



# 2025 Multi-Jurisdiction Hazard Mitigation Plan: Lakeport Annex

## CHAPTER ONE: INTRODUCTION

### 1.1 About the Plan

Lake County OES led the 2025 Lake County Multi-Jurisdictional Hazard Mitigation Plan development in close coordination with the City of Clearlake, the City of Lakeport and a team of consultants retained to author the annexes for each city, together called the Project Team. This new, multi-jurisdiction plan geographically encompasses the unincorporated areas within Lake County's boundaries and both cities (hereinafter referred to as the Planning Area). It is acknowledged that the local tribal governments also maintain a separate multi-jurisdictional tribal mitigation plan and may decide to join the Lake County plan in the future.

Hazard mitigation is defined by FEMA as "any sustained action taken to reduce or eliminate long-term risk to human life and property from a hazard event." A three-year, congressionally mandated independent study to assess potential cost savings from mitigation activities provided evidence that mitigation activities are highly cost-effective. On average, each dollar spent on mitigation prevents \$6 in future losses, in addition to saving lives and preventing injuries (National Institute of Building Science Natural Hazard Mitigation Saves 2017 Interim Report).

This 2025 Plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 (Public Law 106-390) and regulations set forth by the Interim Final Rule published in the Federal Register February 26, 2002, (44 CFR §201.6) and finalized October 31, 2007 (hereafter, these requirements and regulations will be referred to collectively as the Disaster Mitigation Act, DMA, or DMA 2000). The Act emphasized the need for mitigation plans and more coordinated mitigation planning and implementation efforts. Regulations set forth establish requirements local hazard mitigation plans must meet for a local jurisdiction to be eligible for certain federal disaster assistance and hazard mitigation funding under the Robert T. Stafford Disaster Relief and Emergency Act (Public Law 93-288).



This planning effort also follows FEMA's 2023 Plan Preparation Guidance. Planning efforts result in a Multi-Jurisdictional HMP that details potential hazards, risks and mitigation goals/objectives. It will be used to guide County and City efforts to protect life and property and enhance resiliency to disaster through local land use policy, mitigation activities and efforts.

## 1.2 What's New or Updated

The biggest change between the previous 2019 City of Lakeport Local Hazard Mitigation Plan and the current plan is the decision to move to a *Lake County Multi-Jurisdiction Hazard Mitigation Plan* (MJHMP). This MJHMP combines the previous Local Hazard Mitigation Plans of Lake County, the City of Lakeport, and the City of Clearlake. This decision was based on several considerations:

- The Cities of Lakeport and Clearlake are relatively geographically small sections within Lake County.
- The Cities of Lakeport and Clearlake both border unincorporated Lake County land.
- Hazard profiles are fairly standard across the three jurisdictions, with limited differences.
- Creating a MJHMP allows the three jurisdictions to combine resources and encourages further cooperation and coordination between them.

The structure of the MJHMP has changed to include a Base Plan (also referred to in this document as the Lake County Base Plan), which focuses on Lake County, with each city having its own Annex. These Annexes will highlight any differences between the County's hazard profiles in the Base Plan and the Cities' hazard profiles. Additionally, profiled hazards were changed to match those listed in the Base Plan. These changes are identified in Chapter Two, Section 2.1.

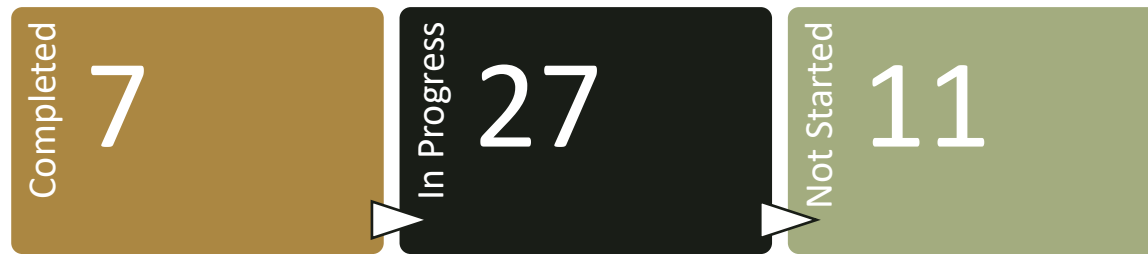
The planning process, such as organizing resources, engaging the public, and hazard profiling, was combined due to the proximity of each jurisdiction, the similarity of the hazards, and the crossover in stakeholders.

### 1.2.1 Mitigation Action Review

The 2019 HMP included 45 mitigation activities, summarized below. The impacts of hazard mitigation planning and new mitigation actions (refer to [CHAPTER SIXTEEN: Mitigation Strategy](#)) will continue to build the City's resilience in the face of disaster.



**Figure 1: Lakeport's Mitigation Action Overview**



### 1.3 Organizing Resources

Lakeport was represented on the Hazard Mitigation Planning Committee (HMPC) through the following representative. Throughout the planning process, Lakeport representation worked closely with Lake County OES representation to select, review, and approve selected city and county stakeholders.

| Name            | Title                       | Representing     |
|-----------------|-----------------------------|------------------|
| <b>Ron Ladd</b> | Public Works Superintendent | City of Lakeport |

This HMPC was built upon the previous group created for the County's 2023 HMP update. The City reviewed and approved the participant list. This group guided the 2025 Multi-Jurisdictional Hazard Mitigation Plan project. Additionally, representatives from both Cities and the County met regularly to ensure equal participation from all three jurisdictions.

In addition to organizing resources outlined in the Base Plan, the City of Lakeport completed a Lakeport Department Leaders Meeting, MJHMP Briefing, and Annex review with the following representatives. These stakeholders reviewed the Plan, including reviewing and updating their associated hazard mitigation actions.

| Name                    | Title                                    | Representing     |
|-------------------------|------------------------------------------|------------------|
| <b>Victor Fernandez</b> | Community Development                    | City of Lakeport |
| <b>Ron Ladd</b>         | Dept of Public Works - Lakeport          | City of Lakeport |
| <b>Dale Stoebe</b>      | Chief of Police                          | City of Lakeport |
| <b>Nicholas Walker</b>  | Assistant City Manager  Finance Director | City of Lakeport |
| <b>Joey Hejnowicz</b>   | Community Development Director           | City of Lakeport |



| Name                 | Title                        | Representing     |
|----------------------|------------------------------|------------------|
| <b>Bethany Moss</b>  | Lakeport Building            | City of Lakeport |
| <b>Patrick Reitz</b> | Local Fire Councils/Agencies | City of Lakeport |

The City facilitated stakeholder outreach by reviewing and approving the invited stakeholders. Additionally, the forwarded all relevant messaging to City contacts. These stakeholders (identified in Base Plan Section 1.4.1) reviewed relevant sections for the Base Plan and the annexes. For more information regarding the creation, facilitation, and participation of the HMPC, refer to the Base Plan Section 1.4.1.

#### 1.4 Assess Community Support

In addition to the assessment of community support outlined in the Base Plan, the City of Lakeport completed the following outreach activities:

- Engagement with City Council
- Engagement with City Staff

#### 1.5 Engage the Public

In addition to the public engagement outlined in the Base Plan, the City of Lakeport completed the following activities:

Lakeport promoted the overall mitigation project, public information sessions, the public input survey, and opportunities for engagement through:

- City Website
- City Department Email
- Social Media
- Public Engagement Flyers

**Figure 2: Lakeport Website Update**

##### 2024-25 Lake County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Project

**2024-25 Lake County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Project**  
Lake County's Office of Emergency Services (OES), in collaboration with the City of Lakeport and the City of Clearlake, has initiated the **2024-25 Multi-Jurisdictional Hazard Mitigation Plan (MJHMP)** project. Supported by The Resiliency Initiative consulting firm, this update aims to develop a unified strategy for mitigating disaster-related risks.

##### Why It Matters

Hazard mitigation plans are essential for preparing and reducing disaster losses. FEMA requires approved plans for local governments to be eligible for non-emergency disaster aid and project funding. Lakeport and Clearlake's existing plans, last updated in 2018, need renewal. The new MJHMP will combine these efforts for greater community impact.

##### Get Involved

Public input is crucial! Attend upcoming info sessions:

- **Clearlake:** October 23, 5:30-7:00 PM at Clearlake City Hall
- **Lakeport:** October 24, 5:30-7:00 PM at Lakeport City Hall
- **Virtual:** October 30, 12:00-1:00 PM (details on the website)

For more information, visit the project website:  
<https://www.lakesheriff.com/about/oes/hmp>

#HazardMitigation #LakeCountyOES #CommunitySafety #PublicParticipation #MJHMP

The 2025 MJHMP final draft was provided for a public review and comment period from February 3 to February 28, 2025.

Edits, additions, and other considerations provided by the public, stakeholders, and City staff were incorporated into the final submission draft. The core public comments received include:



- Concerns about the maintenance needs of the levee system in Upper Lake.
- Evacuation concerns with wildfires and the need for wider transportation routes, defensible space and fuel breaks.
- Mediterranean Oak Boar as a cause of tree mortality and the need to find solutions to protect local forests.
- The need for greater understanding of H<sub>2</sub>S gasses in relation to volcanic vents around the County.

## **1.6 Integration and Coordination with Other Planning Efforts**

In addition to the documents listed in the Base Plan, the following were consulted, reviewed, referenced and evaluated:

- Lakeport General Plan
  - The Lakeport General Plan is the official document used by decision makers and citizens to guide and interpret the City's long range plans for development of land and conservation of resources.
    - Used mainly for the narrative of the hazard profile.
- [City Municipal Code](#)
  - Referenced regarding authority, compliance guidelines, and procedural standards for managing and reducing local disaster risks.

### **1.6.1 Previous HMP**

The 2019 Lakeport HMP was integrated into city planning with the Emergency Operations Plan, utilizing the hazard profiles and ratings to evaluate the city's response procedures. The Lakeport General Plan incorporated the HMP into the Safety Element through an amendment adopted by the City Council on June 15, 2021.

### **1.6.2 Ongoing Integration**

The 2025 MJHMP will be referenced and integrated with the Lakeport Departments into other planning mechanisms as appropriate, such as community planning, EOP revisions, city training and exercises. As the HMP is updated and reviewed annually, the information will be provided to these departments.

Additionally, as Lakeport reviews and updates the Lakeport General Plan in 2025, the MJHMP will be incorporated into the plan and the revisions to the safety element.

## **1.7 Integrating Climate Change**

To match the Base Plan structure, this Annex fully integrates climate change into the annex, rather than treating it as a standalone hazard. Climate change concerns,



projections, and expectations factor into all phases of development and each hazard profile. The annual report from the American Meteorological Society (AMS) released in early 2023, which compiles the leading science about the role of climate change in extreme weather acknowledges that climate change drove unprecedented heat waves, floods, and droughts in 2021 and 2022. Those heat waves, floods, and droughts will continue to increase in frequency and intensity, as well as impact other ecological systems within the entirety of Lake County.

## CHAPTER TWO: HAZARDS OF CONCERN

### 2.1 Hazard Identification

The 2019 City of Lakeport HMP Hazards List, the 2023 Lake County HMP, and public survey results were reviewed with the working group, at public sessions, and with the HMPC. Our intent was to:

- Identify hazards not previously included
- Remove hazards no longer relevant
- Agree on a complete list of hazards that could affect Lake County

Results from this process, ranked by perceived importance, are included in Table 1.

**Table 1: Hazards for 2025 Inclusion Ranking**

| Hazard                                               | Included in 2019 Plan? | Included in 2023 County Plan? | Included in 2025 MJHMP? |
|------------------------------------------------------|------------------------|-------------------------------|-------------------------|
| Agricultural Hazards (i.e. insect pests/smoke taint) | Yes                    | Yes*                          | Yes*                    |
| Air Pollution                                        | No                     | No                            | No                      |
| Aquatic Biologic Hazards: Cyanobacterial Bloom       | Yes                    | Yes±                          | Yes±                    |
| Aquatic Biologic Hazards: Quagga Mussel              | Yes                    | Yes±                          | Yes±                    |
| Avalanche                                            | No                     | No                            | No                      |
| Climate Change                                       | Yes                    | Yes±                          | Yes±                    |
| Coastal Flooding/Erosion, Sea Level Rise             | No                     | No                            | No                      |
| Dam Failure                                          | Yes                    | Yes                           | Yes                     |
| Drought & Water Shortage                             | Yes                    | Yes                           | Yes                     |
| Earthquake                                           | Yes                    | Yes                           | Yes                     |



| Hazard                                             | Included in 2019 Plan? | Included in 2023 County Plan? | Included in 2025 MJHMP? |
|----------------------------------------------------|------------------------|-------------------------------|-------------------------|
| Epidemic/Pandemic/Vector-borne Disease Hazards     | No                     | No                            | No                      |
| Flood: 1%/0.2% Annual Chance                       | Yes                    | Yes±                          | Yes±                    |
| Flood: Localized/Stormwater                        | Yes                    | Yes±                          | Yes±                    |
| Hazardous Materials Transportation                 | Yes                    | No                            | No                      |
| Landslide & Debris Flows                           | Yes                    | Yes*                          | Yes*                    |
| Levee Failure                                      | Yes                    | Yes                           | Yes                     |
| Oil Spills                                         | No                     | No                            | No                      |
| Radiological Accidents                             | No                     | No                            | No                      |
| Seiche                                             | Yes                    | Yes*                          | Yes*                    |
| Severe Weather: Extreme Heat                       | Yes                    | Yes                           | Yes                     |
| Severe Weather: High Winds                         | Yes                    | Yes±                          | Yes±                    |
| Severe Weather: Storms (Heavy Rain, Snow & Storms) | Yes                    | Yes±                          | Yes±                    |
| Subsidence                                         | Yes                    | Yes*                          | Yes*                    |
| Terrorism                                          | No                     | No                            | No                      |
| Tree Mortality                                     | No                     | Yes                           | Yes                     |
| Tsunami                                            | No                     | No                            | No                      |
| Volcano and Geothermal Gas Release                 | Yes                    | Yes                           | Yes                     |
| Wildfire                                           | Yes                    | Yes                           | Yes                     |

\*Hazards are included as secondary hazards.

±Profiles combined, see below.

The HMPC reviewed the 2019 City of Lakeport LHMP, reviewed the 2023 Lake County LHMP, and considered input from public sessions, working group meetings and the community survey to identify hazards of concern. While the hazards are generally the same as the 2019 Plan, some changes were made:

- **Severe Weather**

Previously, these were separate and specific hazards: Extreme Heat; Heavy Rains, Snow, and Storms; and High Winds. To match the Base Plan, these were condensed into two categories: Extreme Heat, Heavy Rains, Snow, Storms.



Extreme heat is its own category, as it differs greatly in its effects and appropriate mitigation actions, and all others (rain, snow, freeze, wind) could be covered by “Storms”.

- **Tree Mortality as a standalone hazard**

Tree Mortality was not included in the previous plan as its own hazard but has since been declared a local emergency. Contributors weighed leaving it as its own category, versus discussing it in relation to other topics, such as drought. Ultimately, it was maintained as a standalone hazard. Measures to address the issue of the multi-species bark beetle infestation could not be satisfyingly combined with other disaster-types.

- **Aquatic Biologic Hazards – one hazard**

Previously, two separate and specific hazards: quagga mussel and cyanobacterial bloom. Recognizing the evolving research and impacts, the HMPC combined the separate hazards into a single category.

- **Landslide and Debris Flows**

In the previous HMP, Landslide and Debris Flows were a profiled hazard. For this MJHMP, the risk of this natural hazard is reduced and does not constitute a full profile because of the land susceptible to this hazard is in remote and undeveloped locales. Landslide and Debris Flow are covered as a secondary hazard in Earthquakes and Wildfires.

- **Climate Change**

Climate change is integrated throughout the plan rather than being a standalone hazard. This does not mean less information is included in the Plan Update, but rather that climate change is detailed in Section 1.8 and referenced within each hazard profile.

- **Floods– one hazard**

Previously, two separate and specific hazards: Flood (1% and 0.2% Annual Chance) and Flood (Localized/Stormwater). Based on the overarching similarities between these profiles, these separate hazards were combined into a single category. Additionally, Lake County does not have major rivers or other terrain that would suggest a vast difference between these flood categories.

- **Seiches**

In the previous HMP, Seiches were a profiled hazard. For this MJHMP, Seiche is covered as a secondary hazard in Earthquakes.

- **Non-Natural Hazards**

After much discussion, the HMPC elected not to include non-natural hazards within the Base Plan. To match the Base Plan structure, this Annex also does not include non-natural hazards. The following were either removed or not



considered: Hazardous Materials Transportation, Energy Shortage, and Industrial Accidents/Activities. It is reasonable to consider further exploration of these in future updates.

### 2.1.1 Priority

Hazards for the City of Lakeport were prioritized using the same rubric as the County's Base Plan. (Refer to Section 2.2.1 Priority of the Base Plan for more information.)

Table 2 summarizes results from this process and whether the hazard is considered a priority for the Planning Area.

**Table 2: Hazard Identification Table**

| Hazard                                              | Geographic Extent | Probability of Future Occurrences | Magnitude/Severity | Significance | Climate Change Influence | Priority Hazard |
|-----------------------------------------------------|-------------------|-----------------------------------|--------------------|--------------|--------------------------|-----------------|
| <b>Aquatic Biological Hazards: Invasive Species</b> | Significant       | Highly Likely                     | Critical           | High         | High                     | Yes             |
| <b>Dam Failure</b>                                  | Limited           | Unlikely                          | Critical           | Medium       | Medium                   | Yes             |
| <b>Drought and Water Shortage</b>                   | Extensive         | Likely                            | Critical           | High         | High                     | Yes             |
| <b>Earthquake</b>                                   | Extensive         | Occasional                        | Catastrophic       | Medium       | Low                      | Yes             |
| <b>Flood</b>                                        | Extensive         | Occasional                        | Critical           | Medium       | High                     | Yes             |
| <b>Levee Failure</b>                                | Highly Likely     | Critical                          | Medium             | Medium       | Yes                      | Yes             |
| <b>Severe Weather: Extreme Heat</b>                 | Extensive         | Highly Likely                     | Critical           | Medium       | High                     | Yes             |
| <b>Severe Weather: Heavy Rains,</b>                 | Extensive         | Highly Likely                     | Limited            | Medium       | Medium                   | Yes             |



| Hazard                              | Geographic Extent | Probability of Future Occurrences | Magnitude/Severity | Significance | Climate Change Influence | Priority Hazard |
|-------------------------------------|-------------------|-----------------------------------|--------------------|--------------|--------------------------|-----------------|
| <b>Snow, Storms, and High Winds</b> |                   |                                   |                    |              |                          |                 |
| <b>Tree Mortality</b>               | Extensive         | Highly Likely                     | Critical           | Medium       | High                     | Yes             |
| <b>Volcano Geothermal Gases</b>     | Significant       | Unlikely                          | Critical           | Low          | Low                      | Yes             |
| <b>Wildfire</b>                     | Extensive         | Highly Likely                     | Catastrophic       | High         | Medium                   | Yes             |

Hazards determined to be a “priority” to the County are profiled. Hazards not determined to be a “priority” to the County are included as secondary hazards to relevant profiled hazards.

## CHAPTER THREE: Profiling Lakeport

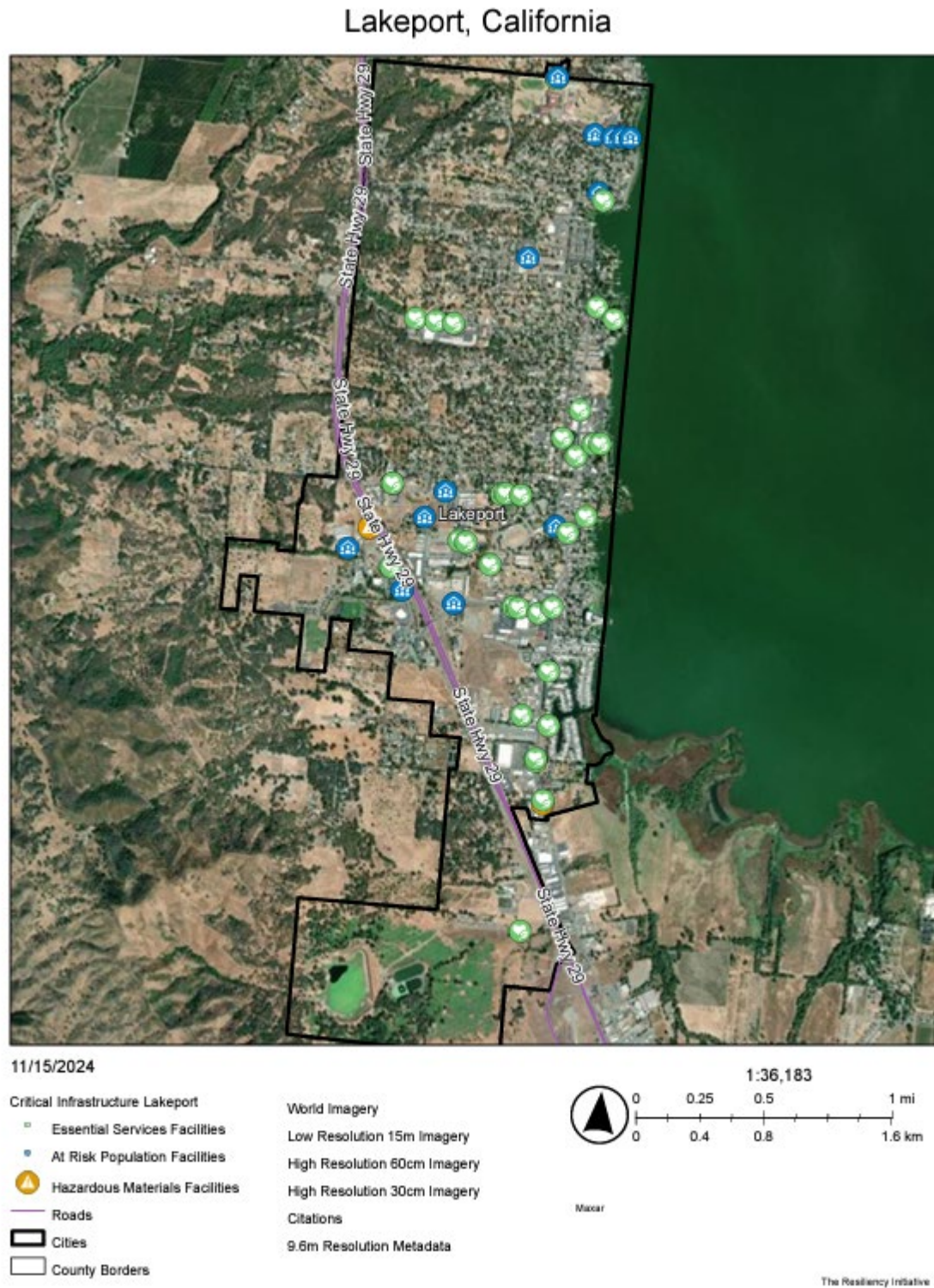
### 3.1 Lakeport at a Glance

The City of Lakeport is located in beautiful Lake County in the heart of Northern California’s wine country, just north of the San Francisco Bay Area. Lakeport is on the west shore of Clear Lake, the largest natural freshwater lake wholly in California. Clear Lake is 68 square miles, offering premier boating and fishing experiences. There is no shortage of other fun activities: hiking, biking, antiquing, off-roading, camping, bird watching, excellent restaurants, breweries, and wine tasting are some of the local activities. With over 30 wineries and 9,000+ acres of vineyards, Lake County is one of the fastest growing winemaking regions in America.

Lakeport is located at 39.0430° N, 122.9158° W at an elevation of 1,355 feet above sea level.



**Figure 3: Satellite Image of Lakeport, California**





### **3.2 Planning Area Communities**

Lakeport is a full-service, general law city under the council-manager form of government. It is led by a five-member council elected at large, which provides policy direction to Lakeport's City Manager.

Lakeport is an incorporated city and the county seat of Lake County. In the California State Legislature, Lakeport is in the 2nd Senate District and the 4th Assembly District. Federally, Lakeport is in California's 5th Congressional district.

### **3.3 Geography and Climate**

The City of Lakeport is located on the western shore of Clear Lake, in west-central Lake County, in northwestern California. The City is 125 miles northwest of Sacramento. Lakeport is generally flat in topography. To the west of the City the terrain rises quickly.

The climate of the Lakeport area is classified as temperate and semiarid. Summers are dry and warm, and winters are wet and mild. Average monthly temperatures vary from the 80°F range in July to the 40°F range in January. Annual precipitation averages 25 inches in the Lakeport vicinity; more than 50 percent of the annual precipitation normally occurs from December through February. The area's economy is based primarily on agriculture and water-oriented recreation. The seasonal population is often more than twice the permanent resident population, and the demand for services increases accordingly.

### **3.4 History**

Incorporated in 1888, Lakeport is Lake County's oldest town. However, Lakeport's history dates back at least another 40 years to the Gold Rush Era of the 1840s. Miners coming and going through the Northern California gold fields began passing through Lake County as early as 1847. At the conclusion of the Gold Rush, many miners returned to the County to settle permanently.

With attractive farmland, temperate climate, and an abundant water supply, pioneers began staking their claims at the northeast end of Clear Lake in the 1850s. Among them was William Forbes, credited by County historians as the "father" of Lakeport. Forbes was the first person in the County to settle in what would eventually become Lakeport and became the first undertaker, served as the settlement's postmaster for several years, and with partner James Parish founded the first business in Lakeport—a blacksmithing and wagon-making shop.



Originally named “Forbestown” after Forbes, Lakeport was initially a part of Napa County. In 1861, after the settlement broke away from Napa, Forbes deeded 40 acres of his land to the local government in exchange for Forbestown becoming the County seat. Soon after the acceptance of the offer, a two-story wooden courthouse and separate jailhouse were constructed on Main Street between Second and Third. Following the approval of Forbestown to become the County seat came another change. At the suggestion of Woods Crawford, an attorney, the town’s name was officially changed from Forbestown to Lakeport to recognize the natural port on Clear Lake.

In 1867, the original County courthouse burned to the ground in a fire that was later attributed by many to be arson. Shortly after, the County seat was moved to the south of the County in Lower Lake. In a series of hotly contested events that followed this move, the County seat was eventually returned to Lakeport by a vote of the people in 1871.

By 1888, Lakeport had grown from the first settler, William Forbes, to a town of about 700 residents with an estimated 500 people living in the outlying areas. The downtown area of Lakeport had also grown to include a drug store, general store, bakery, restaurant, and a saloon. In all, 35 businesses operated in the town, with three doctors and several dentists and attorneys holding practices in Lakeport as well.

On April 30, 1888, Lakeport officially became an incorporated town by a vote of 154-8. Lakeport continued to operate as an incorporated town until March 17, 1952, when an ordinance was passed declaring the area a city. Since then, the City has continued to grow in size and population.

### **3.5 Population and Demographics**

According to 2020 Decennial Census, the population of the City is 5,026. This represents an increase in population from the 2000 US Census, which estimated the City population at 4,820. Select social and economic information for the City is shown in Table 3.

