip length in plan/community	miles per trip	11.7		CAPCOA
H	Elasticity of bike commuters with respect to bikeway miles per 10,000 population	unitless	0.25		CAPCOA
I	Proposed bikeway miles	miles	66.12		LE ATP

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Equation CAPCOA * RTAC VMT

CAPCOA Formula $-1 \times \frac{\left(\frac{C-B}{B}\right) \times D \times F \times H}{E \times G}$

Notes: **Assumes half completion of target by 2030.**

Implementation Level	Existing Bikeway Miles	Proposed Increase	Bikeway Miles after Increase	CAPCOA	2030 Reduction	2045 Reduction
50% Buildout of ATP	31.38	33.06	64.44	-0.003%	(37)	(98)
100% Buildout of ATP	31.38	66.12	97.50	-0.006%	(73)	(195)

Appendix F

Implementation and Monitoring Matrices

INTRODUCTION

This appendix to the City of Lake Elsinore (City) Climate Action and Adaptation Plan (CAAP) includes details on how the City will implement the climate action strategies in the CAAP, and how progress towards reaching the greenhouse gas (GHG) reduction targets will be tracked. This appendix includes three matrices:

- Table F-1 Target Indicators for Quantified Climate Action Strategies,
- Table F-2 List of City Departments and Divisions, and
- Table F-3 Implementation Responsibilities and Timeframes.

Table F-1 provides quantitative tracking metrics for the climate action strategies that have been quantified for a GHG reduction potential in the CAAP. The tracking metrics, referred to as "target indicators" are intended to be trackable data points that are correlated to the GHG reduction potential of a given strategy. These target indicators provide the City with data that allows evaluation of the effectiveness of strategy implementation, and if the shifts needed to reduce GHG emissions are being realized. It should be noted that the target indicators identified here include implementation in both the Lake Elsinore City Limits and Sphere of Influence. As such, there may be delays in the ability to report data for areas of the Sphere of Influence that have not yet been annexed into the City Limits at the time of data collection.

Tables F-2 and F-3 provide information for City staff as to the department and divisions that will be responsible for the implementation of each implementation action under the climate action strategies and measures. Table F-2 provides an overview of all relevant City departments and divisions, while Table F-3 includes primary and supportive departments and divisions that will be responsible for implementation. Table F-3 also includes implementation timelines in the terms of:

- Short-term (before 2030),
- Mid-term (2030 to 2034),
- Long-term (2035 or later), and
- Ongoing.

Table F-1 Target Indicators for Quantified Climate Action Strategies

Climate Action Strategy	2030 Target Indicators	2045 Target Indicator	Data Needed to Track
BE-1 Energy Efficiency and Decarbonization	25% of all new housing units constructed are all-electric (no natural gas piping to units)	75% of all new housing units constructed are all-electric (no natural gas piping to units)	▶ Total number of new units constructed ▶ Permitting records for natural gas piping to new units
	8,600 residential electric heat pump installations for water heating and HVAC	57,500 residential electric heat pump installations for water heating and HVAC	▶ Permitting records for residential water heater and HVAC installations, including fuel type of replacement unit
	32 nonresidential electric heat pump installations for water heating and HVAC	152 nonresidential electric heat pump installations for water heating and HVAC	▶ Permitting records for nonresidential water heater and HVAC installations, including fuel type of replacement unit
BE-2 Renewable Energy	35% participation rate in a 100% carbon-free electricity option (through Southern California Edison or a Community Choice Aggregator)	None identified	▶ Participation rates in 100% carbon-free electricity options through utility providers
	79 MW total installed solar capacity in Lake Elsinore	121 MW total installed solar capacity in Lake Elsinore	▶ Interconnected solar capacity in Lake Elsinore through permitting data or California Distributed Generation Statistics (https://www.californiadgstats.ca.gov/) ▶ As of October 2024, there was 57.3 MW of existing solar capacity in Lake Elsinore
TR-1 Active Transportation	18.6 miles of sidewalk gaps length filled	37.1 miles of sidewalk gaps length filled	▶ Sidewalk gaps filled, as identified in the 2019 Active LE
	56.2 total miles of bikeways in Lake Elsinore	81.0 total miles of bikeways in Lake Elsinore	▶ Bikeways constructed, as identified in the 2019 Active LE
TR-2 Transit	970 employees communitywide with access to microtransit or vanpool programs	3,060 employees communitywide with access to microtransit or vanpool programs	▶ Number of City employees utilizing microtransit or vanpool programs ▶ Microtansit service area coverage data from RTA
	120 total transit service miles in Lake Elsinore	128 total transit service miles in Lake Elsinore	▶ Transit service miles from RTA
	8.8% increase in transit service hours for routes serving Lake Elsinore, above 2025 levels	17.5% increase in transit service hours for routes serving Lake Elsinore, above 2025 levels	▶ Transit service hours for routes service Lake Elsinore from RTA
	4,100 residents reached with Community-Based Travel Planning Program	11,400 residents reached with Community-Based Travel Planning Program	▶ Number of Lake Elsinore residents reached with Community-Based Travel Planning programs
	63 new parking spaces for Park and Ride lots near transit	125 new parking spaces for Park and Ride lots near transit	▶ Number of new Park and Ride lot parking spaces