**Table 3: Lakeport- Select Social and Economic Statistics**

| Statistic                           | Lakeport | Lake County |
|-------------------------------------|----------|-------------|
| Populations                         |          |             |
| Population under 5                  | 8.5%     | 5.6%        |
| Population under 18                 | 21.2%    | 21.3%       |
| Population over 65                  | 22.5%    | 23.2%       |
| Median Age                          | 42.7     | 43.2        |
| Racial Makeup                       |          |             |
| White                               | 74.7%    | 68.7%       |
| Black or African American           | 1.1%     | 1.6%        |
| American Indian or Alaska Native    | 2.6%     | 3.5%        |
| Asian                               | 2.6%     | 1.5%        |
| Native Hawaiian or Pacific Islander | .2%      | .2%         |
| Other Races                         | 7.7%     | 11.3%       |
| Two or more races                   | 11.1%    | 13.1%       |
| Income and Employment               |          |             |
| Median Income                       | \$61,100 | \$59,444    |
| Poverty Rate: All people            | 11.1%    | 17%         |
| Employment Rate                     | 40.1%    | 48.8%       |
| Home Ownership                      |          |             |
| Home value of \$299,999 or less     | 47.3%    | 40.4%       |
| Home Ownership Rate                 | 72.9%    | 76.3%       |
| Education                           |          |             |
| Bachelor's Degree or higher         | 26.3%    | 16.8%       |
| Disabilities                        |          |             |
| One or More Disabilities            | 17%      | 22.2%       |
| Hearing Difficulty                  | 3.8%     | 6.8%        |
| Vision Difficulty                   | .9%      | 6.2%        |
| Cognitive Difficulty                | 6.6%     | 8.6%        |
| Ambulatory Difficulty               | 10.8%    | 11.7%       |
| Self-Care Difficulty                | 2.3%     | 5.8%        |
| Independent Living Difficulty       | 3.6%     | 12.7%       |



| Statistic                                           | Lakeport | Lake County |
|-----------------------------------------------------|----------|-------------|
| Language                                            |          |             |
| English is only spoken at home                      | 87.8%    | 81%         |
| Spanish is spoken at home                           | 10%      | 16.6%       |
| Other Indo-European languages spoken at home        | 1.6%     | 1.8%        |
| Asian and Pacific Islander languages spoken at home | .7%      | .5%         |

## CHAPTER FOUR: HAZARD PROFILES AND RISK ASSESSMENTS

### 4.1 What's at Risk

#### 4.1.1 Methodology

The City of Lakeport Annex follows the same methodology outlined in the *Lake County Base Plan*.

#### 4.1.2 Vulnerability

The City of Lakeport Annex uses the same vulnerability rubric as the *Lake County Base Plan*. (Refer to Section 4.1.2 *Vulnerability* of the Base Plan for more information.)

### 4.2 Underserved Populations/Communities

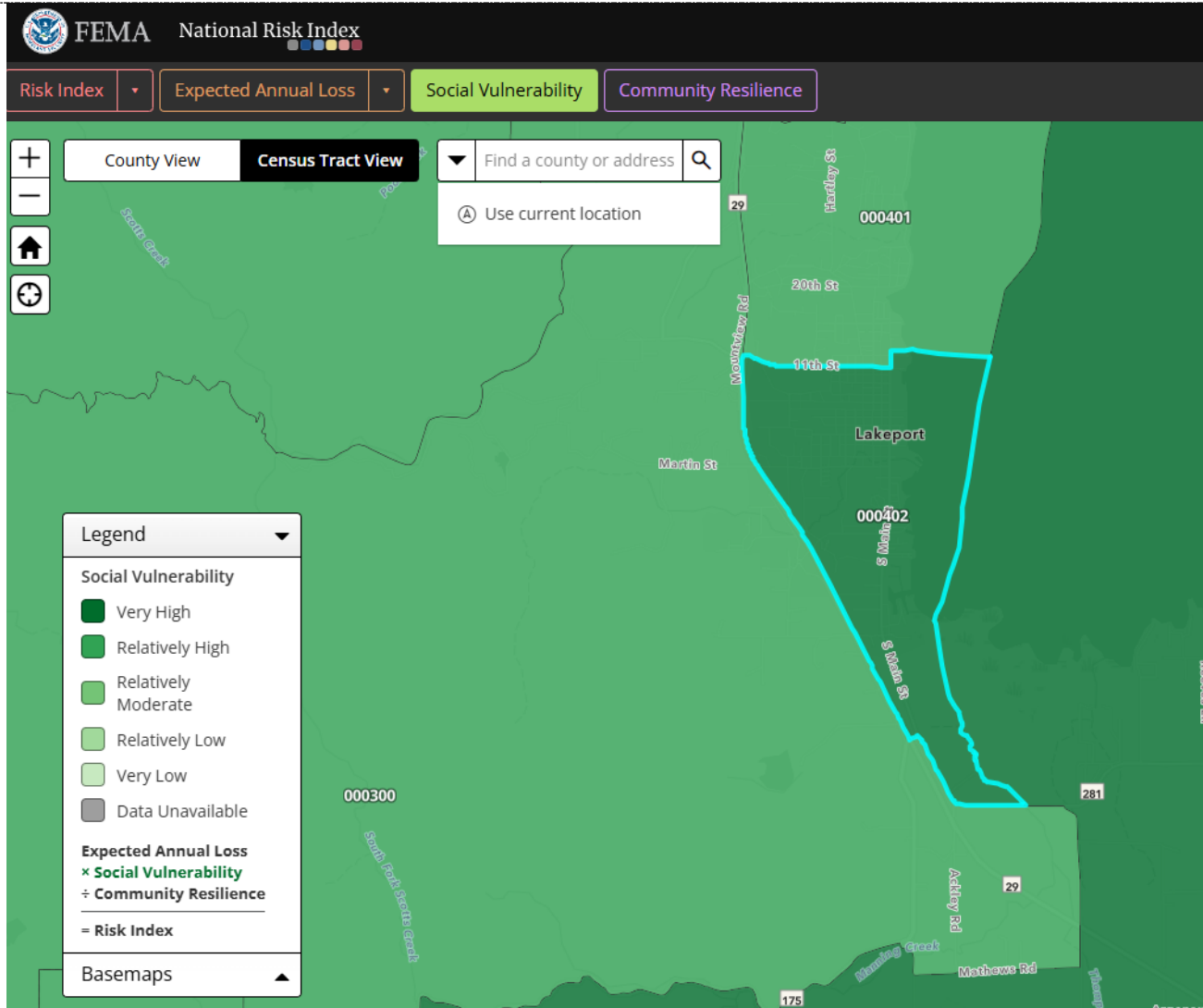
General population statistics are included in Chapter 3.

#### 4.2.1 Socioeconomically Disadvantaged

Lakeport spans three census tracts. Two of the tracts have a social vulnerability rating of **Relatively High**, and one has a social vulnerability rating of **Very High**, according to FEMA's National Risk Index.



**Figure 4: FEMA's National Risk Index Map of Lakeport**



#### 4.2.2 Access and Functional Needs

According to the 2022 American Community Survey 5-Year Estimates, 17% of Lakeport residents live with one or more disabilities.

#### 4.2.3 Tourists

No additional information specific to Lakeport.

### 4.3 Built Environment

#### 4.3.1 City-Owned or Leased Facilities

These facilities are critical to the continuity of operations post-disaster. The list included herein is also managed by its location within the Planning Area and will be



compared with potential exposure to each hazard in the profiles. The source for this information is Lakeport Public Works.

#### 4.3.2 Critical Facilities

**Table 4: Critical Facilities Identified in Lakeport**

| Facility Category                     | Critical Facility Types    | Lakeport  |
|---------------------------------------|----------------------------|-----------|
| <b>Hazardous Materials Facilities</b> | Hazardous Material         | 2         |
| <b>At Risk Population Facilities</b>  | Assisted Living            | 4         |
|                                       | Child Care                 | 2         |
|                                       | School                     | 6         |
|                                       | Senior Apt Complex         | 2         |
| <b>Essential Services Facilities</b>  | Animal                     | 0         |
|                                       | Commerce                   | 6         |
|                                       | Communications             | 2         |
|                                       | Construction - Engineering | 2         |
|                                       | Fire - Rescue              | 4         |
|                                       | Government                 | 6         |
|                                       | Medical - Clinic           | 3         |
|                                       | Medical - Hospital         | 0         |
|                                       | Pump Stations              | 10        |
|                                       | Shelter Site               | 1         |
|                                       | Transportation             | 1         |
|                                       | Utilities                  | 4         |
| <b>Total Critical Infrastructure</b>  |                            | <b>55</b> |

#### 4.3.3 Other

According to the California State Hazard Mitigation Plan, Lake County has 82,544 acres of buildable lands (i.e. currently vacant lots that have land use or zoning designations permitting future development.)



**Table 5: Values - Lakeport Parcels, Land and Improved Structures**

| Property Use       | Parcel Count | Improved Parcel Count | Land Value    | Improved Structure Value | Total Value   |
|--------------------|--------------|-----------------------|---------------|--------------------------|---------------|
| <b>Grand Total</b> | 2,448        | 2,170                 | \$196,555,736 | \$520,434,691            | \$716,990,427 |

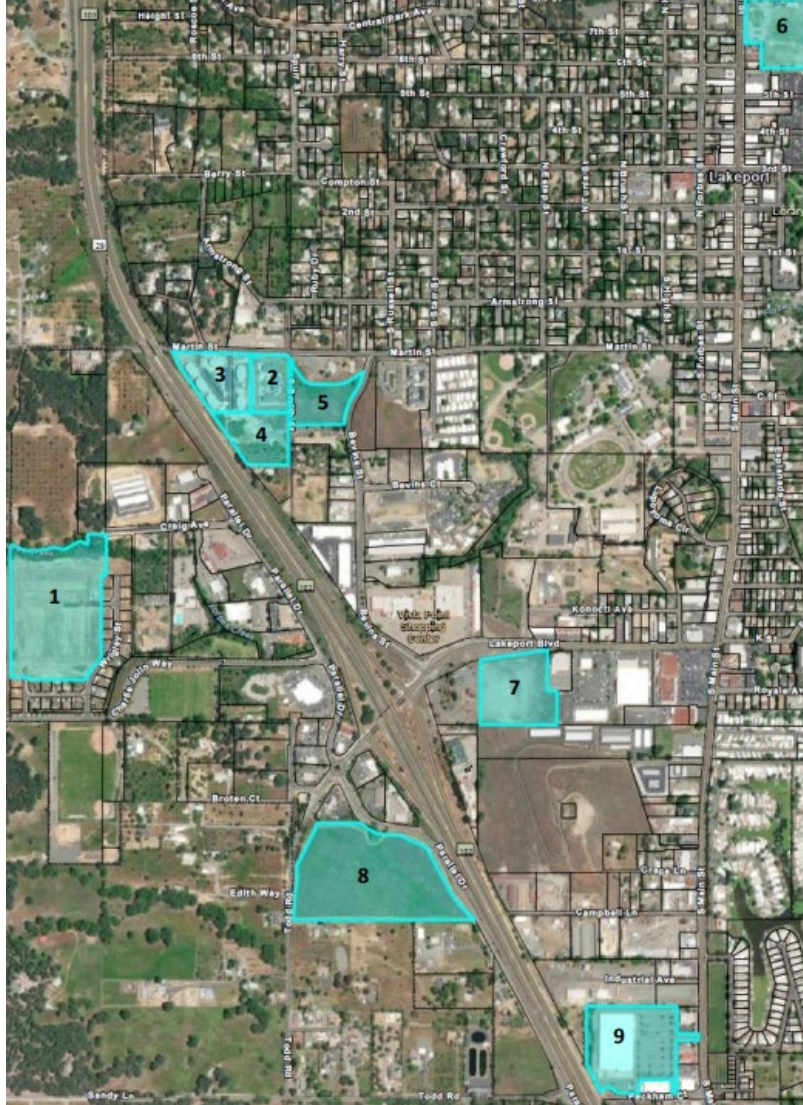
#### 4.3.4 Future Development

Lakeport supports additional growth and development and incorporates measures to address hazard mitigation. Current proposed development projects include:

1. APN 005-030-51 - Entitled Parkside - 176 dwelling units.
2. APN 025-431-16 - Martin Street - 24 multifamily units.
3. APN 025-431-16 - Martin Street Phase - 48 multifamily units.
4. APN 025-431-41 - Martin Street Phase - 40 multifamily units.
5. APN 025-431-37 - Bevins senior apartment project entitled for 40 units.
6. APN 025-601-07 - Lakefront Park
7. APN 025-521-41 - Proposed relocation of the courthouse
8. APN 005-045-15 - Lakeport Hub, retail space, a 70-room hotel, a service station, 6-8 restaurants, and 2 additional retail buildings.
9. APN 005-045-40 - Tractor Supply and Marshalls.



**Figure 5: Map of Planned Future Development**



#### 4.3.5 Outside County Access

There are three major ingress/egress routes for the County: State Roads 20, 29, and 175. These can be blocked by snow, slides, debris, wildfires, etc.

In addition, the HMPC clearly pointed out the National Weather Service Radio coverage in Lake County is deficient according to the propagation maps. The NOAA/NWS radios given to residents in the burn scars of the Valley Fire, Clayton Fire and others might never hear an alert since they do not live in a coverage area. It is also known that NOAA/NWS would like to help increase coverage, but currently do not have any funds available now, nor are they expected in the future to improve the coverage for Lake County.



## **4.4 Natural Environment**

### **4.4.1 Tribal Cultural and Natural Resources**

Lake County lies within and near the ancestral lands of the various local Native American Tribes, including the Pomo, Wintun, Wappo, and Lake Miwok Indians, that have and continue to live within the Lake County Planning Areas.

### **4.4.2 Natural Resources**

Natural resources are important to include in cost/benefit analyses for future projects and may be used to leverage additional funding for mitigation projects that also contribute to community goals for protecting sensitive natural resources. Lakeport sits on the edge of Clear Lake, the largest natural freshwater lake entirely within the geographic boundaries of California. Clear Lake, which has more than 100 miles of shoreline, sits at an elevation of 1,326 feet above sea level.

## **4.5 Agricultural Resources**

Agriculture is an integral part of Lake County and has continually adapted along with the County. The Base Plan outlines the agricultural commodities in Lake County.



## CHAPTER FIVE: WILDFIRE

### 5.1 Lakeport and Lake County Hazard Profile Comparison

**Table 6: Lakeport and Lake County Wildfire Hazard Profile Comparison**

| Category                        | Lakeport Previous Rating | Compared to the County | Validations  Changes            |
|---------------------------------|--------------------------|------------------------|---------------------------------|
| Geography                       | Extensive                | Extensive              | N/A                             |
| Likelihood                      | Highly Likely            | Highly Likely          | N/A                             |
| <b>Magnitude  Severity</b>      | <b>Catastrophic</b>      | <b>Critical</b>        | <b>Maintain at Catastrophic</b> |
| Significance                    | High                     | High                   | N/A                             |
| <b>Climate Change Influence</b> | <b>Medium</b>            | <b>High</b>            | <b>Upgrade to High</b>          |
| Vulnerability                   | Extremely High           | Extremely High         | N/A                             |

#### 5.1.1 Profile Updates:

The City's Wildfire Hazards profile has been updated from its 2019 assessment in the following ways:

- The City's climate change influence assessment has been raised to High to match the County's.

#### 5.1.2 Differences between County and City assessments:

- The city's assessment of the magnitude/severity rating of wildfires is higher than that of the county due to the city's population density and critical infrastructure within the jurisdictional planning area.

### 5.2 Location and Extent

CAL FIRE has mapped areas at risk of fires in the eastern hills surrounding the City. CAL FIRE has also designated portions of land within City limits east as Moderate to High Fire Hazard Severity Zones.

There are many vacant and undeveloped areas within or adjacent to the City, particularly on the west side of Highway 29 and the northern portions of the City, including mobile home parks. Rugged topography and highly flammable vegetation make residential development potentially unsafe unless adequate fire safety measures are taken.

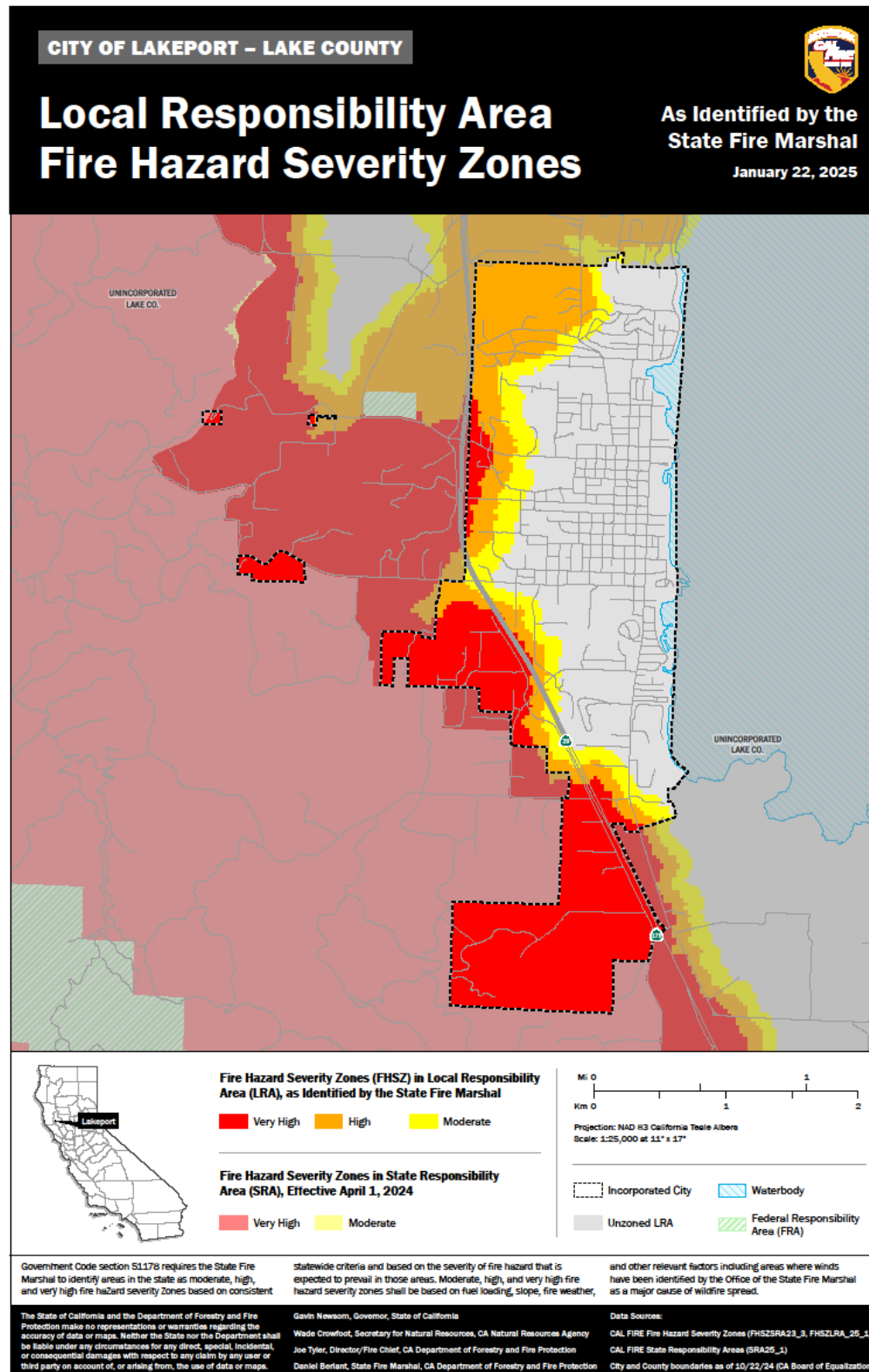


The periphery of Lakeport is a wildland urban interface (WUI) area where structures are at significant risk of fire exposure. Poor road conditions and inadequate water suppression infrastructure can limit the ability of fire crews from successfully fighting fires. An abundance of dead vegetation on properties, paired with construction using non-fire-resistant building materials can also increase the potential for structural losses in fires. Many environmental variables influence home and business exposure to wildfires.

Extended periods of hot and dry weather combined with wind often determine the duration and severity of fires. CAL FIRE released an updated Fire Hazard Severity Zones in January 2025.



**Figure 6: LRA Lakeport FHZS**





### 5.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 5.4 Probability of Future Events

**Highly Likely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

### 5.5 Impacts of Climate Change

The City of Lakeport's impacts of climate change are being updated to align with the County Planning Area, as **High**. Refer to the *Lake County Base Plan*.

### 5.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 5.7 Exposure & Vulnerability

**Vulnerability: Extremely High** – This is the same as the County rating. Refer to the *Lake County Base Plan*.

Risk and vulnerability to the Lakeport from wildfire is of significant concern. High fuel loads in the County, along with geographical and topographical features, create the potential for both natural and human-caused fires that can result in loss of life and property. These factors, combined with natural weather conditions common to the area, including periods of drought, high temperatures, low relative humidity, and periodic winds, exacerbated by climate change, can result in frequent and sometimes catastrophic fires. No development changes affected Lakeport's overall vulnerability.

#### 5.7.1 Population

Lakeport's over 5,000 residents live within 3.2 square miles, with several neighborhoods within or bordering a Very High Severity Zone. According to the Lake County Community Wildfire Protection Plan, the City of Lakeport is designated as a Community at Risk with the highest threat level.

#### 5.7.2 Property

The entire geographical area of Lakeport falls within the LRA. The LRA contains 2,448 parcels, of which 2,170 are improved. The LRA has over \$716 million in total value. Note that fire does not just affect structural values, fire can also affect land values. As such the Assessor's land values and all parcels were accounted for in this analysis to represent total City assets at risk.

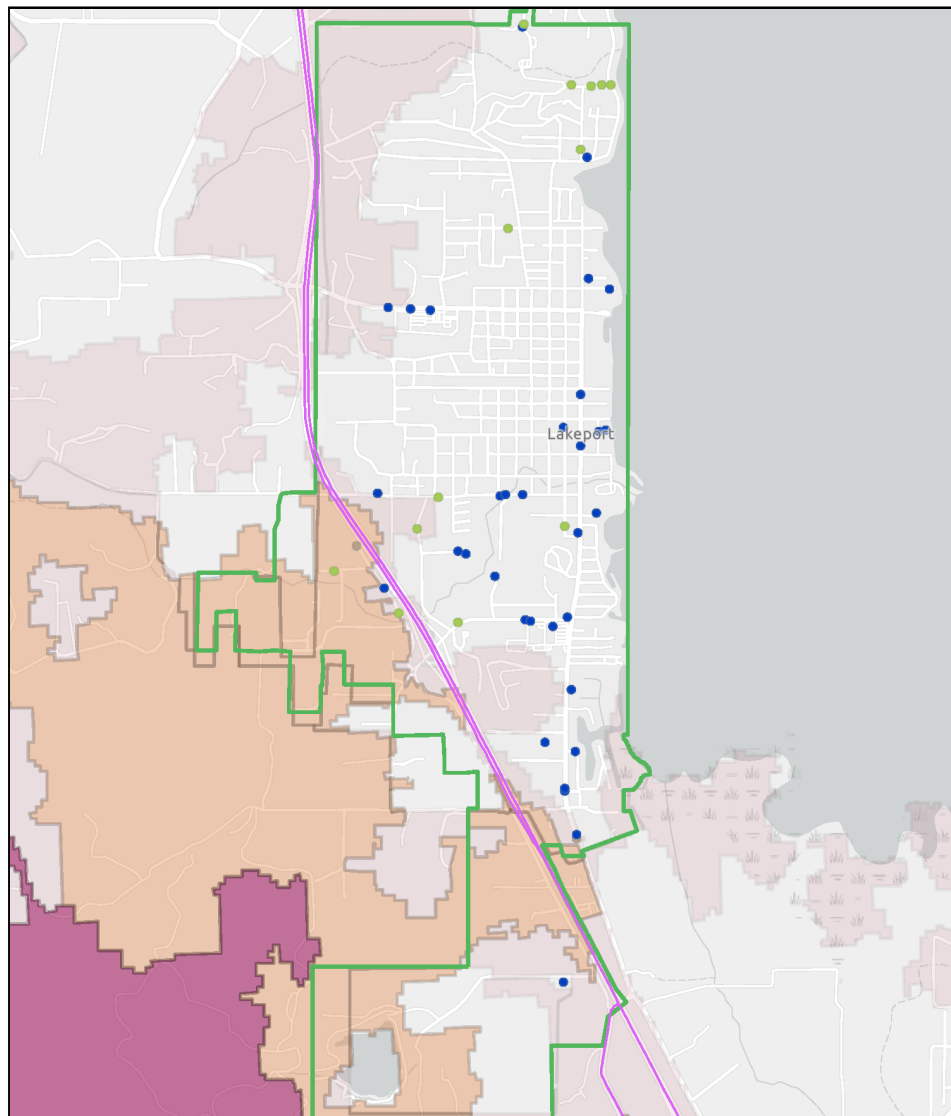


### 5.7.3 Critical Facilities & Infrastructure

Figure 7 outlines the critical infrastructure identified within Lakeport among the identified Fire Hazard and Severity Zones as of the hazard data December 2024.

**Figure 7: Lakeport's Fire Hazard and Severity Zones with Critical Infrastructure**

Lakeport Fire Hazard and Severity Zones with Critical Infrastructure



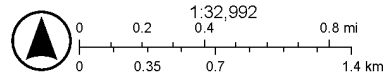
12/6/2024

Critical Infrastructure Lakeport

- Essential Services Facilities
- At Risk Population Facilities
- Hazardous Materials Facilities
- Roads
- Cities
- County Border

Fire Hazard and Severity

- Very High
- High
- Moderate
- Non-Wildland/Non-Urban
- Urban Unzoned



California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., MET/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

The Resiliency Initiative



## CHAPTER SIX: EARTHQUAKE

### 6.1 Lakeport and Lake County Hazard Profile Comparison

**Table 7: Lakeport and Lake County Earthquake Hazard Profile Comparison**

| Category                   | Lakeport Previous Rating | Compared to the County | Validations  Changes         |
|----------------------------|--------------------------|------------------------|------------------------------|
| Geography                  | Extensive                | Extensive              | N/A                          |
| Likelihood                 | Occasional   Likely      | Occasional   Likely    | N/A                          |
| <b>Magnitude  Severity</b> | <b>Catastrophic</b>      | <b>Critical</b>        | <b>Maintain Catastrophic</b> |
| <b>Significance</b>        | <b>Medium</b>            | <b>High</b>            | <b>Upgrade to High</b>       |
| Climate Change Influence   | Low                      | Low                    | N/A                          |
| <b>Vulnerability</b>       | <b>High</b>              | <b>Medium</b>          | <b>Maintain High</b>         |

#### 6.1.1 Profile Updates:

The City's Earthquake profile has been updated from its 2019 assessment in the following ways:

- The City's significance assessment has been raised to High to match the County's.

#### 6.1.2 Differences between County and City Assessments:

The City's Earthquake Hazard differs from the County's in the following ways:

- The City's assessment of the magnitude/severity rating of wildfires is higher than that of the County due to the City's population density and critical infrastructure within the jurisdictional planning area.
- The City's vulnerability assessment is higher than the County's due to its higher population density and critical infrastructure within the jurisdictional planning area.

### 6.2 Location and Extent

In addition to the information provided in the County's Base Plan, see below for Lakeport-specific information.



The City of Lakeport General Plan Safety Element noted that Lakeport is in a highly active earthquake area and the potential exists for a significant seismic event in the future.