Climate Action Strategy	2030 Target Indicators	2045 Target Indicator	Data Needed to Track
TR-3 Zero-Emissions Vehicles and Equipment	16% of vehicles registered in Lake Elsinore are ZEV and PHEV	90% of vehicles registered in Lake Elsinore are ZEV and PHEV	▶ DMV registration statistics (https://data.ca.gov/dataset/vehicle-fuel-type-count-by-zip-code)
	685 public EV chargers in Lake Elsinore	4,470 public EV chargers in Lake Elsinore	▶ Total number of public EV chargers
TR-4 Smart Growth	15% increase in residential land use density across 1,100 acres	15% increase in residential land use density across 2,000 acres	▶ Land use density changes and associated acreage of changes
	15% increase in commercial land use density across 2,200 acres	15% increase in commercial land use density across 4,000 acres	▶ Land use density changes and associated acreage of changes
W-1 Water Conservation	44 GPCD water consumption target	20 GPCD water consumption target	▶ Average daily per capita water consumption from water suppliers
W-2 Recycled Water	1,360 MG of recycled water delivered to Lake Elsinore annually	6,143 MG of recycled water delivered to Lake Elsinore annually	▶ Annual recycled water deliveries to Lake Elsinore customers from water suppliers
SW-1 Recycling and Compost	30,000 tons of organic waste diverted from landfill, above 2022 levels	44,000 tons of organic waste diverted from landfill, above 2022 levels	▶ Historical total organics recovered and/or diverted from landfill for 2022 ▶ Annual total organics recovered and/or diverted from landfill
GC -2 Urban Tree Canopy	5,570 net new trees planted (since 2022)	13,527 net new trees planted (since 2022)	▶ Historical net new trees planting since 2022 ▶ Annual net new trees planted.

Notes: DMV = Department of Motor Vehicles; EV = electric vehicle; GPCD = gallons per capita per day; HVAC = heating, ventilation, and air conditioning; LE = Lake Elsinore; MW = megawatts; PHEV = plug-in hybrid electric vehicle; RTA = Riverside Transit Agency; ZEV = zero emissions vehicle.