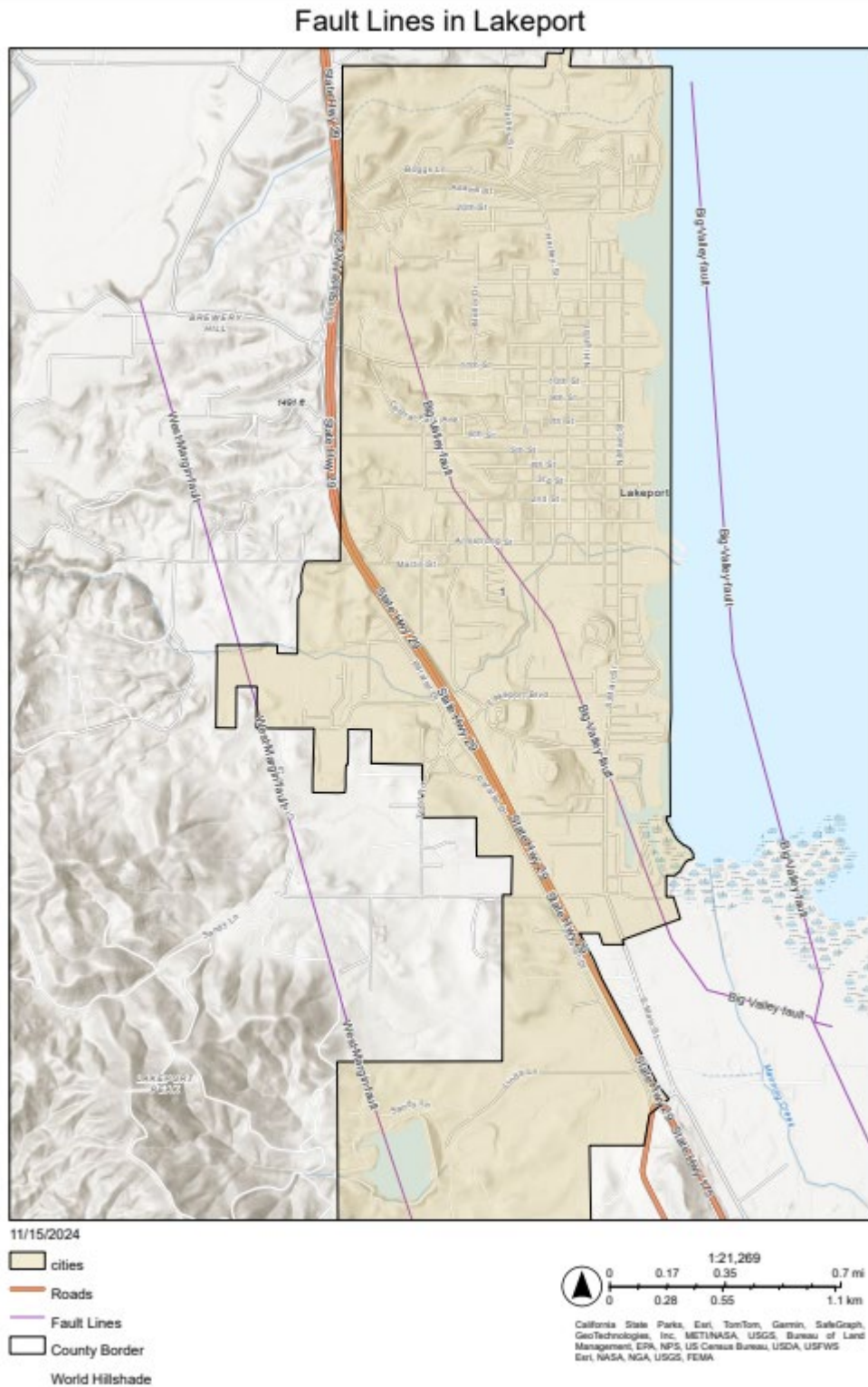
Immediately east of the City, between the City limits and Clear Lake, there is a potentially active rupture zone. Potentially active rupture zones are faults which have been active in the past 2,000 years. Little is known about this shoreline fault rupture zone, however, it represents a potentially significant hazard and must be taken into consideration when development occurs in the vicinity.

Within the past 200 years, no major earthquakes have occurred along faults in Lake County. To the west of the City lie the San Andreas fault and the Healdsburg fault, 30 and 15 miles away, respectively. These faults have been responsible for moderate to major seismic events in the past. The maximum earthquake magnitudes observed to date are 8.5 (Richter scale) for the San Andreas fault and 6.75 for the Healdsburg fault.

Most of the ground shaking which has occurred in past years in the Lakeport area has come from faults in the Mayacamas and Mt. Konocti area. Additionally, fault zones run diagonally in a southeast to northwest direction through the Potato Hill, Lake Pillsbury and Sanhedrin areas. In the far southeastern corner of the County there is a fault zone in the Jericho Valley, an area that runs along the Lake/Napa County line.



**Figure 8: Fault Lines in Lakeport**





### 6.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 6.4 Probability of Future Events

**Occasional (major earthquake)** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

**Likely (minor earthquake)** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

### 6.5 Impacts of Climate Change

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 6.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 6.7 Exposure & Vulnerability

**Vulnerability: High.** This is higher than the County's due to its higher population density.

Earthquake losses will vary depending on the source and magnitude of the event. Lakeport faces several specific vulnerabilities to earthquakes, including<sup>1</sup>:

- **Ground Failure:** Ground shaking and soil liquefaction in low-lying areas can damage foundations and disrupt underground utilities.
- **Utility Disruption:** Electricity, water, and gas lines may be severed by earthquakes, leading to prolonged outages and increased risks to public health and safety.
- **Fire Hazards:** Damaged electrical and gas lines may ignite.
- **Landslides:** The hilly terrain increases the likelihood of landslides, which could block roads, damage property, and disrupt transportation and communication routes.
- **Ground rupture:** Surface faulting may directly damage infrastructure.

The Lakeport General Plan Safety Element noted that communities containing structures built with unreinforced masonry walls are particularly susceptible to damage from earthquakes. The Unreinforced Masonry Law passed by the State Legislature in 1986 [SB 547], requires all cities and counties in Seismic Zone 4 to

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<sup>1</sup> Adapted from the [2023 California Hazard Mitigation Plan Volume 1, Part 2](#) with an analysis of Lake County specific characteristics and vulnerabilities.

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identify potentially hazardous unreinforced masonry buildings. No development changes affected Lakeport's overall vulnerability.

### 6.7.1 Population

The City rated its vulnerability as High compared to the County's rating of Medium due to the City having a higher population density.

### 6.7.2 Property, Critical Facilities & Infrastructure

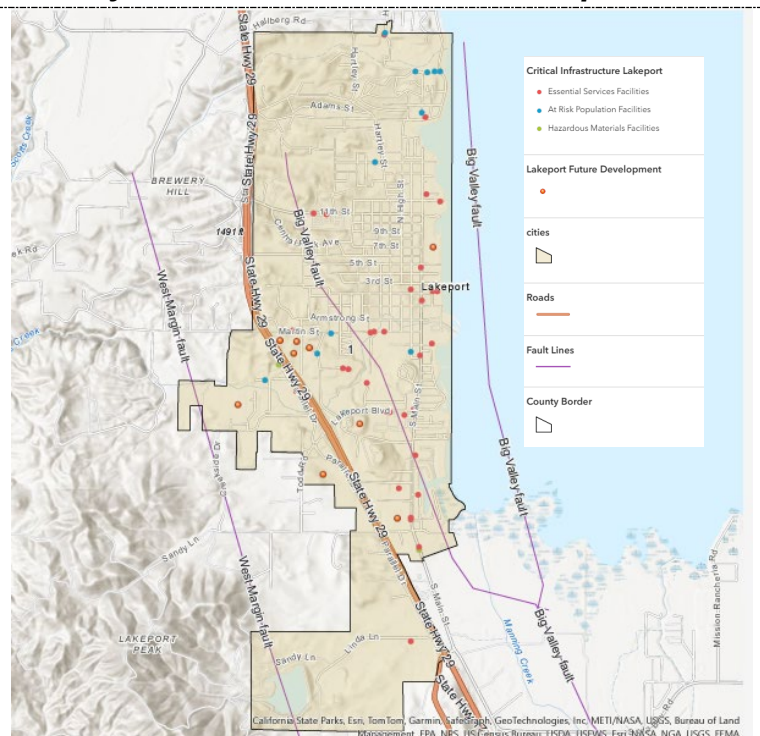
The city has complied with the legislation and identified several unreinforced masonry buildings. An inspection and reinforcement program was carried out to help mitigate hazards associated with seismic effects on structures. A comprehensive structural rehabilitation program was not carried out city-wide.

In addition to unreinforced masonry buildings, other key community structures are also at risk in the occurrence of a seismic event.

- All critical emergency buildings (City Hall, County courthouse, police and fire stations);
- High priority buildings (theaters, schools, limited care facilities)
- The majority of high-use buildings (commercial and office buildings, large apartment buildings, and churches);

A major earthquake is expected to cause considerable damage to transportation systems. Roads, bridges and highway overpasses all cross various earthquake faults as well as areas susceptible to ground failure.

**Figure 9: Map of Lakeport with Critical Infrastructure and Future Development**





## CHAPTER SEVEN: AQUATIC HAZARDS

### 7.1 Lakeport and Lake County Hazard Profile Comparison

**Table 8: Lakeport and Lake County Aquatic Hazards Profile Comparison**

| Category                        | Lakeport Previous Rating | Compared to the County | Validations  Changes        |
|---------------------------------|--------------------------|------------------------|-----------------------------|
| <b>Geography</b>                | <b>Significant</b>       | <b>Extensive</b>       | <b>Upgrade to Extensive</b> |
| Likelihood                      | Highly Likely            | Highly Likely          | N/A                         |
| <b>Magnitude  Severity</b>      | <b>Critical</b>          | <b>Limited</b>         | <b>Maintain Critical</b>    |
| Significance                    | High                     | High                   | N/A                         |
| <b>Climate Change Influence</b> | <b>Medium   Low</b>      | <b>High</b>            | <b>Upgrade to High</b>      |
| Vulnerability                   | High                     | High                   | N/A                         |

#### 7.1.1 Profile Updates:

The City's Aquatic Hazards profile has been updated from its 2019 assessment in the following ways:

- The City's Geography assessment has been raised to Extensive to match the County's.
- The City's Climate Change influence assessment has been raised to High to match the County's.

#### 7.1.2 Differences between County and City assessments:

Due to its proximity to the lake, the City's assessment of Aquatic Hazards' magnitude and severity is higher than the County's.

### 7.2 Location and Extent

Aquatic Hazards have a higher magnitude/severity level for Lakeport than the County due to the City's proximity to the lake. Tourism from Clear Lake is a major driver of revenue for the city. Homes along the Lake are an important tax base for the city. Cyanobacterial blooms and invasive species threaten the tourism industry, the value of homes along the Lake and municipal water facilities. Cyanobacterial blooms in the lake affect the water intake systems from which the water treatment plants draw. Hydroelectric power plants and municipal water facilities face severe



risks from mussel infestations, which clog pipelines, water intakes, and disrupt operations. This leads to costly cleaning, treatment, and maintenance. Preventative measures can cost \$100,000 to \$200,000 per facility initially, with annual costs ranging from \$4,000 to \$141,700. Maintenance costs for established mussel presence can run between \$22,000 and \$505,000 per facility, with annual recurring maintenance expenses from \$26,000 to \$112,000. Monitoring costs range from \$1,970 to \$47,245 annually, while unplanned outages can cost \$44,000 to \$80,000 per occurrence, amounting to \$849,000 in total.

### 7.2.1 Cyanobacterial Blooms

While it affects Clear Lake as a whole, cyanobacteria also affects the shoreline of Lakeport that abuts Clear Lake. No other locations of the City are physically affected. While only the shoreline of the Lake is physically affected, the economic extent of cyanobacterial blooms affect the whole of the City.

### 7.2.2 Invasive Species

Invasive species, such as the quagga mussel, have not been detected in Clear Lake, California. However, if an infestation would affect the Lake, Lakeport's shoreline, and likely the municipal water facilities.

## 7.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

## 7.4 Probability of Future Events

### 7.4.1 Cyanobacteria Bloom

**Highly Likely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

### 7.4.2 Invasive Species

**Likely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

## 7.5 Impacts of Climate Change

The City of Lakeport's impacts of climate change are being updated to align with the County Planning Area, as **High**. Refer to the *Lake County Base Plan*.

## 7.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.



## 7.7 Exposure & Vulnerability

**Vulnerability: High** – This is the same as the county rating. Refer to the *Lake County Base Plan*. No development changes affected Lakeport’s overall vulnerability.

### 7.7.1 Population

An infestation of invasive aquatic hazards would significantly impact Lakeport’s population due to its proximity to the lake. Infestations could negatively impact the City’s local economy and potentially cause serious damage to the City’s water facilities.

### 7.7.2 Property

Continued widespread and persistent cyanobacterial blooms may adversely affect lakeside property values and the desirability to visit and recreate at Clear Lake. Non-native aquatic vegetation has been shown to adversely affect real estate values of shoreline property in the County and Lakeport. Cyanobacteria blooms could impact future development by damaging Clear Lake, thereby negatively impacting tourism, including boating and fishing.

### 7.7.3 Critical Facilities & Infrastructure

Invasive species pose a threat to municipal water facilities. An infestation could impact the City’s water supply and be a significant financial burden for the City.



## CHAPTER EIGHT: Drought

### 8.1 Lakeport and Lake County Hazard Profile Comparison

**Table 9: Lakeport and Lake County Drought Hazard Profile Comparison**

| Category                 | Lakeport Previous Rating | Compared to the County | Validations  Changes |
|--------------------------|--------------------------|------------------------|----------------------|
| Geography                | Extensive                | Extensive              | N/A                  |
| Likelihood               | Likely                   | Likely                 | N/A                  |
| Magnitude  Severity      | Critical                 | Critical               | N/A                  |
| Significance             | High                     | High                   | N/A                  |
| Climate Change Influence | High                     | High                   | N/A                  |
| Vulnerability            | High                     | High                   | N/A                  |

#### 8.1.1 Profile Updates:

No changes have been made to the City's Drought Hazards profile from its 2019 assessment

#### 8.1.2 Differences between County and City assessments:

There is no significant difference in drought's effects on the extent, location, exposure, or vulnerability of the City of Lakeport compared to the County.

### 8.2 Location and Extent

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 8.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 8.4 Probability of Future Events

#### 8.4.1 Drought

**Likely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

#### 8.4.2 Water Shortage

**Occasional** – This is the same as the county rating. Refer to the *Lake County Base Plan*.



### 8.5 Impacts of Climate Change

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 8.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 8.7 Exposure & Vulnerability

**Vulnerability: High** – This is the same as the county rating; there is no significant difference in the impact of Drought on population, property, or critical facilities & infrastructure. Refer to the *Lake County Base Plan*. No development changes affected Lakeport's overall vulnerability.



## CHAPTER NINE: FLOOD

### 9.1 Lakeport and Lake County Hazard Profile Comparison

**Table 10: Lakeport and Lake County Flood Hazard Profile Comparison**

| Category                   | Lakeport Previous Rating                | Compared to the County                  | Validations  Changes     |
|----------------------------|-----------------------------------------|-----------------------------------------|--------------------------|
| Geography                  | Extensive                               | Extensive                               | N/A                      |
| Likelihood                 | Occasional<br>Unlikely<br>Highly Likely | Occasional<br>Unlikely<br>Highly Likely | N/A                      |
| <b>Magnitude  Severity</b> | <b>Critical</b>                         | <b>Limited</b>                          | <b>Maintain Critical</b> |
| <b>Significance</b>        | <b>Medium</b>                           | <b>High</b>                             | <b>N/A</b>               |
| Climate Change Influence   | Medium                                  | Medium                                  | N/A                      |
| <b>Vulnerability</b>       | <b>High</b>                             | <b>Extremely High</b>                   | <b>Maintain High</b>     |

#### 9.1.1 Profile Updates:

The City's Flood profile has not changed from its 2019 assessment.

#### 9.1.2 Differences between County and City assessments:

The City's Flood Hazard differs from the County's in the following ways:

- The City's assessment of flooding's magnitude/severity is higher than the County's due to its population density and its proximity to the Lake.
- The City's assessment of significance is lower than the County's due to its limited proximity to dams and levees.
- The City's assessment of vulnerability is lower than the County's due to its limited proximity to dams and levees.

### 9.2 Location and Extent

#### 9.2.1 Lakeport Watersheds and Streams

The City of Lakeport lies in the Cache Creek watershed. Cache Creek originates from, and is the sole outlet of, Clear Lake, the largest natural freshwater lake located entirely in California and among the world's oldest lakes. The Cache Creek Dam on the main fork, located 5 miles downstream from Clear Lake, was built to increase



Clear Lake's capacity and to regulate outflow for downstream users of Cache Creek water. The dam later was modified to include a hydroelectric plant.

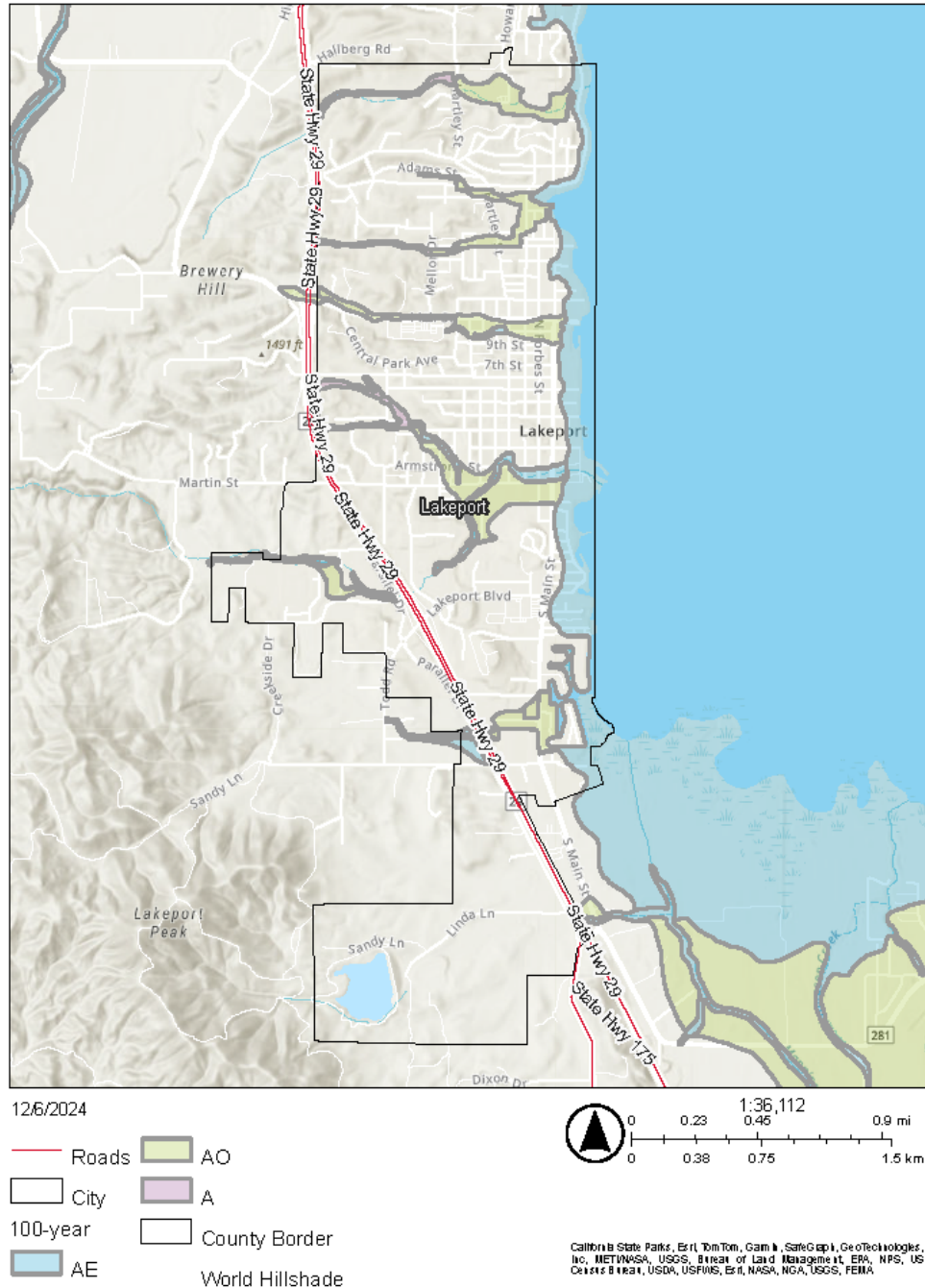
The stream has a relatively small capacity—less than a quarter of the amount the dam can release. Additionally, a rock ledge 1.5 miles downstream of Clear Lake called the Grigsby Riffle creates a “bottleneck” that restricts the water flow at that point, making it difficult for excess flows to drain from Clear Lake and increasing the chance of flooding for lakeside communities.

By downloading the National Flood Hazard Layer (NFHL) from the FEMA website, it is possible to extract the 100-year flood zone. It is extracted by merging the A, AE, and AO zones which relate to flood zones specified by FEMA. Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk.



**Figure 10: Map of Lakeport with 100 Year Flood Risk**

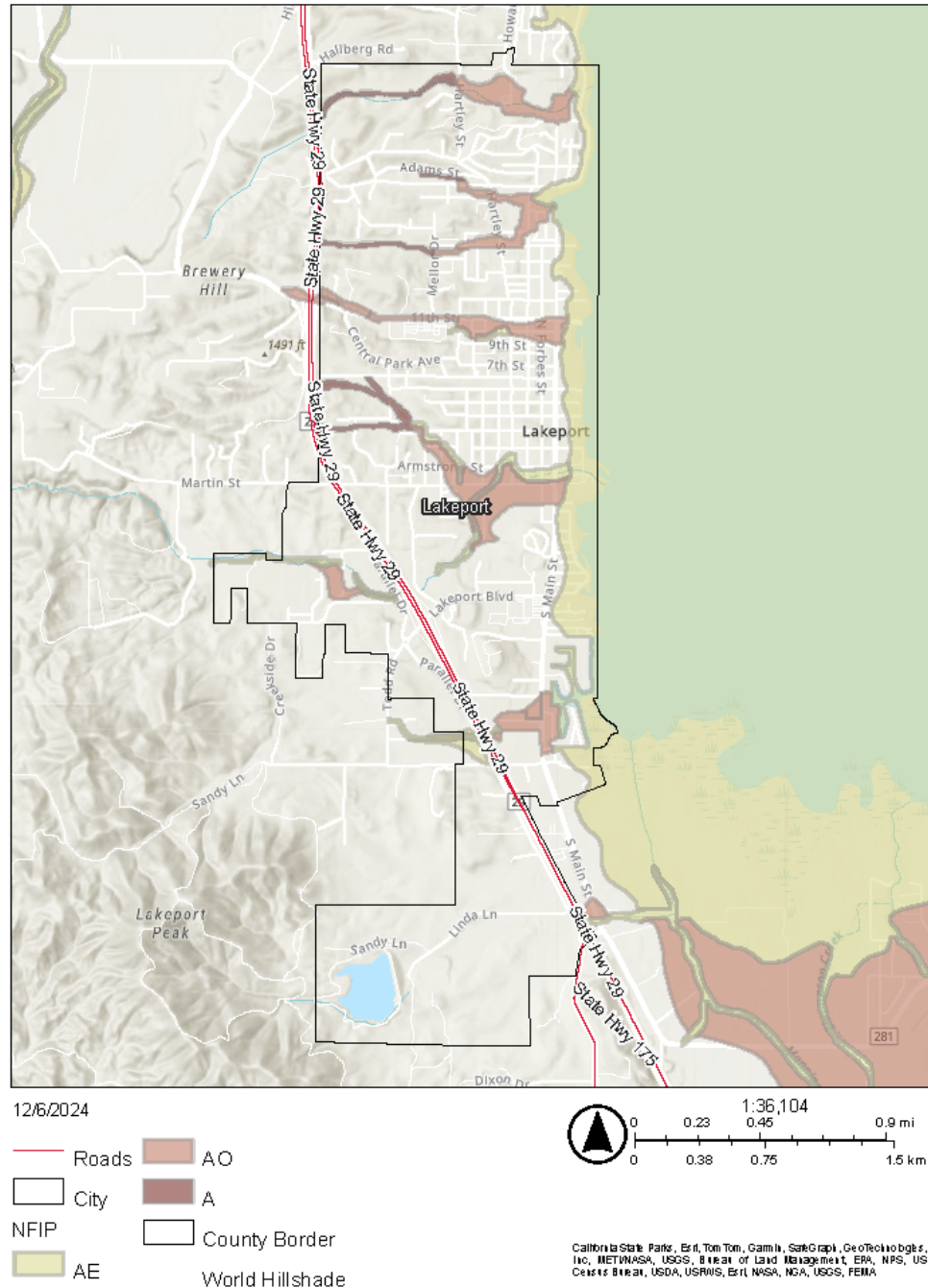
Lakeport 100 Year Flood





**Figure 11: Map of Lakeport with NFIP**

**Lakeport NFIP**





### 9.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 9.4 Probability of Future Events

#### 1% Annual Chance Flood

**Occasional** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

#### 0.2% Annual Chance Flood

**Unlikely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

#### Localized (Storm Water) Flood

**Highly Likely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

### 9.5 Impacts of Climate Change

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 9.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 9.7 Exposure & Vulnerability

#### **Vulnerability: High**

#### 9.7.1 Population, Critical Facilities & Infrastructure

Flooding is the rising and overflowing of a body of water onto normally dry land. Due to its proximity to Clear Lake, history clearly highlights floods as one of the natural hazards impacting Lakeport. Floods are among the costliest natural disasters in terms of human hardship and economic loss nationwide. Floods can cause substantial damage to structures, landscapes, and utilities and can cause life safety issues.

Floods can be extremely dangerous. Six inches of moving water can knock over a person given a strong current. A car will float in less than two feet of moving water and can be swept downstream into deeper waters. This is one reason floods kill more people trapped in vehicles than anywhere else. No development changes affected Lakeport's overall vulnerability.

**Table 11: Critical Facilities in Flood Zones**

| Flood Zone/Critical Facility Category | Facility Count |
|---------------------------------------|----------------|
| 1% Annual Chance Flood Hazard         |                |
| Essential Services Facilities         | 15             |
| At Risk Population Facilities         | 4              |
| 1% Annual Chance Flood Hazard Total   | 19             |

### 9.7.2 Repetitive Loss Areas

The repetitive loss areas within Clearlake are identified in [Table 28: Lakeport's NFIP Status and Floodplain Management Program](#)



## CHAPTER 10: LEVEE FAILURE

### 10.1 Lakeport and Lake County Hazard Profile Comparison

**Table 12: Lakeport and Lake County Levee Hazard Profile Comparison**

| Category                 | Lakeport Previous Rating | Compared to the County | Validations  Changes                                           |
|--------------------------|--------------------------|------------------------|----------------------------------------------------------------|
| Geography                | Limited                  | Significant            | Maintain ratings as there are no levees in the City Boundaries |
| Likelihood               | Unlikely                 | Likely                 |                                                                |
| Magnitude  Severity      | Negligible               | Limited                |                                                                |
| Significance             | Low                      | Medium                 |                                                                |
| Climate Change Influence | Low                      | Medium                 |                                                                |
| Vulnerability            | Extremely Low            | Medium                 |                                                                |

#### 10.1.1 Profile Updates:

The City's Levee Failure profile has no significant updates from the 2019 assessment.

#### 10.1.2 Differences between County and City assessments:

The City's Levee Failure profile differs from the County's because there are no levees within the City's boundaries. Thus, these ratings are lower than those of the County:

- Geographical risk
- Likelihood of future events
- Magnitude and severity
- Significance
- Influence of climate change
- Vulnerability



## 10.2 Location and Extent

There are no levees in the City Boundaries.

## 10.3 Previous Occurrences

There are no levees in the City Boundaries.

## 10.4 Probability of Future Events

There are no levees in the City Boundaries.

## 10.5 Impacts of Climate Change

There are no levees in the City Boundaries.

## 10.6 Secondary Hazards

There are no levees in the City Boundaries.

## 10.7 Exposure & Vulnerability

**Vulnerability: Extremely Low**

There are no levees in the City Boundaries No development changes affected Lakeport's overall vulnerability.

**Figure 12: Map of Levees Near Lakeport**





## CHAPTER 11: DAM FAILURE

### 11.1 Lakeport and Lake County Hazard Profile Comparison

**Table 13: Lakeport and Lake County Dam Failure Hazard Profile Comparison**

| Category                 | Lakeport Previous Rating | Compared to the County | Validations  Changes                                                       |
|--------------------------|--------------------------|------------------------|----------------------------------------------------------------------------|
| Geography                | Limited                  | Limited                | Lakeport Wastewater Dam is the one dam with impact to the city of Lakeport |
| Likelihood               | Unlikely                 | Occasional             |                                                                            |
| Magnitude  Severity      | Critical                 | Limited                |                                                                            |
| Significance             | Medium                   | Medium                 |                                                                            |
| Climate Change Influence | Medium                   | Low                    |                                                                            |
| Vulnerability            | Medium                   | Medium                 |                                                                            |

#### 11.1.1 Profile Updates:

The City's Dam profile has no significant updates from the 2019 assessment.

#### 11.1.2 Differences between County and City assessments:

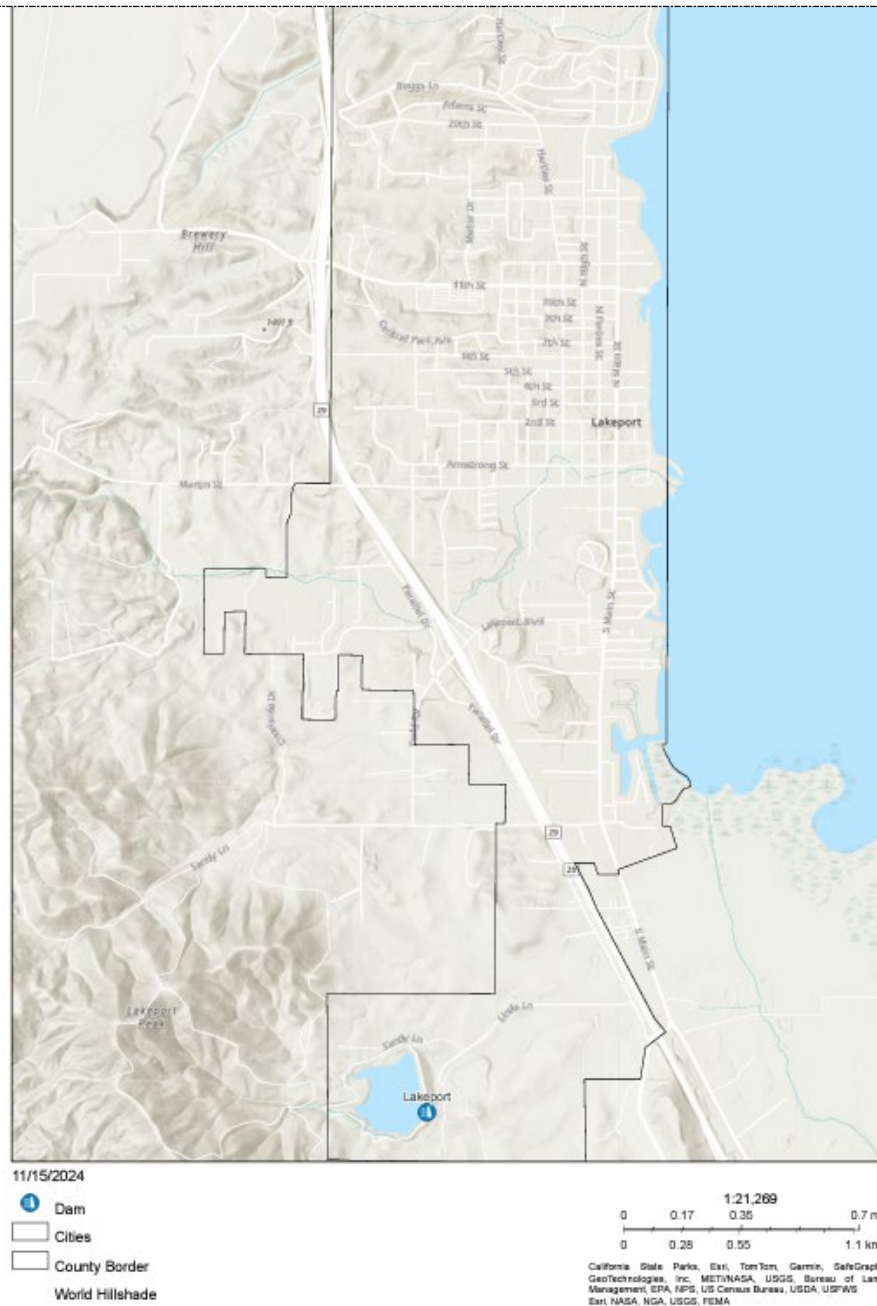
The City's Dam Failure profile differs from the County's in the following ways:

- The City's assessment of the likelihood of future events is lower than the County's because there is only one dam in proximity to the City.
- The City's assessment of the influence of climate change is higher than the County's due to its proximity to the Southeast Wastewater Treatment Plant and the effects that climate change could have on rainfall, particularly during the wetter winter season.



## 11.2 Location and Extent

**Figure 13: Map of Dam Locations in Lakeport**



### 11.2.1 Lakeport Wastewater Treatment Plant (Lakeport Dam)

The City of Lakeport Municipal Sewer District (CLMSD) maintains an earthen dam in the southwest part of the Planning Area, near the intersection of Highways 29 and 175, for the retention of treated wastewater. The dam stores a total of 650 acre-feet



of water and has been approved by the State. The possibility of catastrophic collapse of this dam is remote. Should this occur, however, the spill-out would result in a relatively minor inundation that would probably be contained by existing drainage courses, with a low probability of loss of life or property damage.

### 11.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 11.4 Probability of Future Events

**Unlikely** — The City of Lakeport has a lower rating because it only has one dam within proximity.

### 11.5 Impacts of Climate Change

Increases in both precipitation and heat causing snow melt could increase the potential for dam failure and uncontrolled releases in Lake County.

### 11.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 11.7 Exposure & Vulnerability

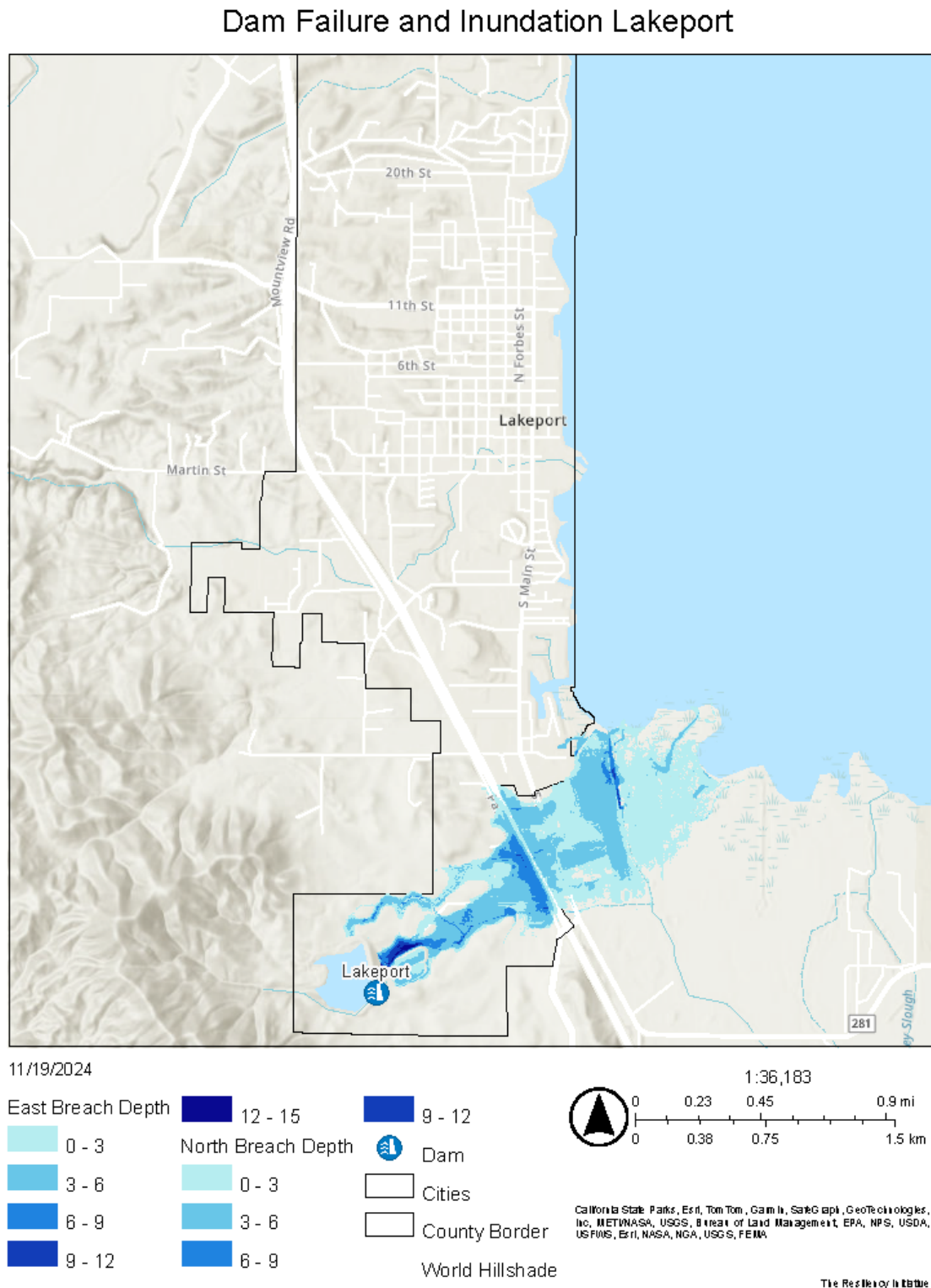
**Vulnerability: Medium** – This is the same as the county rating. Refer to the *Lake County Base Plan*. Specific information regarding Lakeport's only Dam (Lakeport Wastewater Treatment Plant (Lakeport Dam)) is provided below. No development changes affected Lakeport's overall vulnerability.

#### 11.7.1 Population

The residential parcel centroids that intersect the dam inundation areas for both the north and east breach scenarios.



**Figure 14: Map of Lakeport Dam Failure and Inundation Zones**





## 11.7.2 Property

**Table 14: City of Lakeport - Count and Value of Parcels in Lakeport Wastewater Treatment Plant Inundation Area (North Breach Scenario)<sup>2</sup>**

| Dam Inundation Area/<br>Property Use | Total Parcel Count | Improved Parcel Count | Total Land Value   | Improved Structure Value | Estimated Contents Value | Total Value        |
|--------------------------------------|--------------------|-----------------------|--------------------|--------------------------|--------------------------|--------------------|
| <b>Lakeport WWTP – North Breach</b>  |                    |                       |                    |                          |                          |                    |
| Commercial                           | 7                  | 6                     | \$2,216,999        | \$748,364                | \$748,364                | \$3,713,727        |
| Government                           | 2                  | 0                     | \$0                | \$0                      | \$0                      | \$0                |
| Open Space / Rural Lands             | 1                  | 0                     | \$0                | \$0                      | \$0                      | \$0                |
| Residential                          | 8                  | 7                     | \$1,584,997        | \$927,027                | \$463,514                | \$2,975,538        |
| <b>Total</b>                         | <b>18</b>          | <b>13</b>             | <b>\$3,801,996</b> | <b>\$1,675,391</b>       | <b>\$1,211,878</b>       | <b>\$6,689,265</b> |

**Table 15: City of Lakeport – Count and Value of Parcels in Lakeport Wastewater Treatment Plant Inundation Area (East Breach Scenario)<sup>3</sup>**

| Dam Inundation Area/<br>Property Use | Total Parcel Count | Improved Parcel Count | Total Land Value   | Improved Structure Value | Estimated Contents Value | Total Value        |
|--------------------------------------|--------------------|-----------------------|--------------------|--------------------------|--------------------------|--------------------|
| <b>Lakeport WWTP – East Breach</b>   |                    |                       |                    |                          |                          |                    |
| Commercial                           | 8                  | 6                     | \$2,233,289        | \$748,364                | \$748,364                | \$3,730,017        |
| Government                           | 2                  | 0                     | \$0                | \$0                      | \$0                      | \$0                |
| Open Space / Rural Lands             | 3                  | 0                     | \$0                | \$0                      | \$0                      | \$0                |
| Residential                          | 9                  | 7                     | \$1,948,096        | \$927,027                | \$463,514                | \$3,338,637        |
| <b>Total</b>                         | <b>22</b>          | <b>13</b>             | <b>\$4,181,385</b> | <b>\$1,675,391</b>       | <b>\$1,211,878</b>       | <b>\$7,068,654</b> |

<sup>2</sup> City of Lakeport GIS, Lakeport/Lake County 10/30/2018 Parcel/Assessor's Data

<sup>3</sup> City of Lakeport GIS, Lakeport/Lake County 10/30/2018 Parcel/Assessor's Data



### 11.7.3 Critical Facilities and Infrastructure

**Table 16: City of Lakeport – Critical Facilities in Dam Inundation Areas (North Breach) Detail by Category and Facility Type<sup>4</sup>**

| Dam Inundation Area                 | Critical Facility Category / Critical Facility Type | Facility Count |
|-------------------------------------|-----------------------------------------------------|----------------|
| <b>Lakeport WWTP - North Breach</b> |                                                     |                |
| Essential Services Facilities       | Commerce                                            | 1              |
|                                     | Total                                               | 1              |

**Table 17: City of Lakeport – Critical Facilities in Dam Inundation Areas (East Breach) Detail by Category and Facility Type<sup>5</sup>**

| Dam Inundation Area                | Critical Facility Category / Critical Facility Type | Facility Count |
|------------------------------------|-----------------------------------------------------|----------------|
| <b>Lakeport WWTP - East Breach</b> |                                                     |                |
| Essential Services Facilities      | Commerce                                            | 1              |
|                                    | Pump Stations                                       | 1              |
|                                    | Sewer Treatment Plant                               | 1              |
|                                    | Total                                               | 3              |

<sup>4</sup> Cal OES, City of Lakeport GIS

<sup>5</sup> Cal OES, City of Lakeport GIS



## CHAPTER TWELVE: SEVERE WEATHER | EXTREME HEAT

### 12.1 Lakeport and Lake County Hazard Profile Comparison

**Table 18: Lakeport and Lake County Severe Weather - Extreme Heat Hazard Profile Comparison**

| Category                   | Lakeport Previous Rating | Compared to the County | Validations  Changes       |
|----------------------------|--------------------------|------------------------|----------------------------|
| Geography                  | Extensive                | Extensive              | N/A                        |
| Likelihood                 | Highly Likely            | Highly Likely          | N/A                        |
| <b>Magnitude  Severity</b> | <b>Limited</b>           | <b>Critical</b>        | <b>Upgrade to Critical</b> |
| Significance               | Medium                   | Medium                 | N/A                        |
| Climate Change Influence   | High                     | High                   | N/A                        |
| <b>Vulnerability</b>       | <b>Medium</b>            | <b>High</b>            | <b>Upgrade to High</b>     |

#### 12.1.1 Profile Updates:

Lakeport's Severe Weather – Extreme Heat hazard profile has been updated from its 2019 assessment in the following ways:

- The City's assessment magnitude/severity has been raised to Critical to match the County's.
- The City's assessment vulnerability has been raised to High to match the County's.

#### 12.1.2 Differences between County and City assessments:

There is no significant difference in Severe Weather – Extreme Heat's effects on the extent, location, exposure, or vulnerability of the City of Lakeport compared to the County's.

### 12.2 Location and Extent

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 12.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.



## 12.4 Probability of Future Events

**Highly Likely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

## 12.5 Impacts of Climate Change

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

## 12.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

## 12.7 Exposure and Vulnerability

**Vulnerability: High** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

Extreme heat events are a recurring hazard in Lakeport, particularly during summer months, though their intensity and frequency may vary from year to year. Prolonged periods of extreme heat can strain electricity demands, locally and state-wide or beyond, particularly for air conditioning in homes and businesses, and pose health risks for individuals exposed to high temperatures. Additionally, extreme heat can exacerbate or mimic drought conditions by increasing evapotranspiration and reducing vegetation moisture, thereby heightening wildfire vulnerability. No development changes affected Lakeport's overall vulnerability.

### 12.7.1 Population

As the City's demographics shift, more residents will become senior citizens. The residents of nursing homes and elder care facilities, as well as elderly individuals who live alone, are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme heat. Low-income residents and homeless populations are also vulnerable.

### 12.7.2 Property & Critical Infrastructure

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.



## CHAPTER THIRTEEN: SEVERE WEATHER | HEAVY RAINS, SNOW & STORMS

### 13.1 Lakeport and Lake County Hazard Profile Comparison

**Table 19: Lakeport and Lake County Severe Weather - Heavy Rains, Snow, and Storms Hazard Profile Comparison**

| Category                 | Lakeport Previous Rating | Compared to the County | Validations  Changes |
|--------------------------|--------------------------|------------------------|----------------------|
| Geography                | Extensive                | Extensive              | N/A                  |
| Likelihood               | Highly Likely            | Highly Likely          | N/A                  |
| Magnitude  Severity      | Limited                  | Limited                | N/A                  |
| Significance             | Medium                   | Medium                 | N/A                  |
| Climate Change Influence | Medium                   | Medium                 | N/A                  |
| Vulnerability            | High                     | High                   | N/A                  |

#### 13.1.1 Profile Updates:

There are no updates to the City's Severe Weather – Heavy Rains, Snow, & Storms profile from its 2019.

#### 13.1.2 Differences between County and City assessments:

There is no significant difference in drought's effects on the extent, location, exposure, or vulnerability of the City of Lakeport compared to the County's.

### 13.2 Location and Extent

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 13.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 13.4 Probability of Future Events

**Highly Likely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

### 13.5 Impacts of Climate Change

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 13.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.



### 13.7 Exposure and Vulnerability

**Vulnerability: High** – This is the same as the county rating. Refer to the *Lake County Base Plan*. No development changes affected Lakeport’s overall vulnerability.

## CHAPTER FOURTEEN: TREE MORTALITY

### 14.1 Lakeport and Lake County Hazard Profile Comparison

**Table 20: Lakeport and Lake County Tree Mortality Hazard Profile**

| Category                 | Lakeport Previous Rating | Compared to the County | Validations  Changes  |
|--------------------------|--------------------------|------------------------|-----------------------|
| Geography                | Significant              | Extensive              | Lower Tree Population |
| Likelihood               | Highly Likely            | Highly Likely          |                       |
| Magnitude  Severity      | Critical                 | Critical               |                       |
| Significance             | Medium                   | High                   |                       |
| Climate Change Influence | High                     | High                   |                       |
| Vulnerability            | Medium                   | Extremely High         |                       |

#### 14.1.1 Profile Updates:

Tree Mortality has been raised from a secondary hazard to a profiled hazard.

#### 14.1.2 Differences between County and City assessments:

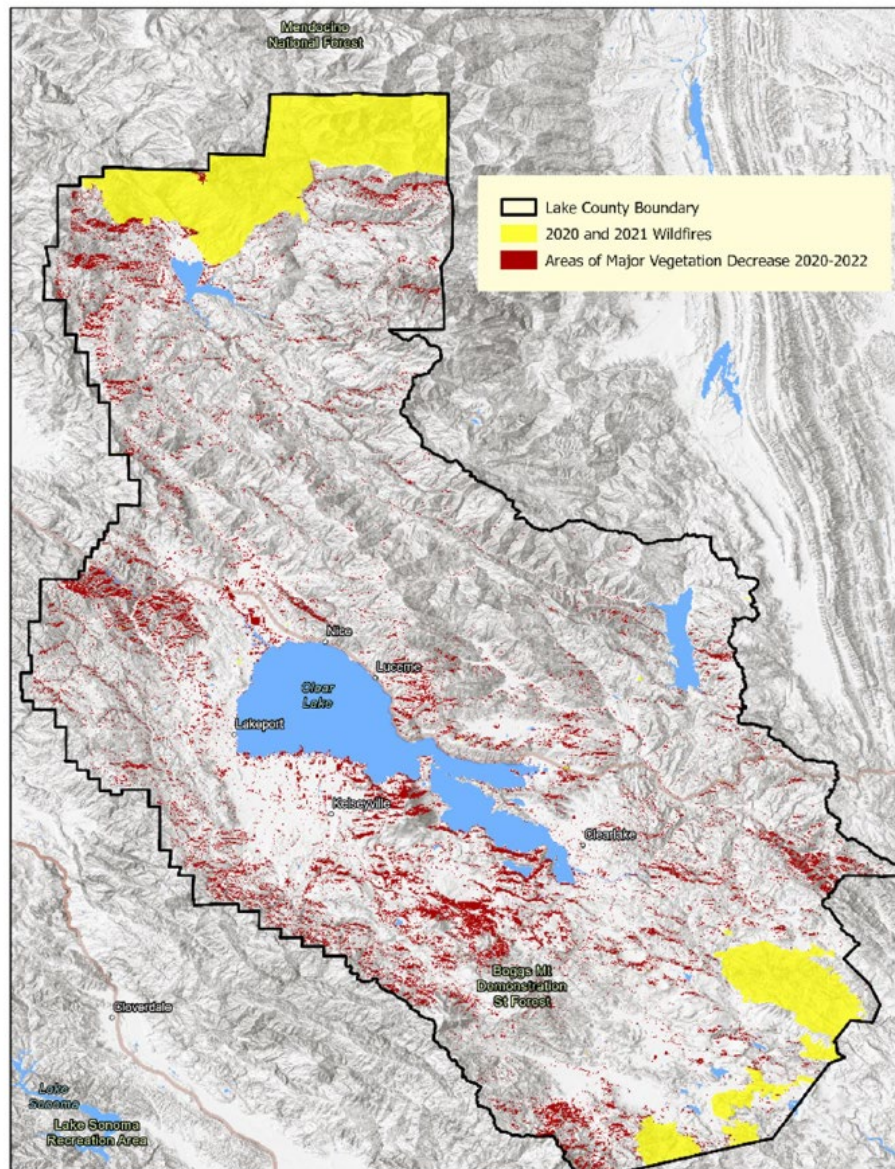
The City’s Tree Mortality profile differs from the County’s in the following ways:

- The City’s geographic assessment is lower than the County’s because there is a lower tree population.
- The City’s assessment of significance is lower than the County’s because there is a lower tree population.
- The City’s assessment of vulnerability is lower than the County’s because there is a lower tree population.



## 14.2 Location and Extent

**Figure 15: Vegetation Loss Due to Tree Mortality**



## 14.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

## 14.4 Probability of Future Events

**Highly Likely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.



### 14.5 Impacts of Climate Change

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 14.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

### 14.7 Exposure & Vulnerability

**Vulnerability: Medium** - The City has a lower tree population due to the urban environment. Severe Tree Mortality in population-dense areas may cause loss of life and property due to trees falling. Severe Tree Mortality may also increase the risk of Wildfire. No development changes affected Lakeport's overall vulnerability.

## CHAPTER FIFTEEN: VOLCANO AND GEOTHERMAL GAS RELEASE

### 15.1 Lakeport and Lake County Hazard Profile Comparison

**Table 21: Lakeport and Lake County Volcano and Geothermal Gas Release Hazard Profile**

| Category                 | Lakeport Previous Rating | Compared to the County | Validations  Changes     |
|--------------------------|--------------------------|------------------------|--------------------------|
| Geography                | Extensive                | Significant            | Downgrade to Significant |
| Likelihood               | Unlikely/Highly Likely   | Unlikely/Likely        | N/A                      |
| Magnitude  Severity      | Critical                 | Critical               | N/A                      |
| Significance             | Low                      | High                   | Maintain Low             |
| Climate Change Influence | Low                      | Low                    | N/A                      |
| Vulnerability            | Extremely Low            | Extremely High         | Maintain Extremely Low   |



### 15.1.1 Profile Updates:

The City's Volcano and Geothermal Gas Releases profile has been updated from its 2019 assessment in the following ways:

- The City's Geographic assessment has been lowered to Significant to match the County's.

### 15.1.2 Differences between County and City assessments:

- The City's assessment of the likelihood of future events for geothermal gas release is higher than the County's due to the proximity of active geothermal vents.
- The City's assessment of significance for geothermal gas release is lower than the County's because they do not pose a direct threat to the city.
- The City's assessment of vulnerability for geothermal gas release is lower than the County's because they do not pose a direct threat to the city.

## 15.2 Location and Extent

Lakeport is in a region with geothermal sources and mineral springs that release gases through surface vents. Hydrogen sulfide, carbon dioxide and methane gases leach out from underground magma through hot springs and during volcanic activity. The HMPC noted that none of these surface vents affect the City directly.

## 15.3 Previous Occurrences

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

## 15.4 Probability of Future Events

**Volcano: Unlikely** – This is the same as the county rating. Refer to the *Lake County Base Plan*.

## 15.5 Impacts of Climate Change

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

## 15.6 Secondary Hazards

No additional City of Lakeport information. Refer to the *Lake County Base Plan*.

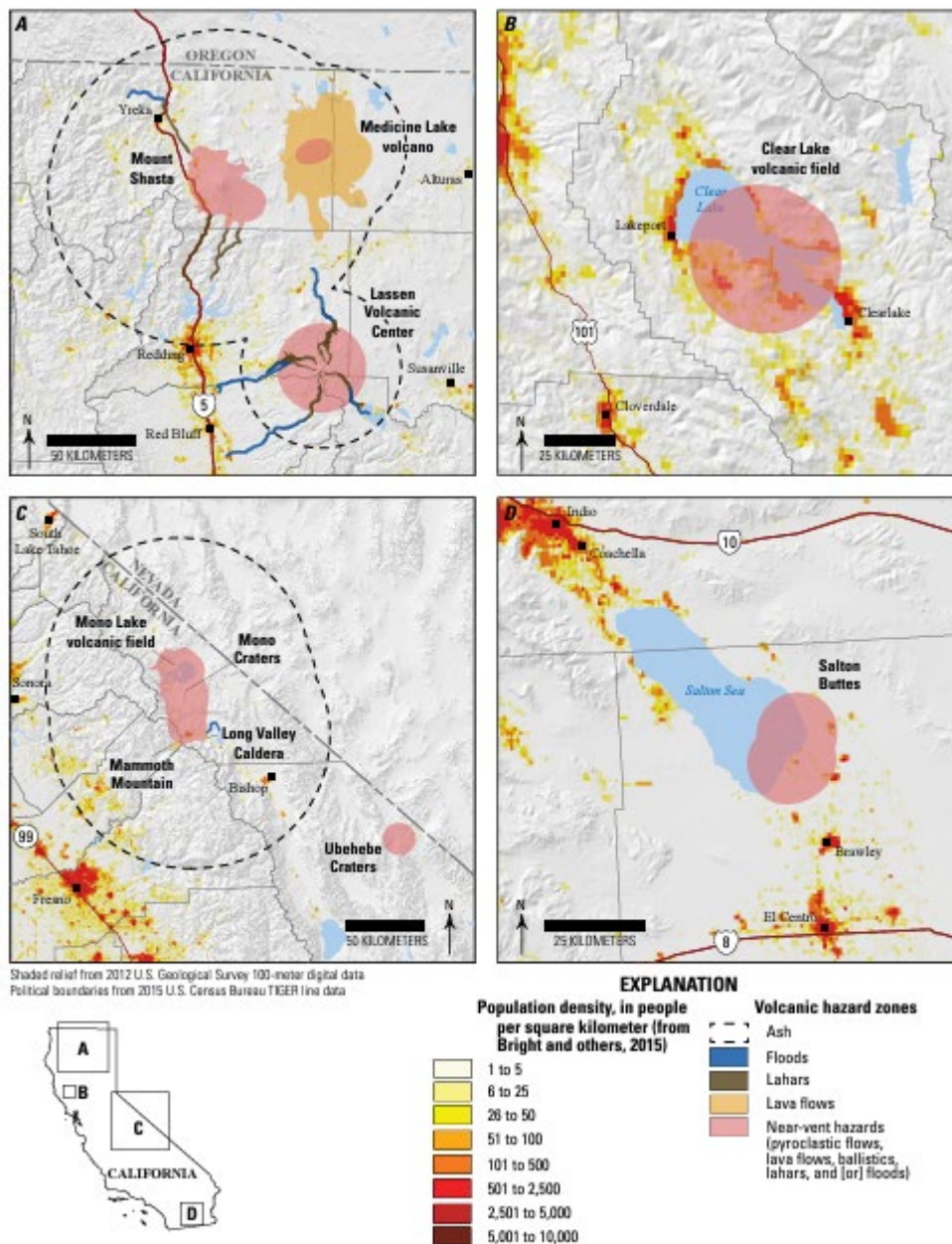


### 15.7 Exposure & Vulnerability

**Vulnerability: Extremely Low** - This is lower than the County's because they do not pose a significant threat to the city. No development changes affected Lakeport's overall vulnerability.