Table F-2 List of City Departments and Divisions

City Departments	Division
Administrative Services	Finance
Administrative Services	Human Resources
Administrative Services	Information Technology
Administrative Services	Risk
City Manager's Office	None Identified
Community Development	Planning
Community Development	Building and Safety
Community Development	Code Enforcement
Recreation Department	None Identified
Public Works Operations Department	Administration
Public Works Operations Department	Streets
Public Works Operations Department	Parks and Streetscape
Public Works Operations Department	Lake Operations
Public Works Operations Department	Facilities
Public Works Operations Department	Fleet
Economic Development Department	None Identified
Engineering Department	Inspection
Engineering Department	Traffic
Engineering Department	Capital Improvement Projects
Engineering Department	Land Development
Engineering Department	Environmental Services

Table F-3 Implementation Responsibilities and Timeframes

Measure/Action Identifier	Implementation Action	Lead Responsible Department	Supporting Department	Timeframe for Implementation
Measure BE-1.1	**Encourage building operations that minimize electricity use.**			
Action BE-1.1.1	Establish and administer a voluntary Green Business Certification Program to recognize businesses that voluntarily develop and implement energy conservation programs, including energy efficiency improvements, installation of solar energy arrays, and energy-efficient heating and cooling systems.	Economic Development Department	Community Development – Planning	Mid-term
Measure BE-1.2	**Support efforts to reduce energy burden and track energy consumption.**			
Action BE-1.2.1	Partner with Southern California Edison to advertise their energy benchmarking and discounted rates programs.	Community Development – Planning	Economic Development Department	Short-term
Measure BE-1.3	**Develop building performance standards that adhere to or go beyond CALGreen Tier 1 values.**			
Action BE-1.3.1	Evaluate the adoption of an ordinance requiring that all new construction exceed the California Energy Code requirements, based on the 2025 Energy Efficiency Standards, consistent with CALGreen Section A4.203.1. Modification to the building code would be informed by: 1) Conducting outreach with internal stakeholders such as City staff and officials, and external stakeholders such as local developers and utility providers. 2) Complete a cost-effectiveness analysis study and obtain California Energy Commission (CEC) approval.	Community Development – Building and Safety	Code Enforcement Division, Economic Development Department	Mid-term
Action BE-1.3.2	Provide incentives for developers to achieve green building standards such as LEED certification, expedited permitting, and density bonuses.	Community Development – Planning	Community Development – Building and Safety	Short-term
Measure BE-1.4	**Retrofit existing residential and nonresidential buildings to use electric heating and cooling technology.**			
Action BE-1.4.1	Partner with Southern California Edison to provide rebates/loans for the installation of electric water heaters and HVAC units at time of replacement in existing residential and nonresidential buildings.	Community Development – Building and Safety	City Manager's Office	Mid-term
Action BE-1.4.2	Evaluate the adoption of an ordinance requiring air conditioning equipment to use heat pumps at time of replacement in single-family residential housing units consistent with CALGreen voluntary standards Section A4.204.1.1, including exceptions. Modification to the building code would be informed by: 1) Conducting outreach with internal stakeholders such as City staff and officials, and external stakeholders such as local contractors. 2) Complete a cost-effectiveness analysis and obtain CEC approval.	Community Development – Building and Safety	Community Development – Planning	Short-term

Measure/Action Identifier	Implementation Action	Lead Responsible Department	Supporting Department	Timeframe for Implementation
Measure BE-1.5	**Replace fixtures with energy efficient options.**			
Action BE-1.5.1	Install energy efficient lights, ballasts, and occupancy sensors at all City facilities.	Public Works Operations Department – Facilities	None identified	Short-term
Action BE-1.5.2	Partner with Southern California Edison or a local business to sponsor a LED light bulb distribution program; distribute at least 4,000 LEDs.	Community Development – Planning	Economic Development Department	Short-term
Action BE-1.5.3	Replace existing HVAC at City buildings at the end of their life cycle with higher efficiency equipment.	Public Works Operations Department – Facilities	None identified	Short-term and ongoing
Measure BE-2.1	**Facilitate the transition of residential electricity use to 100% renewable energy sources.**			
Action BE-2.1.1	Create or join a Community Choice Aggregator to establish energy independence and receive electricity from renewable sources. Seek guidance from the California Public Utilities Commission (CPUC) or contact other local jurisdictions (for example, those that were a part of Western Community Energy) for partnership.	Community Development – Planning	City Manager's Office	Short-term
Action BE-2.1.2	Collaborate with the CPUC and California Department of Community Services and Development (CSD) to offer solar array and photovoltaic battery storage incentives for residents.	City Manager's Office	Administrative Services – Finance	Mid-term
Action BE-2.1.3	Conduct outreach to builders and developers to assess the feasibility of community solar project development in Lake Elsinore.	Community Development – Planning	Community Development – Building and Safety	Mid-term
Measure BE-3.1	**Develop educational campaigns and programs that inform community members about renewable energy and electrification benefits and opportunities**			
Action BE-3.1.1	Partner with utility providers and other energy efficiency program administrators, such as Inland Regional Energy Network (I-REN) and GRID Inland Empire to spread awareness of clean energy and energy efficiency opportunities/programs. Assist the organization in applications to CPUC and California Department of CSD grants.	Community Development – Planning	City Manager's Office	Short-term and ongoing
Action BE-3.1.2	Develop educational materials/conduct outreach regarding weatherization programs and provide assistance to residents to navigate applications.	Community Development – Building and Safety	Community Development – Planning	Short-term