**Figure 16: Maps of 2010 Population Density<sup>6</sup>**



**Figure 14.** Maps of 2010 population density in and near (A) Mount Shasta, Medicine Lake volcano, and Lassen Volcanic Center; (B) Clear Lake volcanic field; (C) Long Valley volcanic region and Ubehebe Craters; and (D) Salton Buttes. See appendix 1 for data sources.

<sup>6</sup> USGS California's Exposure to Volcanic Hazards 2018



## CHAPTER SIXTEEN Mitigation Strategy

The results of the planning process, risk assessment, goal setting, identification of mitigation actions, and the hard work of the Hazard Mitigation Planning Committee (HMPC) led to the mitigation strategy and mitigation action plan for this HMP Update. As part of the HMP Update process, a comprehensive review and update of the mitigation strategy portion of the plan was conducted. The goals from the 2019 plan were refined, and Lake County, Clearlake, and Lakeport aligned goals across all three jurisdictions and identified specific jurisdiction-specific objectives.

### 16.1 Capabilities

The Fiscal Year 2024-25 budget is available at

<https://www.cityoflakeport.com/2024-25%20Adopted%20Budget.pdf>

For additional detail on capabilities and methods to improve refer to the following tables:

|                                |          |
|--------------------------------|----------|
| Regulations Related to Hazards | Table 22 |
| Administrative and Technical   | Table 23 |
| Financial                      | Table 24 |
| Education and Outreach         | Table 25 |

The City of Lakeport is actively working to build enforcement capacity for hazard-related codes by pursuing the following specific improvements:

- **Upgrading permitting and code enforcement software** to streamline inspections, tracking, and reporting—this will improve coordination between departments and increase compliance with hazard mitigation codes.
- **Conducting joint training session** between Community Development, Fire Prevention, and Police to ensure consistent understanding and enforcement of hazard-related ordinances, particularly those related to fire, flooding, and nuisance abatement.
- **Applying for state and federal grant funding** (e.g., Cal OES Code Enforcement Capacity grants, if available) to support staffing and equipment needs for enforcement activities.

These improvements directly support the enforcement of regulations identified in Table 22, such as Chapters 8.28 (Weeds and Rubbish), 8.32 (Fire Prevention), and 17.28 (Zoning Performance Standards).



**Responsible Department:** Community Development (in coordination with Fire Prevention and Police)

**Table 22: City of Lakeport Regulations that Address Hazards**

| LAKEPORT MUNICIPAL CODE                |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chapter 8.28 – Weeds and Rubbish       | <p>Weeds bearing seeds, growing excessively large, or posing fire risks, along with rubbish, refuse, and dirt on streets, sidewalks, parkways, or private property, are declared public nuisances due to their potential danger and noxious nature.</p> <p>Such nuisances may be formally identified and abated by the City Council to protect public safety and cleanliness</p>                                                                    |
| Chapter 8.32 – Fire Prevention Systems | <p>Adequate water supply, fire flow, and fire protection systems are required for new constructions, major modifications to multifamily or commercial structures, and high-hazard occupancies to mitigate fire risks.</p> <p>Automatic sprinkler and alarm systems must be installed in buildings exceeding specified fire flow thresholds or deemed severe or high-hazard by the Fire Chief, ensuring compliance with fire and building codes.</p> |
| Chapter 8.35 – Nuisance Vehicles       | <p>Abandoned, wrecked, dismantled, or inoperative vehicles on private or public property create hazards including reduced property values, blight, fire risks, health and safety dangers to minors, and rodent or insect infestations. Their presence is declared a public nuisance that must be removed or abated to protect health, safety, and general welfare.</p>                                                                              |
| Chapter 13.08 Cross-Connection Control | <p>Identifies hazards to the city's potable water supply, including health risks from contaminants, plumbing hazards from cross-connections in customer systems, pollution threats to water</p>                                                                                                                                                                                                                                                     |



|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 | <p>quality, and system hazards causing potential damage to infrastructure.</p> <p>It also addresses industrial fluid hazards, which involve chemicals and other substances that could compromise water safety, emphasizing the need for cross-connection control and protection measures to safeguard public health and comply with water supply regulations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>LAKEPORT MUNICIPAL CODE ZONING ORDINANCE</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Chapter 17 Zoning Permit                        | <p><b>17.28.010 Purpose and intent.</b></p> <p>Performance standards regulate the design and use of buildings or parcels of land, in order to minimize public hazards and to prevent the creation of nuisances and other conditions which are potentially harmful or detrimental to the users of the property or surrounding area. The purpose of the performance standards shall be to protect and improve the living and working environment, the appearance of the community, reduce or eliminate nuisance conditions, and to minimize the impacts of certain land uses on adjacent properties.</p> <p><b>REGULATIONS FOR CLEAR LAKE SHORELINE DEVELOPMENT (SD) COMBINING DISTRICT</b></p> <p><b>17.18.010 Purpose.</b></p> <p>To protect and preserve environmentally sensitive areas adjacent to the Clear Lake shoreline and to prevent degradation of wetland and riparian areas, reduce erosion and water quality impacts and enhance the fishery resources and view corridors. Within the SD combining district, all uses shall comply with the regulations of the base zoning district and with the additional regulations set</p> |



|                                          | forth in this chapter. (Ord. 903 §1(part), 2016: Ord. 796 Att. A(part), 1999)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LAKEPORT MUNICIPAL CODE OTHER ORDINANCES |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Chapter 2.28<br>EMERGENCY SERVICES*      | The declared purposes of this chapter are to provide for the preparation and carrying out of plans for the protection of persons and property within the city of Lakeport in the event of an emergency; the establishment, coordination and direction of the city emergency organization; the establishment, coordination and direction of the disaster council; the establishment, coordination and direction of the office of emergency services; and the coordination of the emergency functions of this city with all other public agencies, corporations, organizations and affected private persons. (Ord. 926 §1(part), 2020: Ord. 832 §1(part), 2004) |

IMPROVEMENT: Building capacity to increase the ability to enforce current codes (including increasing staff, identifying additional equipment needed, etc.) (Responsible Department: Community Development)

**Table 23: County Administrative and Technical Capabilities & Improvement Needs**

| Administrative and Technical |        |                                            |                                                                                                                                                         |
|------------------------------|--------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAPABILITY                   | YES/NO | RESPONSIBLE                                | IMPROVEMENT(S)                                                                                                                                          |
| Engineers                    | Yes    | Contract Engineers /<br>Public Works Dept. | Develop a system for rotating priority review assignments to expedite permitting of mitigation projects and ensure faster project starts post-disaster. |



| <b>Administrative and Technical</b>       |               |                          |                                                                                                                                                    |
|-------------------------------------------|---------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CAPABILITY</b>                         | <b>YES/NO</b> | <b>RESPONSIBLE</b>       | <b>IMPROVEMENT(S)</b>                                                                                                                              |
| Emergency Manager                         | Yes           | Assistant City Manager   | Finalize and adopt an updated Emergency Operations Plan (EOP) that includes climate-adaptive response strategies and post-disaster recovery roles. |
| GIS Analyst                               | Yes           | Utilities / Public Works | Expand GIS capability to include a flood risk model overlay.                                                                                       |
| Building Inspector                        | Yes           | Chief Building Official  | Implement post-disaster rapid evaluation training                                                                                                  |
| Grant Writer                              | Yes           | City Administration      | Formalize a grant calendar and tracking system;                                                                                                    |
| Floodplain Manager                        | Yes           | Chief Building Official  | Develop a local Substantial Damage Estimation (SDE) protocol using FEMA tools.                                                                     |
| Climate Coordinator                       | No            | Public Works             | Assign climate hazard monitoring duties under Public Works until formal role is established.                                                       |
| Committees Impacting Emergency Management | Yes           | Various Departments      | Conduct tabletop exercises with COAD and Risk Reduction Authority partners to test LHMP                                                            |



| Administrative and Technical        |        |                                    |                                                                                                                             |
|-------------------------------------|--------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| CAPABILITY                          | YES/NO | RESPONSIBLE                        | IMPROVEMENT(S)                                                                                                              |
|                                     |        |                                    | implementation strategies.                                                                                                  |
| Planning Commission                 | Yes    | Planning Division / Community Dev. | Schedule an annual joint workshop with the planning commission to align development decisions with hazard risk findings.    |
| Mitigation Planning Committee       | Yes    | Emergency Services / Public Works  | Expand committee role to include monitoring progress of mitigation actions and recommend annual plan updates.               |
| Maintenance Programs to Reduce Risk | Yes    | Public Works                       | Track maintenance activities in GIS for performance evaluation and reporting in the annual MS4 and LHMP reviews.            |
| Mutual Aid Agreements               | Yes    | Admin / Emergency Management       | Review and renew MOUs annually; assess gaps and initiate mutual aid agreements with utility districts and school districts. |

**Table 24: County Financial Capabilities and Improvement Needs**

| <b>Financial</b>                                  |                                                                                                                  |                                                                                                    |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| <b>CAPABILITY</b>                                 | <b>DETAIL</b>                                                                                                    | <b>IMPROVEMENT(S)</b>                                                                              |
| Administrative and financial procedures           | Policies aligned with state regulations; purchasing policies updated to streamline procurement during disasters. | Continue improving disaster-specific procurement training for staff to enhance emergency response. |
| Personnel                                         | Existing staffing is adequate but stretched for large disasters.                                                 | Expand cross-training programs for financial staff on disaster-specific funding streams.           |
| <b>Funding Sources</b>                            |                                                                                                                  |                                                                                                    |
| Property, Sales, Income, or Special Purpose Taxes | Yes; funding allocated to support general operations and resilience projects.                                    | Evaluate opportunities for additional revenue sources dedicated to mitigation projects.            |
| General Funds                                     | Yes; used for baseline operations and some infrastructure improvements.                                          | Maintain reserves dedicated to emergency response and recovery efforts.                            |
| Utility Service, Impact, or Other Fees            | Yes; used for utility and stormwater improvements.                                                               | Conduct rate studies to ensure sustainable funding for mitigation- related upgrades.               |
| General Obligation or Special Purpose Bonds       | Yes; special-purpose bonds are being used.                                                                       | Use of bonds to fund large-scale hazard mitigation projects, such as Utility upgrades.             |
| Federal, State, Private Grants/Funding            | Yes; accessed for infrastructure, environmental protection, and disaster recovery projects.                      | Expand eligibility for FEMA grants through compliance and additional staff training.               |

**Table 25: Education and Outreach Capabilities and Improvement Areas**

| <b>Education and Outreach</b>     |                              |                                                                                                                                                    |
|-----------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CAPABILITY</b>                 | <b>RESPONSIBLE</b>           | <b>IMPROVEMENT(S)</b>                                                                                                                              |
| Public Information Officer (PIO)  | City Administration          | Develop a multilingual outreach toolkit on wildfire, flood, and earthquake preparedness.                                                           |
| Social Media and Website Outreach | City Administration          | Launch a social media campaign with interactive maps and local project updates.                                                                    |
| Community Outreach Events/Venues  | Various Departments          | Host an annual Hazard Mitigation Booth at National Night Out and promote LHMP goals.                                                               |
| Local Citizen Groups / Nonprofits | COAD                         | Engage COAD partners in executing at least one mitigation-related Activity per year, such as storm drain stenciling or defensible space education. |
| Public Education or Info Programs | Fire / Police / Public Works | Develop a digital Hazard Mitigation Home Guide for residents with checklists for different hazard types and mitigation grant info.                 |
| Firewise Certification            | Evaluation ongoing           | Complete risk assessment and community action plan in collaboration with Cal Fire.                                                                 |



| Education and Outreach                 |                              |                                                                                                                                            |
|----------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| CAPABILITY                             | RESPONSIBLE                  | IMPROVEMENT(S)                                                                                                                             |
| Public-Private Partnership Initiatives | Admin / Emergency Management | Expand partnerships to include local hardware stores, nurseries, and realtors to distribute preparedness materials and mitigation rebates. |

Although identified actions within the Hazard Mitigation Plan may have unique limitations, the mitigation strategy is administratively achievable. Additional State and Federal funding would strengthen our countywide capacity to meet hazard mitigation-related challenges, and the City of Lakeport's capacity, as well. The coordinated efforts this document represents have further developed relationships and capacities needed to achieve mitigation, and cultivated even greater public awareness of this as a matter of urgent priority. The County may seek additional funding via grants or take other measures to increase the identified capabilities to achieve mitigation.

To support the new HMP goals and objectives, the mitigation actions from 2019 were reviewed and assessed for their value in reducing risk and vulnerability to the Planning Area from identified hazards and evaluated for their inclusion in this HMP Update (See **Error! Reference source not found.**).

Hazard Mitigation actions are essential to weaving long-term resiliency into all community recovery efforts so that at-risk infrastructure, development, and other community assets are stronger and more resilient for the next event. Mitigation measures to reduce the risk and vulnerability of a community to future disaster losses can be implemented in advance of a disaster event, as well as part of post-disaster recovery efforts.

Applying mitigation measures to recovery efforts improves community resilience and sustainability. It is often most efficient to fund all eligible infrastructure mitigation through FEMA's Public Assistance mitigation program if the asset was damaged in a storm event. Mitigation work can be added to project worksheets if they can be proven to be cost-beneficial.



Applying mitigation measures to recovery efforts improves community resilience and sustainability.

The City's and County's Emergency Operations Plans seek to mitigate the effects of hazards, prepare to take measures that will preserve life and minimize damage, enhance response during emergencies, provide necessary assistance, and establish a recovery system to return the community to its normal state of affairs. The Plans emphasize mitigation as a major component of emergency management efforts.

## 16.2 Goals and Objectives

The working group and both jurisdictions developed the goals and objectives with input from the community, county departments, and operational area partners and were approved by the Planning Committee. The goals are consistent across the entire planning area, with each jurisdiction having its own objectives. For Lakeport, this was a change from the previous five goals of

1. Minimize risk and vulnerability of Lakeport to hazards and protect lives and prevent losses to property, economy, and the environment
2. Improve Lakeport's capabilities to plan for/prevent/mitigate hazard-related losses and to be prepared for, respond to, and recover from a disaster event
3. Increase community outreach, education, and awareness of risk and vulnerability to hazards and promote preparedness and self-responsibility to reduce hazard-related losses
4. Increase and maintain wildfire prevention and protection in Lakeport
5. Improve community resiliency to flooding in Lakeport

The goals were developed at a multi-jurisdictional level that aligned across all jurisdictions.

**Goal 1:** Minimize loss of life, injury, and property damage from natural hazards.

**Goal 2:** Increase community awareness of natural hazards and shared responsibility in preparedness, response, mitigation, and recovery.

**Goal 3:** Strengthen local mitigation capabilities to protect the community from natural hazards.

Lakeport aligned with these goals and priorities because they encapsulated the previous goals of the City in a simplified approach. From the previous 2019 Plan,



Lakeport's goals have updated, as Goals 1 and 2 remained the same, with Goals 3,4, and 5 being combined.

Each jurisdiction then evaluated the goals and determined the objectives for their jurisdiction. The following objectives are for Lakeport:

**Table 26: Lakeport Objectives**

| Goal  | Objective                                                                                                                                                                                   |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| One   | 1.1 Provide protection for existing and future development                                                                                                                                  |
|       | 1.2 Provide protection for critical facilities, utilities, and services and minimize disruption                                                                                             |
|       | 1.3 Provide protection for public health and safety                                                                                                                                         |
| Two   | 2.1 Enhance hazard mitigation and preparedness programs                                                                                                                                     |
|       | 2.2 Establish a Citywide public information program that utilizes a variety of outreach strategies and mechanisms to reach all Lakeport residents and visitors                              |
|       | 2.3 Inform and educate residents and businesses about all hazards they are exposed to, where they occur, what they can do to mitigate exposure or damages                                   |
| Three | 3.1 Reduce the number of emergency incidents and disaster occurrences                                                                                                                       |
|       | 3.2 Improve local capacity to prepare for disasters                                                                                                                                         |
|       | 3.3 Make continued improvements to infrastructure, equipment, facilities, etc. to meet public safety needs                                                                                  |
|       | 3.4 Improve and maintain emergency communications for community residents and visitors                                                                                                      |
|       | 3.5 Increase the use of shared resources, data sharing, mutual aid and jurisdictional cooperation                                                                                           |
|       | 3.6 Upgrade and maintain disaster/emergency plans, with a long-term focus to address changing community needs to prevent, minimize, and recover from disasters                              |
|       | 3.7 Develop/improve warning, evacuation, and sheltering procedures and information for residents, businesses, visitors, individuals with access and functional needs, and animal risk areas |
|       | 3.8 Reduce the wildfire risk and vulnerability in Lakeport                                                                                                                                  |



| Goal | Objective                                                                |
|------|--------------------------------------------------------------------------|
|      | 3.9 Focus on fuels/vegetation management throughout the community        |
|      | 3.10 Improve coordination of mitigation efforts throughout the community |
|      | 3.11 Reduce the flood risk and vulnerability in Lakeport                 |

### 16.3 Identification and Analysis of Mitigation Actions

The city followed the same identification and analysis processes as the Base Plan. For more information, refer to Section 16.3.1 of the Base Plan.

#### 16.3.1 Prioritization Process

The city followed the same prioritization process as the Base Plan. Refer to Section 16.3.1 of the Base Plan for more information. Lakeport did not remove any mitigation actions outlined in the 2019 Plan.

Table 27: Mitigation Action Status

| Name                                                                                                              | Hazard Addressed        | Completed, In Progress, Not Started, Removed | Existing or New |
|-------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------|-----------------|
| <b>Action 1.Integrate Local Hazard Mitigation Plan into Safety Element of General Plan</b>                        | Multi-Hazard Mitigation | Completed                                    | Existing        |
| <b>Action 2.Public Awareness, Education, Outreach, and Preparedness Program Enhancements.</b>                     | Multi-Hazard Mitigation | In progress                                  | Existing        |
| <b>Action 3.EOP Update</b>                                                                                        | Multi-Hazard Mitigation | In progress                                  | Existing        |
| <b>Action 4.Establish Back Up Power/Generators for Critical Facilities</b>                                        | Multi-Hazard Mitigation | In progress                                  | Existing        |
| <b>Action 5.Sirens Project - Community Warning System Designed to Ensure Sound Reaches all Incorporated Areas</b> | Multi-Hazard Mitigation | Not Started                                  | Existing        |
| <b>Action 6.Continuity of Operations Planning</b>                                                                 | Multi-Hazard Mitigation | In progress                                  | Existing        |



| <b>Name</b>                                                                                                                                              | <b>Hazard Addressed</b>                                  | <b>Completed, In Progress, Not Started, Removed</b> | <b>Existing or New</b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------|------------------------|
| <b>Action 7. Training and Exercise</b>                                                                                                                   | Multi-Hazard Mitigation                                  | In progress                                         | Existing               |
| <b>Action 8. Update Local Emergency Services Ordinance</b>                                                                                               | Multi-Hazard Mitigation                                  | Completed                                           | Existing               |
| <b>Action 9. Update Development Requirements for Undergrounding Utilities Associated with New Development</b>                                            | Multi-Hazard Mitigation                                  | Not Started                                         | Existing               |
| <b>Action 10. Mass Care Planning</b>                                                                                                                     | Multi-Hazard Mitigation                                  | In progress                                         | Existing               |
| <b>Action 11. In Low-lying Flood- prone Areas Strengthen Base Under Pavement to Prevent Deterioration of Pavement/Asphalt Areas</b>                      | Multi-Hazard Mitigation                                  | In progress                                         | Existing               |
| <b>Action 12. Establish a Post-Disaster Recovery Action Plan</b>                                                                                         | Multi-Hazard Mitigation                                  | In progress                                         | Existing               |
| <b>Action 13. Install Water Aerators in Stagnant Areas</b>                                                                                               | Aquatic Biological Hazards: Cyanobacterial Bloom Actions | Completed                                           | Existing               |
| <b>Action 14. Establish Additional Testing Areas within Key Areas of the City (e.g., swimming area) and Training of Staff</b>                            | Aquatic Biological Hazards: Cyanobacterial Bloom Actions | In progress                                         | Existing               |
| <b>Action 15. Establish Nutrient Management Program; Consider Dredging, Paving Roads, Erosion Control, Runoff Basins, Sewer Collection Systems, Etc.</b> | Aquatic Biological Hazards: Cyanobacterial Bloom Actions | In progress                                         | Existing               |
| <b>Action 16. Quagga/Zebra Mussel Threat to Clear Lake: Enhance Public Education</b>                                                                     | Aquatic Biological Hazards: Quagga Mussel Actions        | In progress                                         | Existing               |



| <b>Name</b>                                                                                                              | <b>Hazard Addressed</b>                           | <b>Completed, In Progress, Not Started, Removed</b> | <b>Existing or New</b> |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------|------------------------|
| <b>Action 17. Quagga Mussel Training</b>                                                                                 | Aquatic Biological Hazards: Quagga Mussel Actions | In progress                                         | Existing               |
| <b>Action 18. WWTP Dam - Increase Reservoir Capacity</b>                                                                 | Dam Failure                                       | Not Started                                         | Existing               |
| <b>Action 19. Implement Intertie Projects in Annexation Areas</b>                                                        | Drought and Water Shortage Actions                | In progress                                         | Existing               |
| <b>Action 20. Adoption of State Model Water Efficiency Landscape Ordinance (MWELO)</b>                                   | Drought and Water Shortage Actions                | Completed                                           | Existing               |
| <b>Action 21. Develop and Implement Non-Structural Mitigation Program</b>                                                | Earthquake Actions                                | Not Started                                         | Existing               |
| <b>Action 22. Unreinforced Masonry (URM) and Soft Story Inventory and Retrofits</b>                                      | Flood Actions                                     | Completed                                           | Existing               |
| <b>Action 23. Retrofit 302 N Main St</b>                                                                                 | Flood Actions                                     | Completed                                           | Existing               |
| <b>Action 24. Flood Insurance Promotion</b>                                                                              | Flood Actions                                     | Not Started                                         | Existing               |
| <b>Action 25. Armor Streambeds &amp; Lakefront</b>                                                                       | Flood Actions                                     | In progress                                         | Existing               |
| <b>Action 26. Stormwater Projects: Box Culvert/Drainage Enhancements Multiple Areas</b>                                  | Flood Actions                                     | In progress                                         | Existing               |
| <b>Action 27. Elevation Projects - Repetitive Loss and Other Areas</b>                                                   | Flood Actions                                     | Not Started                                         | Existing               |
| <b>Action 28. Continue Headwall (Redirock) 100 feet to east from Main Street</b>                                         | Flood Actions                                     | In progress                                         | Existing               |
| <b>Action 29. Evaluate and Mitigate Erosion Shoreline Erosion Impacts from High Winds/Wave Action (Possible Seawall)</b> | Flood Actions                                     | In progress                                         | Existing               |



| <b>Name</b>                                                                                                               | <b>Hazard Addressed</b>                                 | <b>Completed, In Progress, Not Started, Removed</b> | <b>Existing or New</b> |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------|------------------------|
| <b>Action 30. Safety Surfacing Library Park</b>                                                                           | Flood Actions                                           | In progress                                         | Existing               |
| <b>Action 31. Continuation of Sea Wall at Boat Ramp Parking (North of 5th to 3rd Street)</b>                              | Flood Actions                                           | In progress                                         | Existing               |
| <b>Action 32. Identify and Implement Drainage/Streambed Clearance Projects</b>                                            | Flood Actions                                           | In progress                                         | Existing               |
| <b>Action 33. Enclose Open Ditches</b>                                                                                    | Localized Flood Actions                                 | In progress                                         | Existing               |
| <b>Action 34. Stormwater Projects: Upsize Project Improvements to Provide More Volume to Increase Drainage Capacities</b> | Localized Flood Actions                                 | In progress                                         | Existing               |
| <b>Action 35. Storm Drainage Related Flooding</b>                                                                         | Localized Flood Actions                                 | In progress                                         | Existing               |
| <b>Action 36. Multi-Agency Spill Response Plan</b>                                                                        | Hazardous Materials Transport Actions                   | Completed                                           | Existing               |
| <b>Action 37. Heat Contingency Plan</b>                                                                                   | Severe Weather: Extreme Heat and Climate Change Actions | Not Started                                         | Existing               |
| <b>Action 38. Defensible Space/ Fuel Reduction Projects</b>                                                               | Wildfire Actions                                        | Not Started                                         | Existing               |
| <b>Action 39. Establish Goat Mitigation Plan</b>                                                                          | Wildfire Actions                                        | Not Started                                         | Existing               |
| <b>Action 40. Establish a Local Firewise Community</b>                                                                    | Wildfire Actions                                        | Not Started                                         | Existing               |
| <b>Action 41. Roofing/Eve Vent Retrofit and Adopt More Restrictive Wildfire Codes</b>                                     | Wildfire Actions                                        | Not Started                                         | Existing               |



| <b>Name</b>                                                                                                              | <b>Hazard Addressed</b>                        | <b>Completed, In Progress, Not Started, Removed</b> | <b>Existing or New</b> |
|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------|------------------------|
| <b>Action 42. Public Safety Power Shutoff (PSPS) Multi-jurisdictional Task Force, Training, and Exercises</b>            | Wildfire Actions                               | In progress                                         | Existing               |
| <b>Action 46: Community outreach and education on Volcanic and Geothermal Gases</b>                                      | Volcano                                        | Not Started                                         | New                    |
| <b>Action 47: Community outreach and education on severe weather conditions and resources</b>                            | Severe Weather                                 | Not Started                                         | New                    |
| <b>Action 48: Community outreach and education on new invasive species and actions to remove or limit the spread.</b>    | Tree Mortality                                 | Not Started                                         | New                    |
| <b>Action 49: Review and update the Tree Preservation Ordinance.</b>                                                     | Tree Mortality                                 | Not Started                                         | New                    |
| <b>Action 50: Assess and remove critical trees to limit the spread of tree mortality and to create defensible space.</b> | Tree Mortality   Wildfires                     | Not Started                                         | New                    |
| <b>Action 51: Water Storage and Fire Protection – South Water Distribution System Improvements</b>                       | Seismic Risk, Fire Suppression Failure         | New                                                 | New                    |
| <b>Action 52: Recycled Water and Tertiary Treatment for Irrigation</b>                                                   | Drought, Flooding, Water Supply Sustainability | New                                                 | New                    |



## 16.4 Mitigation Actions

### 16.4.1 Multi-Hazard

| Action 2. Public Awareness, Education, Outreach, and Preparedness Program Enhancements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |                                                                                                                                                                                                                                                                             |                                                                                                |                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Priority:                                                                                                                                                                                                                                                                   | Change in Priority?                                                                            | Timeframe:                                      |
| This project focuses on improving and enhancing public education, engagement, and preparedness for all hazards through various multimedia platforms. It involves educating the public on how to access critical information before, during, and after a disaster, while promoting self-responsibility and sustainability. The goal is to foster behavioral changes that lead to a culture of risk reduction. Efforts have been made through social media campaigns and community events such as National Night Out and Heroes of Health and Safety, which have successfully raised public awareness. |                               | High                                                                                                                                                                                                                                                                        | No                                                                                             | Efforts have been implemented and will continue |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Financial Option:                                                                                                                                                                                                                                                           | Cost Estimate:                                                                                 | Action Type:                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | FEMA/State Grants (HMGP and FMA), General Fund                                                                                                                                                                                                                              | The primary costs are related to staff time and any additional multimedia efforts for outreach | Public Information                              |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Benefit:                                                                                                                                                                                                                                                                    |                                                                                                |                                                 |
| Lakeport Community Development Department, Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Protects life and property, raises public awareness, and increases community involvement in disaster preparedness and mitigation. Continued efforts through community events and digital platforms have already begun creating a culture of risk reduction within the city. |                                                                                                |                                                 |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                                                                                                                                                                                                                                                                             |                                                                                                |                                                 |
| Lakeport Fire Protection District, Lake County Office of Emergency Services, Local Media Outlets, Community Groups                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |                                                                                                                                                                                                                                                                             |                                                                                                |                                                 |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                       | Status:                                                                                        | Pre or Post Disaster:                           |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                           | Yes                                                                                                                                                                                                                                                                         | In Progress                                                                                    | Pre                                             |



| Action 3. Emergency Operation Plan Update                                                                                                                                                   |                               |                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------|
| Description:                                                                                                                                                                                |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                      | Change in Priority? | Timeframe:                     |
| Update the city Emergency Operation Plan in progress. This update is to align with the Operational Area and changes to the community, and to incorporate Continuity of Operations Planning. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                           | No                  | 1 year                         |
|                                                                                                                                                                                             |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                              | Cost Estimate:      | Action Type:                   |
|                                                                                                                                                                                             |                               | Grants (HMGP and FMA), General Fund                                                                                                                                                                                                                                                                                                                                                                            | \$40,000.00         | Prevention, Emergency Services |
| Leading Organization:                                                                                                                                                                       |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                                |
| Lakeport Emergency Management                                                                                                                                                               |                               | The Emergency Operation Plan exists to ensure that the City is ready to respond to a variety of threats and hazards. The EOP should be consistent with SEMS and NIMS and are coordinated with state and federal plans. To ensure that plans are actionable for use during an emergency, key stakeholders from the City and non-governmental groups are engaged in the development and exercise of these plans. |                     |                                |
| Supporting Organization:                                                                                                                                                                    |                               |                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                |
| Lakeport Fire Protection District, Lake County Office of Emergency Services, Local, Community Groups & Residents                                                                            |                               |                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                |
| Addresses Current Development:                                                                                                                                                              | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                          | Status:             | Pre or Post Disaster:          |
| Yes                                                                                                                                                                                         | Yes                           | N/A                                                                                                                                                                                                                                                                                                                                                                                                            | In Progress         | Pre/Post                       |



| Action 4. Establish Back Up Power/Generators for Critical Facilities                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                                                                                                                                                                                                        |                     |                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               | Priority:                                                                                                                                                                                                              | Change in Priority? | Timeframe:                                                                                                  |
| This action aims to ensure that critical facilities, such as water treatment plants, emergency operation centers, and public safety buildings, are equipped with reliable backup power sources to maintain continuous service during power outages, such as Public Safety Power Shutoff (PSPS) events. The City has already initiated work on the Potable Water Backup Power Project, with a notice to proceed issued for the installation of generators at key potable water facilities. |                               | High                                                                                                                                                                                                                   | No                  | 1-2 years, with work currently underway (contract issued in July 2024, expected completion in October 2024) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               | Financial Option:                                                                                                                                                                                                      | Cost Estimate:      | Action Type:                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               | FEMA Grants (HMGP and FMA), City General Fund, Bid No. 24-06 project funding                                                                                                                                           | \$200,000           | Property Protection, Emergency Services                                                                     |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               | Benefit:                                                                                                                                                                                                               |                     |                                                                                                             |
| Lakeport Public Works Department, City of Lakeport Utilities                                                                                                                                                                                                                                                                                                                                                                                                                              |                               | Provides critical infrastructure resilience, ensures continuous water services and essential functions during power outages (such as PSPS events), improves emergency response capability, and enhances public safety. |                     |                                                                                                             |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               |                                                                                                                                                                                                                        |                     |                                                                                                             |
| Lakeport Fire Protection District, Lake County Office of Emergency Services                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                                                                                                                                                                                        |                     |                                                                                                             |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                  | Status:             | Pre or Post Disaster:                                                                                       |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes                           | N/A                                                                                                                                                                                                                    | In Progress         | Pre/Post                                                                                                    |



| Action 5. Sirens Project - Community Warning System Designed to Ensure Sound Reaches all Incorporated Areas                                                                                                                                       |                               |                                          |                     |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------|---------------------|----------------------------------------|
| Description:                                                                                                                                                                                                                                      |                               | Priority:                                | Change in Priority? | Timeframe:                             |
| Outdoor sirens are located throughout the City. Audible alarm system needs to be capable of reaching all City of Lakeport residents. Sirens should be capable of activating individually or simultaneously in the event of a city-wide emergency. |                               | Medium                                   | No                  | 5 Years                                |
|                                                                                                                                                                                                                                                   |                               | Financial Option:                        | Cost Estimate:      | Action Type:                           |
|                                                                                                                                                                                                                                                   |                               | Grants (HMGP and FMA)/Low Interest Loans | \$150,000.00        | Emergency Services, Public Information |
| Leading Organization:                                                                                                                                                                                                                             |                               | Benefit:                                 |                     |                                        |
| City of Lakeport                                                                                                                                                                                                                                  |                               | Health and safety of local population    |                     |                                        |
| Supporting Organization:                                                                                                                                                                                                                          |                               |                                          |                     |                                        |
| ]                                                                                                                                                                                                                                                 |                               |                                          |                     |                                        |
| Addresses Current Development:                                                                                                                                                                                                                    | Addresses Future Development: | Compliance with NFIP:                    | Status:             | Pre or Post Disaster:                  |
| Yes                                                                                                                                                                                                                                               | Yes                           | N/A                                      | Not Started         | Pre                                    |



| Action 7. Training and Exercise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                                                                                                                                                                                                                                                                                                                     |                     |                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Priority:                                                                                                                                                                                                                                                                                                           | Change in Priority? | Timeframe:                     |
| City staff continue to attend and participate in training and exercise programs with various partners, both internally and externally. These trainings ensure that staff are prepared to respond effectively during emergencies, comply with federal and state requirements, and stay up to date with the latest emergency response protocols. Partners include County Office of Emergency Services (OES), State OES, and the California Specialized Training Institute (CSTI). Additionally, all staff are required to complete FEMA’s IS (Incident Support) courses that are relevant to their positions. |                               | High                                                                                                                                                                                                                                                                                                                | No                  | Ongoing                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               | Financial Option:                                                                                                                                                                                                                                                                                                   | Cost Estimate:      | Action Type:                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               | FEMA (HMGP and FMA)/State Grants, General Fund                                                                                                                                                                                                                                                                      | \$50,000 annually   | Prevention, Emergency Services |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               | Benefit:                                                                                                                                                                                                                                                                                                            |                     |                                |
| City of Lakeport                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               | Ensures that city staff are well-prepared for various types of emergencies, improving the city's overall resilience and ability to respond to disasters. Regular training and exercises enhance coordination between the City and external partners, contributing to more effective emergency management practices. |                     |                                |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                                                                                                                                                                                                                                                                                                                     |                     |                                |
| County OES, State OES, CSTI, FEMA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |                                                                                                                                                                                                                                                                                                                     |                     |                                |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                               | Status:             | Pre or Post Disaster:          |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes                           | N/A                                                                                                                                                                                                                                                                                                                 | In Progress         | Pre/Post                       |



| Action 9. Update Development Requirements for Undergrounding Utilities Associated with New Development                                                                            |                               |                                                                                                              |                     |                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------|
| Description:                                                                                                                                                                      |                               | Priority:                                                                                                    | Change in Priority? | Timeframe:                      |
| Consider revising existing development standards within the Lakeport Municipal Code requiring utility undergrounding for all new residential and commercial development projects. |                               | Low                                                                                                          | No                  | 3-5 Years                       |
|                                                                                                                                                                                   |                               | Financial Option:                                                                                            | Cost Estimate:      | Action Type:                    |
|                                                                                                                                                                                   |                               | Lakeport General Fund, CAL OES & FEMA grant funding (HMGP and FMA)                                           | \$3-5k              | Prevention, Property Protection |
| Leading Organization:                                                                                                                                                             |                               | Benefit:                                                                                                     |                     |                                 |
| Lakeport Community Development Department                                                                                                                                         |                               | Reduce property losses and utility outage times associated with storm and wildland fire events. Life safety. |                     |                                 |
| Supporting Organization:                                                                                                                                                          |                               |                                                                                                              |                     |                                 |
|                                                                                                                                                                                   |                               |                                                                                                              |                     |                                 |
| Addresses Current Development:                                                                                                                                                    | Addresses Future Development: | Compliance with NFIP:                                                                                        | Status:             | Pre or Post Disaster:           |
| No                                                                                                                                                                                | Yes                           | N/A                                                                                                          | Not Started         | Pre/Post                        |



| Action 10. Mass Care Planning                                           |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                    |
|-------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------|
| Description:                                                            |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                    | Change in Priority? | Timeframe:                         |
| Aligning the ordinance with new state requirements and city procedures. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                  | 1 year (as part of the EOP update) |
|                                                                         |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                            | Cost Estimate:      | Action Type:                       |
|                                                                         |                               | FEMA Grants (HMGP and FMA), General Fund                                                                                                                                                                                                                                                                                                                                                                                                     | \$50,000            | Prevention, Emergency Services     |
| Leading Organization:                                                   |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |                                    |
| Lakeport Emergency Management, City of Lakeport Community Services      |                               | A Mass Care Plan ensures that the City is prepared to provide essential services, such as sheltering, feeding, and medical care, during a disaster. It enhances community resilience by ensuring that displaced individuals have the support they need and that these services are delivered in a coordinated and efficient manner. Incorporating this into the EOP provides a structured and actionable framework for mass care operations. |                     |                                    |
| Supporting Organization:                                                |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                    |
| County OES, State OES, American Red Cross, Local Nonprofits             |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                    |
| Addresses Current Development:                                          | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                        | Status:             | Pre or Post Disaster:              |
| Yes                                                                     | Yes                           | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                          | In Progress         | Pre/Post                           |



| Action 11. In Low-lying Flood- prone Areas Strengthen Base Under Pavement to Prevent Deterioration of Pavement/Asphalt Areas |                               |                                                                                                               |                     |                                                            |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------|
| Description:                                                                                                                 |                               | Priority:                                                                                                     | Change in Priority? | Timeframe:                                                 |
| Modifying the structure of the city's disaster council to better reflect the city's management size and organization.        |                               | High                                                                                                          | No                  | Ongoing, with some projects completed and others scheduled |
|                                                                                                                              |                               | Financial Option:                                                                                             | Cost Estimate:      | Action Type:                                               |
|                                                                                                                              |                               | FEMA Grants (HMGP and FMA), General Fund, Road Maintenance Funding                                            | \$500,000           | Property Protection<br>Natural Resource Protection         |
| Leading Organization:                                                                                                        |                               | Benefit:                                                                                                      |                     |                                                            |
| Lakeport Public Works Department                                                                                             |                               | Avoids continue maintenance after flood events. Provides access during flooding events without severe damage. |                     |                                                            |
| Supporting Organization:                                                                                                     |                               |                                                                                                               |                     |                                                            |
| County OES, City Engineering Department                                                                                      |                               |                                                                                                               |                     |                                                            |
| Addresses Current Development:                                                                                               | Addresses Future Development: | Compliance with NFIP:                                                                                         | Status:             | Pre or Post Disaster:                                      |
| Yes                                                                                                                          | Yes                           | Yes                                                                                                           | In Progress         | Pre                                                        |



| Action 12. Establish a Post-Disaster Recovery Action Plan                                 |                               |                                                                                                                                                                                                                                                                                                                                                           |                     |                                          |
|-------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------|
| Description:                                                                              |                               | Priority:                                                                                                                                                                                                                                                                                                                                                 | Change in Priority? | Timeframe:                               |
| Adjusting deadlines for emergency renewal to align with state requirements.               |                               | High                                                                                                                                                                                                                                                                                                                                                      | No                  | 1-2 years                                |
|                                                                                           |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                         | Cost Estimate:      | Action Type:                             |
|                                                                                           |                               | FEMA Grants (HMGP and FMA), State Funding, General Fund                                                                                                                                                                                                                                                                                                   | \$75,000            | Emergency Services<br>Public Information |
| Leading Organization:                                                                     |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                  |                     |                                          |
| City of Lakeport Emergency Management                                                     |                               | A Post-Disaster Recovery Plan ensures that the City can recover from disasters quickly and efficiently by coordinating all recovery efforts, restoring critical infrastructure, and supporting residents and businesses. It provides a clear framework for decision-making and resource allocation, minimizing delays and improving community resilience. |                     |                                          |
| Supporting Organization:                                                                  |                               |                                                                                                                                                                                                                                                                                                                                                           |                     |                                          |
| Lake County Office of Emergency Services, FEMA, Cal OES, Local Nonprofits, and Businesses |                               |                                                                                                                                                                                                                                                                                                                                                           |                     |                                          |
| Addresses Current Development:                                                            | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                     | Status:             | Pre or Post Disaster:                    |
| Yes                                                                                       | Yes                           | N/A                                                                                                                                                                                                                                                                                                                                                       | In Progress         | Post                                     |



| Action 50: Assess and remove critical trees to limit the spread of tree mortality and to create defensible space.                                                                                                                                                                                        |                               |                                                                                                                                                                                                                    |                     |                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|
| Description:                                                                                                                                                                                                                                                                                             |                               | Priority:                                                                                                                                                                                                          | Change in Priority? | Timeframe:            |
| This project aims to proactively assess and remove critically endangered trees within the community to mitigate the risk of tree mortality and enhance fire safety. By identifying and addressing trees that pose a threat due to disease, decay, or proximity to structures and critical infrastructure |                               | High                                                                                                                                                                                                               | No                  | Ongoing               |
|                                                                                                                                                                                                                                                                                                          |                               | Financial Option:                                                                                                                                                                                                  | Cost Estimate:      | Action Type:          |
|                                                                                                                                                                                                                                                                                                          |                               | FEMA Grants (HMGP and FMA), State Funding, General Fund                                                                                                                                                            | \$500,000           | Prevention            |
| Leading Organization:                                                                                                                                                                                                                                                                                    |                               | Benefit:                                                                                                                                                                                                           |                     |                       |
| Lakeport Public Works                                                                                                                                                                                                                                                                                    |                               | This project significantly reduces wildfire risk by eliminating potential fuel sources and establishing buffer zones that slow or halt the spread of fires, thereby safeguarding homes, businesses, and ecosystems |                     |                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                 |                               |                                                                                                                                                                                                                    |                     |                       |
| Lakeport Fire Protection District                                                                                                                                                                                                                                                                        |                               |                                                                                                                                                                                                                    |                     |                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                           | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                              | Status:             | Pre or Post Disaster: |
| Yes                                                                                                                                                                                                                                                                                                      | Yes                           | Yes                                                                                                                                                                                                                | New/Not Started     | Pre                   |



| Action 51: Water Storage and Fire Protection – South Water Distribution System Improvements                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Change in Priority? | Timeframe:                                          |
| This project involves installing a 1-million-gallon water storage tank at the southern end of the water distribution system to provide redundancy and ensure adequate storage and pressure. Currently, the community relies on two cast iron transmission mains (8-inch and 12-inch) installed before 1950, which are vulnerable to failure during seismic events. If these mains were to rupture, the community could face a complete loss of water supply and compromised fire suppression capabilities. |                               | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No                  | 5 Years                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Cost Estimate:      | Action Type:                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               | FEMA Grants (HMGP and FMA), State Funding, General Fund                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \$5,000,000         | Prevention, Structural Projects, Emergency Services |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                                     |
| y of Lakeport Utilities Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | This project significantly enhances community resilience by providing a robust 1-million-gallon water storage tank at a strategic southern location, ensuring continuous water supply and maintaining pressure throughout the system. By adding redundancy, the new tank will mitigate the risk associated with the aging cast iron transmission mains that are susceptible to seismic damage. This not only secures a reliable water supply for daily needs but also bolsters fire suppression capabilities, critical for safety during emergencies. |                     |                                                     |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                                                     |
| City of Lakeport Public Works                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                                                     |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Status:             | Pre or Post Disaster:                               |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | New/Not Started     | Pre                                                 |



| Action 52: Recycled Water and Tertiary Treatment for Irrigation                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Change in Priority? | Timeframe:                                          |
| This project proposes the implementation of a recycled water system with tertiary treatment for irrigation use. It would reduce reliance on potable water for irrigation, conserve local aquifers, and promote sustainability. Additionally, it would provide flood mitigation benefits by enabling the drawdown of storage levels in the summer, creating capacity to manage excess water during heavy rainfall events and prevent overflow. |                               | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No                  | 5 Years                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Cost Estimate:      | Action Type:                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | FEMA Grants (HMGP and FMA), State Funding, General Fund                                                                                                                                                                                                                                                                                                                                                                                                                                                     | \$7,000,000         | Prevention, Structural Projects, Emergency Services |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |                                                     |
| City of Lakeport Utilities Department                                                                                                                                                                                                                                                                                                                                                                                                         |                               | The implementation of a recycled water system with tertiary treatment offers substantial benefits: it significantly reduces the reliance on potable water for irrigation, helping to conserve local aquifers and promoting sustainability. Additionally, this system provides crucial flood mitigation advantages by allowing the drawdown of storage levels during dry periods, thereby increasing capacity to manage excess water during heavy rainfall events, and preventing potential overflow issues. |                     |                                                     |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |                                                     |
| City of Lakeport Public Works                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |                                                     |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Status:             | Pre or Post Disaster:                               |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | New/Not Started     | Pre                                                 |



### 16.4.2 Aquatic Hazards

| Action 14. Establish Additional Testing Areas within Key Areas of the City (e.g., swimming area) and Training of Staff                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                                                                                                                                                                                                                                                                                                                                                                            |                     |                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                  | Change in Priority? | Timeframe:                                                           |
| This action focuses on expanding the City’s monitoring efforts to detect harmful algae blooms (HABs), particularly cyanobacteria, in key areas of Clear Lake, including the swim areas. The City is an active participant in a county-wide working group led by Environmental Health and Water Resources, which coordinates efforts to track and manage HABs. An important partner in this initiative is the Big Valley Band of Pomo Indians EPA, which has secured funding for water quality testing. The City plans to continue collaborating with these partners to expand testing areas and secure additional internal funding to increase monitoring coverage. Staff will also be trained on testing protocols to ensure accurate and timely data collection. |                               | High                                                                                                                                                                                                                                                                                                                                                                       | No                  | Ongoing (Testing currently underway, with expansion planned)         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                          | Cost Estimate:      | Action Type:                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | External grants (secured by Big Valley EPA), City General Fund, additional state or federal funding opportunities (HMGP and FMA)                                                                                                                                                                                                                                           | \$50,000 annually   | Property Protection, Natural Resource Protection, Public Information |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                   |                     |                                                                      |
| City of Lakeport Public Works Department, Environmental Health Department, Big Valley EPA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Expanding water testing areas helps the City better monitor harmful algae blooms, ensuring public health and safety in swimming and recreational areas. Ongoing collaboration with key partners such as Big Valley EPA and Environmental Health improves the ability to track and respond to HAB events, while also supporting the preservation of Clear Lake’s ecosystem. |                     |                                                                      |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |                                                                                                                                                                                                                                                                                                                                                                            |                     |                                                                      |
| Lake County Water Resources, Local Health Departments, Regional Partners                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |                                                                                                                                                                                                                                                                                                                                                                            |                     |                                                                      |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                      | Status:             | Pre or Post Disaster:                                                |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes                           | N/A                                                                                                                                                                                                                                                                                                                                                                        | In Progress         | Pre                                                                  |



| Action 15. Establish Nutrient Management Program; Consider Dredging, Paving Roads, Erosion Control, Runoff Basins, Sewer Collection Systems, Etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |                                                                                                                                                                                                                                                                          |                                                         |                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               | Priority:                                                                                                                                                                                                                                                                | Change in Priority?                                     | Timeframe:                                                                           |
| This ongoing project aims to reduce nutrient pollution in Clear Lake through the development of a Nutrient Management Program. Key strategies include dredging to remove nutrient-rich sediments, paving roads and incorporating erosion control measures to limit runoff, establishing runoff basins to capture excess nutrients, and upgrading the stormwater and sewer collection systems. The City of Lakeport has made significant progress by incorporating Best Management Practices (BMPs) into all construction projects and improving stormwater collection infrastructure. These efforts are part of a comprehensive approach to reducing the inflow of phosphorus and nitrogen, which fuel harmful algae blooms (HABs). |                               | High                                                                                                                                                                                                                                                                     | No                                                      | Ongoing (with continuous improvements in stormwater management and nutrient control) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               | Financial Option:                                                                                                                                                                                                                                                        | Cost Estimate:                                          | Action Type:                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               | Grants (HMGP and FMA), State Environmental Funds), City General Fund, Potential Federal Assistance                                                                                                                                                                       | \$1,000,000 depending on the scope of specific projects | Prevention, Property Protection, Natural Resource Protection                         |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Benefit:                                                                                                                                                                                                                                                                 |                                                         |                                                                                      |
| City of Lakeport Public Works Department, Lake County Water Resources Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | The ongoing efforts to reduce nutrient inflow into Clear Lake through BMPs, stormwater system improvements, and infrastructure upgrades will help mitigate harmful algae blooms, improve water quality, protect aquatic life, and enhance the lake’s recreational value. |                                                         |                                                                                      |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               |                                                                                                                                                                                                                                                                          |                                                         |                                                                                      |
| Lake County Environmental Health, Local Agricultural Partners, Big Valley EPA, California Department of Fish and Wildlife                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |                                                                                                                                                                                                                                                                          |                                                         |                                                                                      |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                    | Status:                                                 | Pre or Post Disaster:                                                                |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yes                           | N/A                                                                                                                                                                                                                                                                      | In Progress                                             | Pre                                                                                  |



| Action 16. Quagga/Zebra Mussel Threat to Clear Lake: Enhance Public Education                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                 |                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                | Change in Priority?                                             | Timeframe:                                                        |
| This ongoing project is focused on raising public awareness about the risks posed by Quagga and Zebra mussels to Clear Lake. These invasive species can cause severe ecological and economic damage by disrupting water infrastructure, harming native species, and altering aquatic ecosystems. The City of Lakeport, in collaboration with Lake County Water Resources, has taken an active role in public outreach, particularly at City-sponsored events in Library Park and Xabatin Park. Educational efforts emphasize the importance of cleaning, draining, and drying watercraft to prevent the spread of these mussels. Public outreach and educational campaigns are conducted seasonally and at key events, with materials distributed at boat ramps, parks, and other recreational areas to target boaters, anglers, and the general public. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                                     | No                                                              | Ongoing (public education conducted seasonally and at key events) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                        | Cost Estimate:                                                  | Action Type:                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Grants [state and federal (HMGP and FMA)], City General Fund                                                                                                                                                                                                                                                                                                                                                             | \$25,000 annually for public outreach and educational materials | Prevention<br>Natural Resource Protection<br>Public Information"  |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                 |                                                                   |
| City of Lakeport Public Works Department, Lake County Water Resources Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | The public education efforts help prevent the introduction and spread of Quagga and Zebra mussels, which in turn protects Clear Lake’s aquatic ecosystem and mitigates the potential for costly damage to water infrastructure. By conducting ongoing outreach at City-sponsored events and key locations, the City enhances community awareness and encourages proactive preventive actions by boaters and water users. |                                                                 |                                                                   |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                 |                                                                   |
| California Department of Fish and Wildlife                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                 |                                                                   |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                    | Status:                                                         | Pre or Post Disaster:                                             |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                           | N/A                                                                                                                                                                                                                                                                                                                                                                                                                      | In Progress                                                     | Pre                                                               |



| Action 17. Quagga Mussel Training                                                                                                                                                                                                                                                                                                                                                                                |                               |                                                                                                                                                                                                                                                                                                                                                                                             |                                                       |                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                     |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                   | Change in Priority?                                   | Timeframe:                                              |
| This action focuses on providing formal training of City staff, particularly Parks Department staff, in collaboration with County Inspectors to ensure the correct placement of informational signage, and to provide educational resources to boaters. Expanding these efforts to include more formalized training programs will further enhance the City’s capacity to prevent the spread of invasive species. |                               | High                                                                                                                                                                                                                                                                                                                                                                                        | No                                                    | Ongoing (with plans to expand formal training programs) |
|                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                           | Cost Estimate:                                        | Action Type:                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | State and Federal Grants (HMGP and FMA), General Fund                                                                                                                                                                                                                                                                                                                                       | \$10,000 annually for training programs and materials | Prevention                                              |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                            |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |                                                         |
| City of Lakeport Public Works Department, County Water Resources Department                                                                                                                                                                                                                                                                                                                                      |                               | Providing formal Quagga Mussel training to City staff, in addition to the existing collaboration with county inspectors, will ensure proper protocols are consistently followed, reducing the risk of invasive species spreading in Clear Lake. The training will strengthen the City’s preventive measures, support the health of the aquatic ecosystem, and protect water infrastructure. |                                                       |                                                         |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                         |                               |                                                                                                                                                                                                                                                                                                                                                                                             |                                                       |                                                         |
| California Department of Fish and Wildlife                                                                                                                                                                                                                                                                                                                                                                       |                               |                                                                                                                                                                                                                                                                                                                                                                                             |                                                       |                                                         |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                   | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                       | Status:                                               | Pre or Post Disaster:                                   |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                              | Yes                           | N/A                                                                                                                                                                                                                                                                                                                                                                                         | In Progress                                           | Pre                                                     |



## 16.4.3 Dam Failure

| Action 18. WWTP Dam - Increase Reservoir Capacity                          |                               |                                           |                     |                                                      |
|----------------------------------------------------------------------------|-------------------------------|-------------------------------------------|---------------------|------------------------------------------------------|
| Description:                                                               |                               | Priority:                                 | Change in Priority? | Timeframe:                                           |
| Remove material from the West side of the reservoir to gain more capacity. |                               | Medium                                    | No                  | 5 Years                                              |
|                                                                            |                               | Financial Option:                         | Cost Estimate:      | Action Type:                                         |
|                                                                            |                               | Grants (HMGP and FMA), low-interest loans | \$5,000,000         | Prevention Property, Protection, Structural Projects |
| Leading Organization:                                                      |                               | Benefit:                                  |                     |                                                      |
| City of Lakeport                                                           |                               | Environmental impacts/ Fines              |                     |                                                      |
| Supporting Organization:                                                   |                               |                                           |                     |                                                      |
|                                                                            |                               |                                           |                     |                                                      |
| Addresses Current Development:                                             | Addresses Future Development: | Compliance with NFIP:                     | Status:             | Pre or Post Disaster:                                |
| Yes                                                                        | Yes                           | Yes                                       | Not Started         | Pre                                                  |



## 16.4.4 Drought

| Action 19. Implement Intertie Projects in Annexation Areas     |                               |                                          |                     |                       |
|----------------------------------------------------------------|-------------------------------|------------------------------------------|---------------------|-----------------------|
| Description:                                                   |                               | Priority:                                | Change in Priority? | Timeframe:            |
| Research potential sources and engineer interties accordingly. |                               | Medium                                   | No                  | 10 years              |
|                                                                |                               | Financial Option:                        | Cost Estimate:      | Action Type:          |
|                                                                |                               | Grants (HMGP and FMA)/Low Interest Loans | \$500,000           | Property Protection   |
| Leading Organization:                                          |                               | Benefit:                                 |                     |                       |
| City Engineering/Consultant                                    |                               | Reliability, drought mitigation.         |                     |                       |
| Supporting Organization:                                       |                               |                                          |                     |                       |
|                                                                |                               |                                          |                     |                       |
| Addresses Current Development:                                 | Addresses Future Development: | Compliance with NFIP:                    | Status:             | Pre or Post Disaster: |
| Yes                                                            | Yes                           | N/A                                      | In Progress         | Pre                   |