Measure/Action Identifier	Implementation Action	Lead Responsible Department	Supporting Department	Timeframe for Implementation
Measure TR-1.1	**Expand active transportation infrastructure by implementing the infrastructure, programmatic, and policy recommendations included in the Active LE Plan.**			
Action TR-1.1.1	Support the installation of sidewalks and bike lanes identified in the Active LE Plan.	Public Works Operations Department – Streets	Engineering Department – Land Development	Ongoing
Action TR-1.1.2	Develop a bikeshare program that connects highly frequented areas of the city.	Engineering Department – Land Development	Public Works Operations Department – Streets	Mid-term
Measure TR-2.1	**Increase opportunities for residents to access alternative transportation and reduce financial barriers to transit ridership.**			
Action TR-2.1.1	Provide community-based travel planning with direct outreach to households that is geographically targeted with information, incentives, and support to encourage the use of alternative transportation.	Community Development – Planning	City Manager's Office	Mid-term
Action TR-2.1.2	Institute a microtransit program for employers with fewer than 100 employees (below the requirements of the existing Transportation Demand Management Program). Provide information, training, and incentives to encourage participation.	Community Development – Planning	Economic Development Department	Mid-term
Action TR-2.1.3	Identify partnerships for car-share programs and offer reduced pricing for low-income residents.	City Manager's Office	Community Development – Planning	Mid-term
Action TR-2.1.4	Create a vanpool or shuttle service program to reduce vehicle miles traveled (VMT) from City employees' commute.	Administrative Services – Human Resources	None identified	Mid-term
Measure TR-2.2	**Upgrade transit facilities and operations to better accommodate residents.**			
Action TR-2.2.1	Collaborate with Riverside Transit Agency (RTA) to revitalize bus stops, including signage with live updates of bus arrivals, shade structures, and expansion of the service area.	Engineering Department – Traffic	Public Works Operations Department – Streets	Ongoing
Action TR-2.2.2	Continue partnership with RTA to establish a GoMicro microtransit service area that includes Lake Elsinore.	Engineering Department – Traffic	Economic Development Department	Ongoing
Action TR-2.2.3	Produce a Multi-Modal Transportation Access Guide, which concisely describes and provides maps on how to reach a major destination in Lake Elsinore by foot, bicycle, transit, rideshare, etc. This information can be provided online, at City buildings, and major destinations in Lake Elsinore.	Engineering Department – Traffic	Economic Development Department	Mid-term

Measure/Action Identifier	Implementation Action	Lead Responsible Department	Supporting Department	Timeframe for Implementation
Action TR-2.2.4	Increase parking spots at existing park-and-ride facilities and add additional spots near high-usage transit stops.	Engineering Department – Traffic	Community Development – Planning	Mid-term
Measure TR-3.1	**Increase the adoption of EVs through financial incentives and vehicle replacement policies.**			
Action TR-3.1.1	Partner with organizations like the South Coast Air Quality Management District (SCAQMD) to offer rebates for hybrid, plug-in-electric, and other low- and zero-emissions vehicles.	City Manager's Office	Administrative Services – Finance	Mid-term
Action TR-3.1.2	Develop and adopt a low and zero-emissions replacement/purchasing policy for new and replaced City vehicles.	Public Works Operations Department – Fleet	None identified	Short-term
Measure TR-3.2	**Expand EV charging infrastructure.**			
Action TR-3.2.1	Consider adopting reach codes that meet CALGreen Tier 1 or 2 EV charging voluntary measures for residential and nonresidential buildings (Sections A4.106.8and A5.106.5.3). Modification to the building code would be informed by conducting outreach with internal stakeholders such as City staff and officials, and external stakeholders such as local developers.	Community Development – Building and Safety	Community Development – Planning	Mid-term
Action TR-3.2.2	Collaborate with the RTA to conduct a study of potential public EV charging station locations.	Community Development – Planning, Engineering Department – Traffic	City Manager's Office	Mid-term
Action TR-3.2.3	Partner with RTA and Southern California Edison to develop a framework for city-wide EV charging infrastructure and identify financial resources for residents.	Community Development – Planning, Engineering Department – Traffic	City Manager's Office	Short-term
Action TR-3.2.4	Survey residents, including those in low-income residential areas, to increase access to charging stations and install stations in priority areas.	Community Development – Planning	Engineering Department – Traffic	Short-term
Action TR-3.2.5	Conduct an educational campaign to promote the transition to EVs and installation of EV charging stations, highlighting available incentives and rebates.	Engineering Department – Traffic	City Manager's Office	Short-term

Measure/Action Identifier	Implementation Action	Lead Responsible Department	Supporting Department	Timeframe for Implementation
Measure TR-3.3	**Transition away from fossil-fuel powered equipment.**			
Action TR-3.3.1	Promote SCAQMD electric lawn and garden programs, which provide electric equipment rebates for residents and discounted electric equipment prices for commercial landscapers and gardeners.	Community Development – Planning	City Manager's Office	Short-term
Action TR-3.3.2	Consider an ordinance for new development projects that requires the use of only electric- and renewable-fueled construction and portable equipment after the year 2035, pending market availability and feasibility of use for such equipment.	Community Development – Planning	Community Development – Building and Safety	Long-term
Action TR-3.3.3	Develop and adopt a low and zero-emissions replacement/purchasing policy for new and replaced City non-road equipment that considers the technological availability and use feasibility of equipment types.	Public Works Operations Department – Fleet	None identified	Short-term
Measure TR-4.1	**Encourage smart-growth strategies that increase connectivity and density.**			
Action TR-4.1.1	Identify and provide incentives to promote mixed-use, infill, and transit-oriented development, such as a streamlined permitting process, less restrictive parking requirements, less restrictive height limits, lower permit fees, and/or reduced impact fees.	Community Development – Planning	Community Development – Building and Safety	Mid-term
Action TR-4.1.2	Require new subdivisions and large developments to provide sidewalks and bike paths to increase connectivity to transit and activity centers. New infrastructure should connect to the sidewalk and bike networks identified in the General Plan, Bike Lane Master Plan, Trails Master Plan, and Western Riverside County Non-Motorized Transportation plan where feasible.	Community Development – Planning	Engineering Department – Land Development	Short-term
Action TR-4.1.3	Prioritize development projects that incorporate the Southern California Association of Governments Regional Pilot Initiative Program Development Framework to qualify for future funding opportunities. Develop a checklist or add criteria to planning applications. The program is intended to fund projects that reduce VMT and include housing and equity initiatives.	Community Development – Planning	Engineering Department – Land Development	Short-term
Measure TR-4.2	**Reduce the space dedicated to vehicles.**			
Action TR-4.2.1	Review/re-evaluate parking minimums for new construction.	Community Development – Planning	Community Development – Building and Safety	Mid-term
Action TR-4.2.2	Consider metered public parking in new and existing central business areas.	Engineering Department – Traffic	Economic Development Department	Long-term