## 16.4.5 Earthquake

| Action 21. Develop and Implement Non-Structural Mitigation Program                                                                                                          |                               |                                                                                                                                                                                                                                                                                                |                                                                             |                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------|
| Description:                                                                                                                                                                |                               | Priority:                                                                                                                                                                                                                                                                                      | Change in Priority?                                                         | Timeframe:            |
| An official mitigation program has not been established, however, all new construction complies with Seismic Zone D requirements set forth in the California Building Code. |                               | High                                                                                                                                                                                                                                                                                           | No                                                                          | Ongoing               |
|                                                                                                                                                                             |                               | Financial Option:                                                                                                                                                                                                                                                                              | Cost Estimate:                                                              | Action Type:          |
|                                                                                                                                                                             |                               | Federal grants (HMGP and FMA)<br>State grants and general fund                                                                                                                                                                                                                                 | \$20-\$30k for consultant to assist in identifying and implementing program | Property Protection   |
| Leading Organization:                                                                                                                                                       |                               | Benefit:                                                                                                                                                                                                                                                                                       |                                                                             |                       |
| City of Lakeport Community Development Department, City of Lakeport Public Works Department                                                                                 |                               | A non-structural mitigation program is essential for a local jurisdiction because it focuses on reducing risks and damage from hazards that are not related to the structure's physical integrity but can still have significant safety, financial, and operational impacts during emergencies |                                                                             |                       |
| Supporting Organization:                                                                                                                                                    |                               |                                                                                                                                                                                                                                                                                                |                                                                             |                       |
|                                                                                                                                                                             |                               |                                                                                                                                                                                                                                                                                                |                                                                             |                       |
| Addresses Current Development:                                                                                                                                              | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                          | Status:                                                                     | Pre or Post Disaster: |
| Yes                                                                                                                                                                         | Yes                           | N/A                                                                                                                                                                                                                                                                                            | In Progress                                                                 | Pre                   |



## 16.4.6 Flood

| Action 24. Flood Insurance Promotion                                                                         |                               |                                                                    |                     |                       |
|--------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------|---------------------|-----------------------|
| Description:                                                                                                 |                               | Priority:                                                          | Change in Priority? | Timeframe:            |
| Increase public awareness of Flood Insurance options to mitigate losses associated with future flood events. |                               | Medium                                                             | No                  | Ongoing               |
|                                                                                                              |                               | Financial Option:                                                  | Cost Estimate:      | Action Type:          |
|                                                                                                              |                               | Lakeport General Fund, CAL OES & FEMA grant funding (HMGP and FMA) | \$1-5K              | Public Information    |
| Leading Organization:                                                                                        |                               | Benefit:                                                           |                     |                       |
| Lakeport Community Development Department                                                                    |                               | Reduce and mitigate losses associated with future flood events.    |                     |                       |
| Supporting Organization:                                                                                     |                               |                                                                    |                     |                       |
|                                                                                                              |                               |                                                                    |                     |                       |
| Addresses Current Development:                                                                               | Addresses Future Development: | Compliance with NFIP:                                              | Status:             | Pre or Post Disaster: |
| Yes                                                                                                          | Yes                           | Yes                                                                | Not Started         | Pre                   |



| Action 25. Armor Streambeds & Lakefront                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                |                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Change in Priority?                                                                            | Timeframe:                                                            |
| This ongoing project focuses on reinforcing and stabilizing streambeds and the lakefront to protect against erosion caused by high winds, wave action, and other natural forces that threaten the shorelines of Clear Lake and its tributaries. Ongoing projects include the Forbes Creek stabilization at Main Street and the Hartley Street culvert and streambed reinforcement. Additionally, design enhancements have been incorporated into the new park construction along the waterfront portion to prevent further erosion and protect infrastructure. These enhancements are part of the City’s proactive efforts to prevent degradation along the lakefront and in streambeds. Erosion control measures include constructing revetments, utilizing Redirock or similar materials, and implementing structural improvements that safeguard both public and private properties. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No                                                                                             | Ongoing                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Cost Estimate:                                                                                 | Action Type:                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Grants (FEMA, State Funding HMGP and FMA), General Fund                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \$500,000 - \$1,500,000 depending on the scope and specific areas targeted for erosion control | Property Protection, Structural Projects, Natural Resource Protection |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                |                                                                       |
| City of Lakeport Public Works Department, City Engineering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               | Stabilizing the shorelines and streambeds helps reduce erosion, protect critical infrastructure, and preserve Clear Lake’s ecological integrity. By incorporating design enhancements into the new waterfront park construction and continuing efforts like the Forbes Creek and Hartley Street projects, the City mitigates future erosion risks and enhances the resilience of the lakefront. These efforts help safeguard property, maintain natural habitats, and ensure long-term sustainability for the lake and surrounding areas. |                                                                                                |                                                                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                |                                                                       |
| California Department of Water Resources, U.S. Army Corps of Engineers, Local Contractors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                |                                                                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Status:                                                                                        | Pre or Post Disaster:                                                 |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | In Progress                                                                                    | Pre                                                                   |



| Action 26. Stormwater Projects: Box Culvert/Drainage Enhancements Multiple Areas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                            |                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Change in Priority?                                                                        | Timeframe:                                                             |
| This ongoing project involves upgrading stormwater infrastructure through the installation of box culverts and other drainage enhancements in key areas around Clear Lake. These upgrades aim to increase drainage capacity, manage stormwater more effectively, and reduce flooding risks. Recent efforts include the installation of interceptors in Library Park to improve water management in that area. Additionally, funding has been secured to upgrade other stormwater systems, including an interceptor in the City’s Corporation Yard, which drains directly into Forbes Creek. These improvements will help mitigate erosion, reduce property damage, and protect natural watercourses by improving the flow and quality of stormwater runoff. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No                                                                                         | Ongoing (with secured funding for future upgrades)                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Cost Estimate:                                                                             | Action Type:                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               | Grants (FEMA HMGP and FMA, State Funding), General Fund                                                                                                                                                                                                                                                                                                                                                                                                                           | \$500,000 - \$1,000,000 depending on the scope of the specific projects and areas targeted | Property Protection, Structural Projects, Natural Resource Protection" |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                            |                                                                        |
| City of Lakeport Public Works Department, City Engineering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | The installation of box culverts and drainage system enhancements, including the recent improvements at Library Park and the upcoming upgrades at the Corporation Yard, will reduce flood risks, improve water quality, prevent erosion, and protect both public and private property. These improvements will also help preserve the health of Forbes Creek and other water bodies, contributing to the City’s long-term resilience against flooding and extreme weather events. |                                                                                            |                                                                        |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                            |                                                                        |
| California Department of Water Resources, U.S. Army Corps of Engineers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                            |                                                                        |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Status:                                                                                    | Pre or Post Disaster:                                                  |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | In Progress                                                                                | Pre                                                                    |



| Action 27. Elevation Projects – Repetitive Loss and Other Areas                                                                    |                               |                                                                             |                           |                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------|
| Description:                                                                                                                       |                               | Priority:                                                                   | Change in Priority?       | Timeframe:                                                            |
| Encourage owners to apply for elevation funding through FEMA. Assist with applications for funding where available and applicable. |                               | Medium – would start with the severe repetitive loss property on Esplanade. | No                        | As soon as finding is available.                                      |
|                                                                                                                                    |                               | Financial Option:                                                           | Cost Estimate:            | Action Type:                                                          |
|                                                                                                                                    |                               | FEMA grant funding (HMGP and FMA)                                           | In excess of \$1 million. | Property Protection, Structural Projects, Natural Resource Protection |
| Leading Organization:                                                                                                              |                               | Benefit:                                                                    |                           |                                                                       |
| Lakeport Community Development Department                                                                                          |                               | Reduced risk to flooding for people and property.                           |                           |                                                                       |
| Supporting Organization:                                                                                                           |                               |                                                                             |                           |                                                                       |
|                                                                                                                                    |                               |                                                                             |                           |                                                                       |
| Addresses Current Development:                                                                                                     | Addresses Future Development: | Compliance with NFIP:                                                       | Status:                   | Pre or Post Disaster:                                                 |
| Yes                                                                                                                                | Yes                           | Yes                                                                         | Not Started               | Pre                                                                   |



| Action 28. Continue Headwall (Redirock) 100 feet to east from Main Street                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                                                                                                                                                                                                                                                                                                                 |                       |                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               | Priority:                                                                                                                                                                                                                                                                                                                                       | Change in Priority?   | Timeframe:                                                            |
| This project focuses on continuing the Redirock headwall for 100 feet east of Main Street to protect the infrastructure at Forbes Creek and prevent further erosion. After the 2019 flooding, which caused the existing headwall to collapse, temporary repairs were made with riprap. A permanent solution is now underway, funded through the Federal Highway Program. The project is currently in the Right-of-Way (ROW) phase, with environmental review and preliminary design completed. This project will improve flood mitigation and stabilize infrastructure along the creek, including sidewalks and fencing that were compromised by previous flood events. |                               | High                                                                                                                                                                                                                                                                                                                                            | No                    | 2021-2026 (Currently in the ROW phase)                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Financial Option:                                                                                                                                                                                                                                                                                                                               | Cost Estimate:        | Action Type:                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Federal Highway Program, FEMA Emergency Relief, HMGP, FMA, General Fund                                                                                                                                                                                                                                                                         | \$500,000 - \$800,000 | Property Protection, Structural Projects, Natural Resource Protection |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               | Benefit:                                                                                                                                                                                                                                                                                                                                        |                       |                                                                       |
| City of Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | The continued headwall project will protect critical infrastructure, prevent erosion, and improve flood mitigation in the Forbes Creek area. Completing this project will safeguard public property, ensure the stability of sidewalks and streets along Main Street, and contribute to the long-term flood resilience of this vulnerable area. |                       |                                                                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                                                                                                                                                                                                                                                                                                                                 |                       |                                                                       |
| U.S. Army Corps of Engineers, California Department of Fish and Wildlife, Regional Water Quality Control Board                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               |                                                                                                                                                                                                                                                                                                                                                 |                       |                                                                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                           | Status:               | Pre or Post Disaster:                                                 |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                             | In Progress           | Post                                                                  |



| Action 29. Evaluate and Mitigate Erosion Shoreline Erosion Impacts from High Winds/Wave Action (Possible Seawall)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                     |                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                 | Change in Priority?                                                                 | Timeframe:                                                            |
| This action focuses on evaluating and mitigating shoreline erosion along Clear Lake due to high winds and wave action. The goal is to assess the current condition of the shoreline, particularly in areas most susceptible to erosion, and consider the construction of a seawall or similar protective structures. These measures will protect both public and private property, improve lakefront infrastructure, and safeguard ecological habitats. The City is exploring design options for constructing a seawall or implementing shoreline armoring techniques, such as riprap or other erosion control methods. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                                      | No                                                                                  | Ongoing (assessment phase with future construction possible)          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                         | Cost Estimate:                                                                      | Action Type:                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Grants (FEMA HMGP and FMA, State Funding), General Fund                                                                                                                                                                                                                                                                                                                                                                   | \$1,000,000 - \$2,500,000 depending on the scope of the seawall or armoring project | Property Protection, Structural Projects, Natural Resource Protection |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |                                                                       |
| City of Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | The construction of a seawall or similar erosion control structure will protect the shoreline from the damaging effects of high winds and wave action, preventing further erosion, protecting properties, and improving the long-term stability of the lakefront. This project will also help preserve critical natural habitats and ensure the sustainability of Clear Lake for recreational and environmental purposes. |                                                                                     |                                                                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                     |                                                                       |
| California Department of Water Resources, U.S. Army Corps of Engineers, Regional Water Quality Control Board                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                     |                                                                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                     | Status:                                                                             | Pre or Post Disaster:                                                 |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                       | In Progress                                                                         | Pre                                                                   |



| Action 30. Safety Surfacing Library Park                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                |                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                             | Change in Priority?                                                            | Timeframe:                                                               |
| This project focuses on upgrading the surfacing of the Library Park playground to reduce the risk of flood-related damage and improve safety. After the floods of 2017 and 2019, the playground was inundated, and the engineered wood fiber surfacing had to be replaced due to flood damage. To mitigate repetitive loss and provide a more durable and safer surface, the playground surfacing could be upgraded to a poured-in-place rubber surface. This material is more resistant to flooding and requires less maintenance compared to wood fiber, which is susceptible to damage and requires frequent replacement after storm or flood events. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                             | 2024-2027 (upgrading the surfacing as part of ongoing park improvements) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                     | Cost Estimate:                                                                 | Action Type:                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Grants (FEMA HMGP and FMA, State Parks Funding), General Fund                                                                                                                                                                                                                                                                                                                                                         | \$100,000 - \$200,000 for the installation of poured-in-place rubber surfacing | Property Protection, Natural Resource Protection                         |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                |                                                                          |
| City of Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               | Upgrading the playground’s surfacing to a poured-in-place rubber material will provide long-term flood resilience, reduce maintenance costs, and enhance safety for children. The new surface will better withstand flooding events, eliminating the need for frequent repairs and replacements, thereby protecting public infrastructure and ensuring the playground remains a safe and enjoyable area for families. |                                                                                |                                                                          |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                |                                                                          |
| Lakeport Parks Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                |                                                                          |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                 | Status:                                                                        | Pre or Post Disaster:                                                    |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                   | In Progress                                                                    | Pre                                                                      |



| Action 31. Continuation of Sea Wall at Boat Ramp Parking (North of 5th to 3rd Street)                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |                                                                                                                                                                                                                                                                                                                      |                                                  |                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               | Priority:                                                                                                                                                                                                                                                                                                            | Change in Priority?                              | Timeframe:                                                             |
| This project involves the continuation of the seawall along the shoreline from north of 5th Street to 3rd Street, protecting the Boat Ramp Parking area. The seawall will mitigate shoreline erosion caused by high winds and wave action and provide structural support to the parking and recreational areas. The seawall will consist of interlocking sheet piles to create a sturdy and impermeable barrier. The project will also include lighting and landscaping enhancements to improve the aesthetics and usability of the area. |                               | High                                                                                                                                                                                                                                                                                                                 | No                                               | 2024-2026<br>(depending on funding availability)                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               | Financial Option:                                                                                                                                                                                                                                                                                                    | Cost Estimate:                                   | Action Type:                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               | Grants (FEMA HMGP and FMA, State Funding), Private Investment, General Fund                                                                                                                                                                                                                                          | The estimated total project cost is \$4,579,700, | Property Protection, Structural Projects, Natural Resource Protection" |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               | Benefit:                                                                                                                                                                                                                                                                                                             |                                                  |                                                                        |
| City of Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | The continuation of the seawall will prevent further erosion, protect lakefront infrastructure, and enhance safety and accessibility for recreational activities. It will also improve the aesthetic appeal of the lakefront, increase the resilience of the shoreline, and enhance public access to the waterfront. |                                                  |                                                                        |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               |                                                                                                                                                                                                                                                                                                                      |                                                  |                                                                        |
| U.S. Army Corps of Engineers, California Department of Fish and Wildlife, Local Contractors                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                                                                                                                                                                                                                                                                                      |                                                  |                                                                        |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                | Status:                                          | Pre or Post Disaster:                                                  |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes                           | Yes                                                                                                                                                                                                                                                                                                                  | In Progress                                      | Pre                                                                    |



| Action 32. Identify and Implement Drainage/Streambed Clearance Projects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        |                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                          | Change in Priority?                                                                    | Timeframe:                                                            |
| This project focuses on identifying and implementing crucial drainage and streambed clearance efforts throughout the City of Lakeport to reduce flood risks and improve stormwater management. Several streambed clearance projects have already been completed, particularly within the Forbes Creek basin. These projects involved clearing debris, sediment, and installing sediment traps at the outfall of culverts to prevent sediment buildup. The continued goal is to clear obstructions that hinder water flow in streams and drainage systems, mitigating flooding risks during heavy rain events and ensuring the proper functionality of these critical systems. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                               | No                                                                                     | Ongoing                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                  | Cost Estimate:                                                                         | Action Type:                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Grants (FEMA HMGP and FMA, State Funding), General Fund                                                                                                                                                                                                                                                                                                                                                            | \$250,000 - \$500,000 depending on the scope of the clearance and maintenance projects | Property Protection, Structural Projects, Natural Resource Protection |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                        |                                                                       |
| City of Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Completing drainage and streambed clearance projects helps prevent flooding, protects property, and improves the City's overall stormwater infrastructure resilience. The recently completed work, including clearing debris and installing sediment traps within the Forbes Creek basin, enhances flood protection and reduces erosion, ensuring long-term sustainability of the City's water management systems. |                                                                                        |                                                                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        |                                                                       |
| California Department of Fish and Wildlife, Regional Water Quality Control Board                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        |                                                                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                              | Status:                                                                                | Pre or Post Disaster:                                                 |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                | In Progress                                                                            | Pre                                                                   |



| Action 33. Enclose Open Ditches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                           |                       |                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                           | Change in Priority?   | Timeframe:                                                            |
| This project focuses on enclosing existing open stormwater drainage ditches across Lakeport to enhance safety, reduce flood risks, and improve stormwater management. A recent project on 6th Street successfully enclosed an open ditch by installing a 24" culvert with a new sidewalk installed on top, demonstrating the benefits of enclosing ditches. These upgrades provide safer pedestrian infrastructure while ensuring that stormwater is managed more efficiently. By enclosing more ditches with covered culverts, the City will further improve stormwater flow, reduce erosion, and minimize safety hazards associated with open ditches. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                           | No                    | Ongoing                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                           | Cost Estimate:        | Action Type:                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Grants (FEMA HMGP and FMA, State Funding), General Fund                                                                                                                                                                                                                                                                                                                                                                                                                                                          | \$1,000,000 - \$3,000,000 depending on the scope and areas targeted for enclosing ditches |                       | Property Protection, Structural Projects, Natural Resource Protection |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                           |                       |                                                                       |
| City of Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               | Enclosing open ditches offers multiple benefits, including improved safety for pedestrians, better flood control, and reduced erosion. The recent 6th Street project, which included installing a 24" culvert and a sidewalk on top, shows how these efforts can enhance both infrastructure and public safety. Enclosing more ditches will also reduce long-term maintenance costs, improve water quality, and provide additional space for sidewalks and bike lanes, enhancing overall community connectivity. |                                                                                           |                       |                                                                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                           |                       |                                                                       |
| California Department of Water Resources, U.S. Army Corps of Engineers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                           |                       |                                                                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Status:                                                                                   | Pre or Post Disaster: |                                                                       |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | In Progress                                                                               | Pre                   |                                                                       |



| Action 34. Stormwater Projects: Upsize Project Improvements to Provide More Volume to Increase Drainage Capacities                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                  |                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Change in Priority?                                                                              | Timeframe:                                                            |
| This project focuses on upsizing stormwater infrastructure to increase drainage capacity and reduce flood risks throughout Lakeport. One of the key objectives is to replace existing, undersized culverts with larger ones to accommodate higher volumes of stormwater during peak events. Currently, there are two projects underway to upsize culverts on Hartley Street to improve drainage in this flood-prone area. These upgrades are part of a larger effort to enhance the City’s stormwater management capabilities and prevent localized flooding. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                                               | Ongoing (with two projects currently in progress on Hartley Street)   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Cost Estimate:                                                                                   | Action Type:                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Grants (FEMA HMGP and FMA, State Funding), General Fund                                                                                                                                                                                                                                                                                                                                                                                                               | \$500,000 - \$1,500,000 depending on the scope and number of areas targeted for culvert upsizing | Property Protection, Structural Project, Natural Resource Protections |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                  |                                                                       |
| City of Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Upsizing culverts will increase drainage capacity, reduce flood risks, and improve the resilience of the City’s stormwater infrastructure. The projects underway on Hartley Street will alleviate flooding in a key area, serving as a model for future drainage improvements across Lakeport. By preventing stormwater from overwhelming the existing system, these upgrades will protect properties, reduce erosion, and enhance water quality in downstream areas. |                                                                                                  |                                                                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                  |                                                                       |
| California Department of Water Resources, U.S. Army Corps of Engineers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                  |                                                                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Status:                                                                                          | Pre or Post Disaster:                                                 |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | In Progress                                                                                      | Pre                                                                   |



| Action 35. Storm Drainage Related Flooding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                             |                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                  | Change in Priority?                                                         | Timeframe:                                                            |
| This project focuses on identifying and addressing areas in the City of Lakeport that are prone to storm drainage-related flooding. Improvements include upgrading aging infrastructure, such as storm drains and culverts, to handle increased water volumes during heavy rain events. One recent project involved repairing a 24” CMP culvert on N. Main Street by sliplining it with a 20” PVC liner to prevent further erosion and property damage. This repair was crucial in stabilizing the area and protecting nearby structures from drainage-related failures. |                               | High                                                                                                                                                                                                                                                                                                                                                                                                       | No                                                                          | Ongoing                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                          | Cost Estimate:                                                              | Action Type:                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Grants (FEMA HMGP and FMA, State Funding), General Fund                                                                                                                                                                                                                                                                                                                                                    | \$250,000 - \$1,000,000 depending on the scope of drainage-related projects | Property Protection, Structural Projects, Natural Resource Protection |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                             |                                                                       |
| City of Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               | Addressing storm drainage issues and upgrading culverts will prevent localized flooding, protect property, and reduce long-term maintenance costs. The N. Main Street project demonstrated the effectiveness of using slip lining to repair aging infrastructure without the need for costly and disruptive excavation, thereby preserving the integrity of nearby structures and improving drainage flow. |                                                                             |                                                                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                             |                                                                       |
| California Department of Water Resources, U.S. Army Corps of Engineers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                             |                                                                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                      | Status:                                                                     | Pre or Post Disaster:                                                 |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                        | In Progress                                                                 | Pre                                                                   |



### 16.4.7 Severe Weather: All (Extreme Heat and High Winds, Rains, and Snow)

| Action 47: Community outreach and education on severe weather conditions and resources                                                                                                                                                                                                                                                                                                                                                                                  |                               |                                                                                                                                                                                                                                                                                                                                                              |                     |                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               | Priority:                                                                                                                                                                                                                                                                                                                                                    | Change in Priority? | Timeframe:            |
| This project aims to enhance community resilience against extreme weather by implementing comprehensive outreach and educational programs. It focuses on informing residents about the risks associated with extreme heat, high winds, heavy rains, and snow. The initiative will distribute essential information on preparedness measures, emergency resources, and safety protocols through various platforms to ensure widespread community awareness and readiness |                               | Medium                                                                                                                                                                                                                                                                                                                                                       | N/A                 | Ongoing               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                            | Cost Estimate:      | Action Type:          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Grants (FEMA HMGP and FMA, State Funding), General Fund                                                                                                                                                                                                                                                                                                      | \$20,000            | Public Information    |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                     |                     |                       |
| City of Lakeport Administration                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Community outreach and education initiative on severe weather conditions significantly enhances public safety and preparedness. By equipping residents with knowledge and resources, it reduces vulnerability to weather-related incidents, ensures quicker community response during emergencies, and promotes a safer, more resilient environment for all. |                     |                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                                                                                                                                                                                                                                                                                                                                              |                     |                       |
| Lake County OES                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |                                                                                                                                                                                                                                                                                                                                                              |                     |                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                          | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                        | Status:             | Pre or Post Disaster: |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                          | New/Not Started     | Pre                   |



## 16.4.8 Tree Mortality

| Action 48: Community outreach and education on new invasive species and actions to remove or limit the spread.                                                                                                                                                                                                   |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|
| Description:                                                                                                                                                                                                                                                                                                     |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                  | Change in Priority? | Timeframe:            |
| Enhancing community awareness and response to new invasive species that contribute to tree mortality. This initiative involves educating the community about identifying these species, understanding their impact, and implementing effective strategies to control their spread and mitigate associated risks. |                               | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                     | N/A                 | Ongoing               |
|                                                                                                                                                                                                                                                                                                                  |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                          | Cost Estimate:      | Action Type:          |
|                                                                                                                                                                                                                                                                                                                  |                               | Grants (FEMA HMGP and FMA, State Funding), General Fund                                                                                                                                                                                                                                                                                                                                                                                    | \$20,000            | Public Information    |
| Leading Organization:                                                                                                                                                                                                                                                                                            |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |                       |
| City of Lakeport Administration                                                                                                                                                                                                                                                                                  |                               | The primary benefit of this outreach is the increased community capacity to prevent and manage tree mortality caused by invasive species. Educating residents leads to better detection and quicker response, reducing ecological damage and preserving local biodiversity. Additionally, informed community action helps maintain the health of urban and rural forests, supporting ecosystem services and enhancing the quality of life. |                     |                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                         |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |                       |
| Lake County OES                                                                                                                                                                                                                                                                                                  |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                   | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                      | Status:             | Pre or Post Disaster: |
| Yes                                                                                                                                                                                                                                                                                                              | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                        | Not Started         | Pre                   |



| Action 49: Review and update the Tree Preservation Ordinance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Change in Priority? | Timeframe:            |
| <p>Tree Preservation Ordinance: <a href="https://www.codepublishing.com/CA/Lakeport/#!/Lakeport17/Lakeport17.html">https://www.codepublishing.com/CA/Lakeport/#!/Lakeport17/Lakeport17.html</a>. This contains provisions for protecting native trees in City Limits. In addition, the City adopted the California Building Code Chapter 7A which includes provisions for defensible space.</p> <p>Action 49 involves a thorough review and update of the Tree Preservation Ordinance to reflect current environmental challenges and conservation science. This action aims to strengthen local policies on tree preservation, ensuring they are effective in protecting and managing the community's tree resources sustainably.</p> |                               | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | N/A                 | Ongoing               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Cost Estimate:      | Action Type:          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               | Grants (FEMA HMGP and FMA, State Funding), General Fund                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \$15,000            | Protection            |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                       |
| City of Lakeport Community Development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               | Updating the Tree Preservation Ordinance offers several benefits, including enhanced protection of mature and significant trees which contribute to the urban canopy, improved biodiversity, and stabilized local ecosystems. Strengthened regulations will also help mitigate the urban heat island effect, enhance air quality, and increase property values by preserving the aesthetic and environmental quality of the community. This proactive measure supports long-term ecological health and sustainability, aligning community standards with best practices in urban forestry management. |                     |                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                       |
| City of Lakeport Administration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Status:             | Pre or Post Disaster: |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | New/Not Started     | Pre                   |



## 16.4.9 Volcano and Geothermic Gasses

| Action 46: Community outreach and education on Volcanic and Geothermal Gases                                                                                                                                                                                                                                                                      |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|
| Description:                                                                                                                                                                                                                                                                                                                                      |                               | Priority:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Change in Priority? | Timeframe:            |
| Action 46 aims to increase public awareness and understanding of volcanic and geothermal gases through targeted community outreach and education programs. This initiative focuses on teaching residents about the sources, types, and potential hazards of these gases, as well as appropriate safety measures and emergency response strategies |                               | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | N/A                 | Ongoing               |
|                                                                                                                                                                                                                                                                                                                                                   |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Cost Estimate:      | Action Type:          |
|                                                                                                                                                                                                                                                                                                                                                   |                               | TBD, HMGP and FMA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Unknown             | Public Information    |
| Leading Organization:                                                                                                                                                                                                                                                                                                                             |                               | Benefit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |                       |
| City of Lakeport Administration                                                                                                                                                                                                                                                                                                                   |                               | The primary benefit of this educational outreach is enhanced public safety and preparedness in areas prone to volcanic activity and geothermal emissions. By informing the community about the risks and necessary precautions associated with volcanic and geothermal gases, residents are better prepared to respond effectively in the event of an emergency. This proactive approach helps prevent health issues, reduces panic during volcanic events, and ensures that the community is resilient in the face of such natural hazards. |                     |                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                          |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                       |
| Lake County OES                                                                                                                                                                                                                                                                                                                                   |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                    | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Status:             | Pre or Post Disaster: |
| Yes                                                                                                                                                                                                                                                                                                                                               | Yes                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | New/Not Started     | Pre                   |