Measure/Action Identifier	Implementation Action	Lead Responsible Department	Supporting Department	Timeframe for Implementation
Measure W-1.1	**Reduce water consumption through regulation and assisting residents to upgrade to efficient fixtures.**			
Action W-1.1.1	Consider amendment to the City's Uniform Building Code to require development projects to reduce indoor water consumption by 12% (consistent with CALGreen Tier 1, Section A5.303.2.3.1). Modification to the Uniform Building Code would be informed by conducting outreach with internal stakeholders such as City staff and officials, and external stakeholders such as local developers.	Community Development – Building and Safety	Community Development – Planning	Short-term
Action W-1.1.2	Collaborate with Elsinore Valley Municipal Water District (EVMWD), Western Municipal Water District and Metropolitan Water District of Southern California to offer customers residential and commercial water efficient rebates to upgrade their properties and fixtures.	Community Development – Building and Safety	City Manager's Office	Mid-term
Action W-1.1.3	Consider adopting Appendix L of the 2025 California Plumbing Code to implement greater equipment efficiency and prevent water loss.	Community Development – Building and Safety	Community Development – Planning	Short-term
Measure W-1.2	**Increase awareness of water loss through education and audits.**			
Action W-1.2.1	Collaborate with EVMWD and expand upon existing water conservation-related educational and outreach programs for the City's residents and businesses.	Engineering Department – Environmental Services	None identified	Short-term
Action W-1.2.2	Collaborate with the EVMWD to offer free water audits to businesses and residents.	Engineering Department – Environmental Services	None identified	Mid-term
Measure W-1.3	**Replace lawn irrigation equipment to prevent water loss.**			
Action W-1.3.1	For outdoor irrigation, recommend residents and businesses use automatic timers and adjusting watering schedules to the cooler hours between 6 p.m. and 6 a.m., which are more restrictive than the current Municipal Code hours of 5 p.m. to 9 a.m.	Community Development – Planning	Code Enforcement	Short-term
Action W-1.3.2	Encourage the adoption of advanced irrigation techniques, such as drip irrigation, moisture sensors, and weather-responsive controllers, to enhance water efficiency and promote sustainable landscaping practices. Incentivize residents and businesses to plant native and drought-tolerant plants that require less watering instead of traditional lawns.	Community Development – Planning	None identified	Short-term

Measure/Action Identifier	Implementation Action	Lead Responsible Department	Supporting Department	Timeframe for Implementation
Measure W-2.1	**Encourage the use of recycled water by increasing access to recycled water systems and informational materials.**			
Action W-2.1.1	Coordinate with EVMWD to establish an educational program to inform residents about on-site recycled water systems, encouraging the reuse of graywater in compliance with the California Regional Water Quality Control Board and Riverside County Health Department.	Community Development – Building and Safety	Engineering Department – Environmental Services	Mid-term
Action W-2.1.2	Partner with EVMWD to expand its recycled water service area. Install metering systems on newly included residences.	Engineering Department – Environmental Services	Community Development – Building and Safety	Long-term
Measure SW-1.1	**Increase the diversion of organic waste for commercial, residential, and municipal facilities.**			
Action SW-1.1.1	Conduct an outreach campaign to educate residents and businesses about existing waste management programs and resources to increase awareness of the emissions associated with solid waste. Partner with the City's franchise waste hauler CR&R Environmental Services.	Engineering Department – Environmental Services	City Manager's Office	Short-term
Measure SW-1.2	**Support the use of sustainable materials.**			
Action SW-1.2.1	Consider an ordinance to require sustainable take-out foodware to reduce the landfill disposal of single-use plastics.	Engineering Department – Environmental Services	City Manager's Office	Short-term
Action SW-1.2.2	Install water bottle filling stations at public facilities to encourage the use of reusable bottles.	Public Works Operations Department – Facilities	None identified	Mid-term
Measure SW-1.3	**Expand access to recycling and compost materials and programs.**			
Action SW-1.3.1	Partner with the City's franchise waste hauler CR&R Environmental Services to provide free compost giveaways to residents.	Engineering Department – Environmental Services	None identified	Mid-term
Action SW-1.3.2	Collaborate with the Lake Elsinore Unified School District to implement a composting program to divert organic waste.	Engineering Department – Environmental Services	None identified	Mid-term

Measure/Action Identifier	Implementation Action	Lead Responsible Department	Supporting Department	Timeframe for Implementation
Measure SW-1.4	**Enable the proper disposal of non-organic waste.**			
Action SW-1.4.1	Partner with battery storage and solar panel businesses to establish a battery/panel recycling program.	Engineering Department – Environmental Services	Economic Development Department	Long-term
Action SW-1.4.2	Reduce the use of and improper disposal of greases and oils by partnering with companies that specialize in oil recycling and disposal.	Community Development – Building and Safety	Economic Development Department	Long-term
Measure SW-2.1	**Improve access to local healthy produce.**			
Action SW-2.1.1	Partner with community groups and consider an ordinance that establishes community gardens as a permitted use and/or identify locations that can be rezoned for agricultural use.	Community Development – Planning	None identified	Mid-term
Action SW-2.1.2	Partner with local food pantries to develop a nutritional foods educational campaign that promotes healthy food alternatives and recipes. Encourage pantries to stock healthy food options.	Recreation Department	None identified	Short-term
Measure GC-1.1	**Enhance economic resilience by investing in green job development.**			
Action GC-1.1.1	Establish partnerships with local community colleges to strengthen the clean energy workforce and streamline hiring for municipal programs.	Economic Development Department	Administrative Services – Human Resources	Mid-term
Measure GC-2.1	**Expand urban tree canopy to reduce the urban heat island effect.**			
Action GC-2.1.1	Require new development to plant at minimum two 15-gallon native, non-deciduous, umbrella-form tree per 30 linear feet of boundary length near buildings.	Community Development – Planning	Engineering Department – Land Development	Short-term
Action GC-2.1.2	Consider adding tree planting to capital projects where feasible.	Engineering Department – Capital Improvement Projects	Public Works Operations Department – Parks and Streetscapes	Short-term
Measure GC-3.1	**Reduce emissions associated with construction by requiring materials be low-carbon or recycled.**			
Action GC-3.1.1	Provide educational information on the benefits and options for low-carbon materials to encourage new development to use low-carbon materials for building construction.	Community Development – Building and Safety	None identified	Mid-term

Measure/Action Identifier	Implementation Action	Lead Responsible Department	Supporting Department	Timeframe for Implementation
Action GC-3.1.2	Amend the Municipal Code to require development projects to divert, recycle or salvage at least 65% of nonhazardous construction and demolition debris generated at the site (consistent with CALGreen Tier 1, Section A5.408.3.1).	Community Development – Building and Safety	Community Development – Planning	Mid-term
Action GC-3.1.3	Require all construction and demolition projects to be accompanied by a waste management plan for the project and a copy of records for proper disposal of waste shall be provided to the City prior to final permit approval.	Community Development – Building and Safety	Community Development – Planning	Mid-term

Notes: CALGreen = California Green Building Standards Code; CEC = California Energy Commission; CPUC = California Public Utilities Commission; CSD = Community Services and Development; EV = electric vehicle; EVMWD = Elsinore Valley Municipal Water District;; HVAC = heating, ventilation, and air conditioning; I-REN = Inland Regional Energy Network; LE = Lake Elsinore; LED = light-emitting diode; LEED = Leadership in Energy and Environmental Design; PV = photovoltaic; RTA = Riverside Transit Agency; SCAQMD = South Coast Air Quality Management District; VMT = vehicle miles traveled.