## 16.4.10 Wildfire

| Action 38. Defensible Space/ Fuel Reduction Projects                                                                                                                                                                                                                                                                |                               |                                                   |                     |                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------|---------------------|------------------------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                        |                               | Priority:                                         | Change in Priority? | Timeframe:                                                                         |
| Hazardous fuel reduction generally requires the reduction of surface and ladder fuels. It may also require thinning out dense tree stands, preserving mature sized trees. It can be accomplished using fire, biological methods, chemical and/or mechanical treatments to remove or modify fuels in wildland areas. |                               | High                                              | No                  | 5 Years                                                                            |
|                                                                                                                                                                                                                                                                                                                     |                               | Financial Option:                                 | Cost Estimate:      | Action Type:                                                                       |
|                                                                                                                                                                                                                                                                                                                     |                               | General Fund, Grants, Bond Measures, HMGP and FMA | \$1,000,000.00      | Prevention Property, Protection, Structural Projects, Natural Resource Protection" |
| Leading Organization:                                                                                                                                                                                                                                                                                               |                               | Benefit:                                          |                     |                                                                                    |
| Lakeport Public Works / Community Development.                                                                                                                                                                                                                                                                      |                               | (Losses Avoided): \$10,000,000.00                 |                     |                                                                                    |
| Supporting Organization:                                                                                                                                                                                                                                                                                            |                               |                                                   |                     |                                                                                    |
|                                                                                                                                                                                                                                                                                                                     |                               |                                                   |                     |                                                                                    |
| Addresses Current Development:                                                                                                                                                                                                                                                                                      | Addresses Future Development: | Compliance with NFIP:                             | Status:             | Pre or Post Disaster:                                                              |
| Yes                                                                                                                                                                                                                                                                                                                 | Yes                           | N/A                                               | Not Started         | Pre                                                                                |



| Action 39. Establish Goat Mitigation Plan                                                                                                                                                                                                                                                                                      |                               |                                           |                     |                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------|---------------------|---------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                   |                               | Priority:                                 | Change in Priority? | Timeframe:                                                    |
| Goat mitigation or Managed Grazing:<br>➤ Creates Fire Breaks<br>City of Lakeport 5-52 Local Hazard Mitigation Plan Update July 2019<br><br>➤ Reduces Fuel Loads<br>➤ Increases Spatial Distance Between Shrubs and Trees<br>➤ Prunes Tree Ladder Fuels up to Six Feet off the Ground<br>➤ Helps Restore Post-Fire Environments |                               | High                                      | No                  | 3 Years                                                       |
|                                                                                                                                                                                                                                                                                                                                |                               | Financial Option:                         | Cost Estimate:      | Action Type:                                                  |
|                                                                                                                                                                                                                                                                                                                                |                               | Grants, bonds, General Fund, HMGP and FMA | \$20,000            | Prevention Property, Protection, Natural Resource Protection" |
| Leading Organization:                                                                                                                                                                                                                                                                                                          |                               | Benefit:                                  |                     |                                                               |
| City of Lakeport, Lakeport Fire Protection District, Fire wise community members                                                                                                                                                                                                                                               |                               | Life and Property                         |                     |                                                               |
| Supporting Organization:                                                                                                                                                                                                                                                                                                       |                               |                                           |                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                |                               |                                           |                     |                                                               |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                 | Addresses Future Development: | Compliance with NFIP:                     | Status:             | Pre or Post Disaster:                                         |
| Yes                                                                                                                                                                                                                                                                                                                            | Yes                           | N/A                                       | Not Started         | Pre                                                           |



| Action 40. Establish a Local Firewise Community                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               |                                                                                                     |                     |                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               | Priority:                                                                                           | Change in Priority? | Timeframe:                                                   |
| Establish and maintain Lakeport as a Firewise community in accordance with the standards established by the National Fire Protection Association. The Firewise program should include an Action Plan which is a prioritized list of risk reduction projects/investments for the Lakeport community, along with suggested homeowner actions and education activities that participants will strive to complete annually, or over a period of multiple years. Action plans are developed by the local board/committee heading the Firewise project and must be updated at least every three years. |                               | Medium                                                                                              | No                  | 5 Years                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | Financial Option:                                                                                   | Cost Estimate:      | Action Type:                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | Grants (HMGP and FMA)/Fire Protection District Funds/City General Fund                              | \$5,000.00          | Prevention Property, Protection, Natural Resource Protection |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               | Benefit:                                                                                            |                     |                                                              |
| Lakeport Fire Protection District, Lake County Fire Safe Council, City of Lakeport, CalFire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Health and safety of local population; protection of structures and other improvements in community |                     |                                                              |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |                                                                                                     |                     |                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               |                                                                                                     |                     |                                                              |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Addresses Future Development: | Compliance with NFIP:                                                                               | Status:             | Pre or Post Disaster:                                        |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes                           | N/A                                                                                                 | Not Started         | Pre                                                          |



| Action 41. Roofing/Eve Vent Retrofit and Adopt More Restrictive Wildfire Codes                                                                     |                               |                            |                                                                                                                    |                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Description:                                                                                                                                       |                               | Priority:                  | Change in Priority?                                                                                                | Timeframe:                                                    |
| This project seeks to address issues with codes that exist and add additional restrictions. Address the most vulnerable existing structures first. |                               | High                       | No                                                                                                                 | Within 5 years                                                |
|                                                                                                                                                    |                               | Financial Option:          | Cost Estimate:                                                                                                     | Action Type:                                                  |
|                                                                                                                                                    |                               | Unknown, HMGP and FMA      | To be determined on case-by-case basis for retrofit. Codes portion of this action would have a cost of staff time. | Prevention Property, Protection, Natural Resource Protection" |
| Leading Organization:                                                                                                                              |                               | Benefit:                   |                                                                                                                    |                                                               |
| Lakeport Community Development Department                                                                                                          |                               | Reduced risk to wildfires. |                                                                                                                    |                                                               |
| Supporting Organization:                                                                                                                           |                               |                            |                                                                                                                    |                                                               |
|                                                                                                                                                    |                               |                            |                                                                                                                    |                                                               |
| Addresses Current Development:                                                                                                                     | Addresses Future Development: | Compliance with NFIP:      | Status:                                                                                                            | Pre or Post Disaster:                                         |
| Yes                                                                                                                                                | Yes                           | N/A                        | Not Started                                                                                                        | Pre                                                           |



| Action 42. Public Safety Power Shutoff (PSPS) Multi-jurisdictional Task Force, Training, and Exercises                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                                                              |                       |                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------|-----------------------|---------------------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | Priority:                                                    | Change in Priority?   | Timeframe:                                                    |
| A multi-jurisdictional task force/working group will be formed to determine how the community can prepare for and maintain critical services during these power shutdowns. This effort will include setting policies and training and exercising for PSPS events. Public outreach will also be a component of this project. Key issues include identifying and establishing backup power supplies for critical facilities, people reliant on powered medical devices; medicine and other perishables requiring refrigeration, and cell phone and other communication systems. |                               | High                                                         | No                    | Immediately                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Financial Option:                                            | Cost Estimate:        | Action Type:                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Staff time, grant funds (HMGP and FMA), private partners     | Staff time; >\$20,000 | Prevention Property, Protection, Natural Resource Protection" |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Benefit:                                                     |                       |                                                               |
| County OES, Sutter Hospital, and key City and agency staff                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | Ensure the Health and Safety of area residents and visitors. |                       |                                                               |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                                              |                       |                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                              |                       |                                                               |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Addresses Future Development: | Compliance with NFIP:                                        | Status:               | Pre or Post Disaster:                                         |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                           | N/A                                                          | In Progress           | Pre                                                           |



## 16.4.11 Completed

## Hazardous Material

| Action 36. Multi-Agency Spill Response Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                                                                                   |                     |                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------|---------------------|--------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               | Priority:                                                                         | Change in Priority? | Timeframe:                     |
| <p>The City has two applicable plans:</p> <ul style="list-style-type: none"><li>• US EPA Tier 1 Qualified Facility Spill Prevention, Control, and Countermeasure Plan</li><li>• the Hazardous Materials Incident Response Plan</li></ul> <p>Although neither document specifically notes multi-Agency response coordination or communication procedures, they both provide contact lists for external agency POC's. When time allows, I would like to discuss both documents with you further.</p> |                               | High                                                                              | No                  | 3 Years                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | Financial Option:                                                                 | Cost Estimate:      | Action Type:                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               | Grants (HMGP and FMA)/Low Interest Loans                                          | \$40,000.00         | Prevention, Emergency Services |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               | Benefit:                                                                          |                     |                                |
| City of Lakeport / Various Departments, Lakeport Fire Protection District, County of Lake Environmental Health, County of Lake Water Resources, County of Lake Public Works, California Department of Transportation, City of Clearlake (possible)                                                                                                                                                                                                                                                 |                               | Health and safety of local population; protection of public drinking water supply |                     |                                |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |                                                                                   |                     |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                                                                                   |                     |                                |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Addresses Future Development: | Compliance with NFIP:                                                             | Status:             | Pre or Post Disaster:          |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes                           | N/A                                                                               | Completed           | Pre                            |



## Flood

| Action 22. Unreinforced Masonry (URM) and Soft Story Inventory and Retrofits                                                                     |                               |                                                                                                                                                                     |                     |                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------|
| Description:                                                                                                                                     |                               | Priority:                                                                                                                                                           | Change in Priority? | Timeframe:                               |
| The city maintains an inventory list of unreinforced and soft story buildings and adopted LMC 15.05 as a mandatory retrofit requirement in 1990. |                               | The action was high priority and has been successfully completed                                                                                                    | N/A<br>Completed    | Dependent on Funding                     |
|                                                                                                                                                  |                               | Financial Option:                                                                                                                                                   | Cost Estimate:      | Action Type:                             |
|                                                                                                                                                  |                               | Grants (HMGP and FMA) and local funding.                                                                                                                            | N/A                 | Property Protection, Structural Projects |
| Leading Organization:                                                                                                                            |                               | Benefit:                                                                                                                                                            |                     |                                          |
| City of Lakeport Community Development Department                                                                                                |                               | Benefits include improved public safety, targeted outreach and education, seismic retrofitting and code enforcement and overall emergency planning and preparedness |                     |                                          |
| Supporting Organization:                                                                                                                         |                               |                                                                                                                                                                     |                     |                                          |
| N/A                                                                                                                                              |                               |                                                                                                                                                                     |                     |                                          |
| Addresses Current Development:                                                                                                                   | Addresses Future Development: | Compliance with NFIP:                                                                                                                                               | Status:             | Pre or Post Disaster:                    |
| Yes                                                                                                                                              | Yes                           | N/A                                                                                                                                                                 | Completed           | Pre                                      |



| Action 23. Retrofit 302 N Main St                                           |                               |                                                                                                                                              |                     |                                |
|-----------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------|
| Description:                                                                |                               | Priority:                                                                                                                                    | Change in Priority? | Timeframe:                     |
| Seismic upgrades began in 2015 and were completed in 2022 for 302 N Main St |                               | This action was medium priority and has been completed                                                                                       | N/A Completed       | When funding is available      |
|                                                                             |                               | Financial Option:                                                                                                                            | Cost Estimate:      | Action Type:                   |
|                                                                             |                               | TBD, HMGP and FMA                                                                                                                            | Unknown             | Prevention, Emergency Services |
| Leading Organization:                                                       |                               | Benefit:                                                                                                                                     |                     |                                |
| City of Lakeport Community Development Department                           |                               | Preserving historical structures in our city all the while improving their safety, balancing both historical conservation and public safety. |                     |                                |
| Supporting Organization:                                                    |                               |                                                                                                                                              |                     |                                |
| N/A                                                                         |                               |                                                                                                                                              |                     |                                |
| Addresses Current Development:                                              | Addresses Future Development: | Compliance with NFIP:                                                                                                                        | Status:             | Pre or Post Disaster:          |
| Yes                                                                         | Yes                           | N/A                                                                                                                                          | Completed           | Pre                            |



## Drought

| Action 20. Adoption of State Model Water Efficiency Landscape Ordinance (MWELO)                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |                                                                                                |                     |                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------|---------------------|------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               | Priority:                                                                                      | Change in Priority? | Timeframe:                   |
| The MWELO ordinance was adopted by City Council in 2022 to comply with AB 1881, and can be found in LMC 17.53<br><br>The City adopted Ordinance No. 931 "An Ordinance of the City Council of the City of Lakeport Adding Chapter 17.53 of the Municipal Code Regarding Water Efficient Landscape Requirements on 2/1/22 (effective 3/2/22) MWELO (Cities and Counties were required to adopt MWELO by 1/1/2010 or a locally modified ordinance at least as effective, or else the state MWELO applied by default) " |                               | Medium                                                                                         | Updated             | Ongoing with new development |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               | Financial Option:                                                                              | Cost Estimate:      | Action Type:                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               | TBD, HMGP and FMA                                                                              | N/A                 | Prevention                   |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Benefit:                                                                                       |                     |                              |
| City of Lakeport Community Development Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               | Enhancing water efficiency, preventing water waste and supporting environmental sustainability |                     |                              |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               |                                                                                                |                     |                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |                                                                                                |                     |                              |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Addresses Future Development: | Compliance with NFIP:                                                                          | Status:             | Pre or Post Disaster:        |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yes                           | N/A                                                                                            | Completed           | Pre                          |



## Aquatic Hazard

| Action 13. Install Water Aerators in Stagnant Areas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                           |                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               | Priority:                                                                                                                                                                                                                                                                                                                                          | Change in Priority?                                                                                       | Timeframe:                                       |
| This project involved installing water aerators in stagnant areas at Library Park swimming areas to improve water quality, reduce harmful algae blooms, and oxygenate the water. The aerators help enhance aquatic health, reduce cyanobacterial growth, and create better conditions for recreation and fish habitats. The project was successfully completed in July 2024, but additional aerators could be installed in other areas around Clear Lake to further expand the benefits. The City will explore additional locations to continue improving water quality, particularly in areas that experience poor circulation or stagnation. |                               | High                                                                                                                                                                                                                                                                                                                                               | N/A Completed                                                                                             | Ongoing (further installations to be explored)   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Financial Option:                                                                                                                                                                                                                                                                                                                                  | Cost Estimate:                                                                                            | Action Type:                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Grants (state and federal HMGP and FMA), General Fund, County Funding                                                                                                                                                                                                                                                                              | Approximately \$14,615 for the initial phase; future expansions will depend on additional site assessment | Property Protection, Natural Resource Protection |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               | Benefit:                                                                                                                                                                                                                                                                                                                                           |                                                                                                           |                                                  |
| City of Lakeport Public Works Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               | The completed project has already improved water quality in targeted areas, reducing harmful algae blooms and supporting aquatic life. Expanding the installation of aerators to other stagnant areas of Clear Lake will further enhance water quality, promote ecological balance, and ensure safe recreational areas for residents and visitors. |                                                                                                           |                                                  |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                           |                                                  |
| Lake County Water Resources Department, Environmental Health Departments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                           |                                                  |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Addresses Future Development: | Compliance with NFIP:                                                                                                                                                                                                                                                                                                                              | Status:                                                                                                   | Pre or Post Disaster:                            |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes                           | N/A                                                                                                                                                                                                                                                                                                                                                | Completed                                                                                                 | Pre                                              |



## Multi-Hazard

| Action 1. Integrate Local Hazard Mitigation Plan into Safety Element of General Plan                                                                                                                                                  |                               |                                                                                                                                                      |                                                         |                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Description:                                                                                                                                                                                                                          |                               | Priority:                                                                                                                                            | Change in Priority?                                     | Timeframe:                                                                                 |
| Incorporated the Local Hazard Mitigation Plan (LHMP) into the Safety Element of the General Plan. This ensures that all city planning, and development activities are aligned with hazard mitigation strategies outlined in the LHMP. |                               | High                                                                                                                                                 | No                                                      | The item was completed following the public hearing and council approval on July 20, 2021. |
|                                                                                                                                                                                                                                       |                               | Financial Option:                                                                                                                                    | Cost Estimate:                                          | Action Type:                                                                               |
|                                                                                                                                                                                                                                       |                               | General Fund, Grant Funds (CDBG, HMGP and FMA)                                                                                                       | Mostly administrative costs related to plan integration | Prevention                                                                                 |
| Leading Organization:                                                                                                                                                                                                                 |                               | Benefit:                                                                                                                                             |                                                         |                                                                                            |
| City of Lakeport Community Development Department                                                                                                                                                                                     |                               | Ensures compliance with state and federal hazard mitigation guidelines, enhances public safety, and reduces potential damages from future disasters. |                                                         |                                                                                            |
| Supporting Organization:                                                                                                                                                                                                              |                               |                                                                                                                                                      |                                                         |                                                                                            |
| Lakeport Public Works Department, Lakeport Fire Protection District, Lake County Office of Emergency Services                                                                                                                         |                               |                                                                                                                                                      |                                                         |                                                                                            |
| Addresses Current Development:                                                                                                                                                                                                        | Addresses Future Development: | Compliance with NFIP:                                                                                                                                | Status:                                                 | Pre or Post Disaster:                                                                      |
| Yes                                                                                                                                                                                                                                   | Yes                           | Yes                                                                                                                                                  | Completed                                               | Pre                                                                                        |



| Action 8. Update Local Emergency Services Ordinance                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |                                                                                                                                                   |                      |                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------------------|
| Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | Priority:                                                                                                                                         | Change in Priority?  | Timeframe:                            |
| <p>The ordinance update was passed by the Lakeport City Council on October 6, 2020. The amendment to Section 2.28 "Emergency Services" of the Lakeport Municipal Code included:</p> <ul style="list-style-type: none"><li>Aligning the ordinance with new state requirements and city procedures.</li><li>Modifying the structure of the city's disaster council to better reflect the city's management size and organization.</li><li>Adjusting deadlines for emergency renewal to align with state requirements.</li></ul> |                               | <p>The action was high priority and has been successfully completed</p>                                                                           | <p>N/A Completed</p> | <p>2020</p>                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | Financial Option:                                                                                                                                 | Cost Estimate:       | Action Type:                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | <p>Lakeport General Fund, CAL OES &amp; FEMA grant funding (HMGP and FMA)</p>                                                                     | <p>\$3-7K</p>        | <p>Prevention, Emergency Services</p> |
| Leading Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Benefit:                                                                                                                                          |                      |                                       |
| <p>Lakeport Police Department; Community Development Department; and Public Works Department</p>                                                                                                                                                                                                                                                                                                                                                                                                                              |                               | <p>Aid in reducing losses during natural disasters and ensure City of Lakeport remains eligible for State and Federal disaster related funds.</p> |                      |                                       |
| Supporting Organization:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                                                                                                                                   |                      |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                                                                                                                                   |                      |                                       |
| Addresses Current Development:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Addresses Future Development: | Compliance with NFIP:                                                                                                                             | Status:              | Pre or Post Disaster:                 |
| <p>Yes</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Yes</p>                    | <p>N/A</p>                                                                                                                                        | <p>Completed</p>     | <p>Pre</p>                            |



## 16.4.12 Lake County Fire Protection Districts (Multi-Hazards)

| Action 43. Relocate and Replace Fire Station 50                                                     |                               |                                                                                                                        |                      |                                                     |
|-----------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------|
| Description:                                                                                        |                               | Priority:                                                                                                              | Change in Priority?  | Timeframe:                                          |
| Demolish existing buildings and construct new fire station or identify new locations and construct. |                               | High                                                                                                                   | No                   | 2-3 years after securing funding                    |
|                                                                                                     |                               | Financial Option:                                                                                                      | Cost Estimate:       | Action Type:                                        |
|                                                                                                     |                               | FEMA (HMGP and FMA), AFG, USDA, HUD, DHS                                                                               | \$1.5 to 2.0 million | Prevention, Structural Projects, Emergency Services |
| Leading Organization:                                                                               |                               | Benefit:                                                                                                               |                      |                                                     |
| Lakeport Fire Protection District,                                                                  |                               | Potential loss of firefighting/EMS apparatus due to seismic activity. Eliminate potential health hazards to personnel. |                      |                                                     |
| Supporting Organization:                                                                            |                               |                                                                                                                        |                      |                                                     |
| City of Lakeport, Lake County                                                                       |                               |                                                                                                                        |                      |                                                     |
| Addresses Current Development:                                                                      | Addresses Future Development: | Compliance with NFIP:                                                                                                  | Status:              | Pre or Post Disaster:                               |
| Yes                                                                                                 | Yes                           | CWPP is aligned at the County level.                                                                                   | In Progress          | Pre                                                 |



| Action 45. Community Wildfire Protection Plan                                                                                                                                                 |                               |                                                  |                     |                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------|---------------------|---------------------------------------------------------------|
| Description:                                                                                                                                                                                  |                               | Priority:                                        | Change in Priority? | Timeframe:                                                    |
| This project seeks to create a Community Wildfire Protection Plan (CWPP), specific to the District and the City that identifies project priorities to reduce risks and hazards from wildfire. |                               | High                                             | No                  | 2-3 years                                                     |
|                                                                                                                                                                                               |                               | Financial Option:                                | Cost Estimate:      | Action Type:                                                  |
|                                                                                                                                                                                               |                               | Existing budgets, grant funding (HMGP and FMA)   | Staff time          | Prevention, Property Protection, Natural Resource Protection" |
| Leading Organization:                                                                                                                                                                         |                               | Benefit:                                         |                     |                                                               |
| Lakeport Fire Protection District,                                                                                                                                                            |                               | Reduced risk to property, increased life safety. |                     |                                                               |
| Supporting Organization:                                                                                                                                                                      |                               |                                                  |                     |                                                               |
| City of Lakeport, Lake County                                                                                                                                                                 |                               |                                                  |                     |                                                               |
| Addresses Current Development:                                                                                                                                                                | Addresses Future Development: | Compliance with NFIP:                            | Status:             | Pre or Post Disaster:                                         |
| Yes                                                                                                                                                                                           | Yes                           | N/A                                              | In Progress         | Pre                                                           |



#### 16.4.13 Reviewed and Not Pursued

The City of Lakeport did not remove any Mitigation Actions from the previous LHMP.



## 16.5 Compliance with National Flood Insurance Program (NFIP)

### 16.5.1 Lakeport's Flood Management Program

The City of Lakeport has participated in the Regular Phase of the NFIP since September 1, 1978. Since then, the City has administered floodplain management regulations that meet the minimum requirements of the NFIP. Under that arrangement, residents and businesses paid the same flood insurance premium rates as most other communities in the country.

The City does not currently participate in the CRS program but will evaluate the overall value of joining CRS in the future during the implementation phase of this MJHMP.

The City of Lakeport adopted its current Floodplain Management regulations under Chapter 15.16 of the Lakeport Municipal Code to establish standards aimed at minimizing flood risks, safeguarding public health and safety, and guiding responsible development within designated flood hazard areas. These regulations incorporate the Flood Insurance Study for the City of Lakeport, including Flood Insurance Rate Maps (FIRMs) and all subsequent amendments or revisions.

While Chapter 15.16 – Floodplain Management of the Lakeport Municipal Code does not explicitly define "substantial damage" or "substantial improvement," the City adheres to the definitions and procedures established by the NFIP.

- **Substantial Damage:** Damage of any origin sustained by a structure whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred.
- **Substantial Improvement:** Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the start of construction. This term includes structures that have incurred substantial damage, regardless of the actual repair work carried out.

#### **Post-Event Process:**

Following a significant flood event or federally declared disaster, the City's **Floodplain Administrator**—designated in Section 15.16.040 of the Municipal Code—



is responsible for assessing damaged properties within Special Flood Hazard Areas (SFHAs). The process includes:

1. **Damage Assessment:** Conducting inspections to evaluate the extent of damage to structures within SFHAs.
2. **Determination:** Comparing the cost of repairs to the market value of the structure to ascertain if it meets the threshold for substantial damage or improvement.
3. **Notification:** Informing property owners of the determination and the requirement to comply with current floodplain management regulations.
4. **Compliance:** Ensuring that any reconstruction or improvement meets the standards outlined in Section 15.16.150, which includes elevation requirements and other flood hazard reduction measures.

### **Enforcement and Permitting:**

Chapter 15.16 mandates that no structure shall be constructed, located, extended, converted, or altered without full compliance with the Floodplain Management regulations. This includes requirements for elevation certificates, which must be prepared by a licensed surveyor or engineer before, during, and after construction to ensure structures are properly elevated above the Base Flood Elevation (BFE). Additionally, the regulations address substantial improvements and substantial damage determinations, requiring that if the cost of reconstruction, rehabilitation, addition, or other improvements to a building equals or exceeds 50% of the building's market value, the building must meet the same construction requirements as a new building. The Floodplain Administrator ensures that any substantial improvements or repairs to substantially damaged structures adhere to the necessary standards before permits are granted.

The implementation and enforcement of Lakeport's Floodplain Management regulations are overseen by the City's Community Development Department, particularly the Building Division. This department is responsible for flood zone determinations, plan reviews, permit issuance, and ensuring compliance with all applicable floodplain management requirements.

These regulations align with the city's commitment to sustainable development and resilience against flood risks. In addition, the City's floodplain management activities apply to existing and new development areas, implementing flood



protection measures for structures and maintaining drainage systems to help reduce the potential of flooding within the City.

Also to be considered are the numerous flood mitigation actions contained in this MJHMP that support the ongoing efforts by the City to minimize the risk and vulnerability of the community to the flood hazard and to enhance their overall floodplain management program.

The City will continue to manage its floodplains in continued compliance with the NFIP. An overview of the City's NFIP status and floodplain management program are discussed in table 27.

**Table 28: Lakeport's NFIP Status and Floodplain Management Program**

| NFIP Topic                                                                                                                                    |                                                                                              | Comments |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------|
| <b>Insurance Summary</b>                                                                                                                      |                                                                                              |          |
| How many NFIP policies are in the community? What is the total premium and coverage?                                                          | 157 policies<br>\$208,973 in premiums<br>\$37,867,000 in coverage                            |          |
| How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage? | 238 claims \$2,756,495.05 in paid losses 18 substantial damage claims since 1978             |          |
| How many structures are exposed to flood risk within the community?                                                                           | 424 improved parcels in the 1% annual chance<br>3 improved parcels in the 0.2% annual chance |          |
| Repetitive Loss and Severe Repetitive Loss Properties                                                                                         | 24 RL properties<br>3 SRL properties                                                         |          |
| Describe any areas of flood risk with limited NFIP policy coverage                                                                            | No areas have limited NFIP policy coverage                                                   |          |
|                                                                                                                                               |                                                                                              |          |
| Is the Community Floodplain Administrator or NFIP Coordinator certified?                                                                      | No                                                                                           |          |
| Provide an explanation of NFIP administration services (e.g.,                                                                                 | All permit applications are reviewed to determine any SGHA designation by checking           |          |



| NFIP Topic                                                                                       | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| permit review, GIS, education or outreach, inspections, engineering capability)                  | the information on the data card assigned to the address and checking the parcel boundaries in the GIS flood map layer. If the property is within a SFHA, then the Floodplain Manager advises the applicant of all restrictions and requirements that pertain to the proposed work. A Floodplain Plan must show compliance with the City's Floodplain Management Ordinance. When necessary, the owner shall provide a benchmark set on site by a land surveyor or civil engineer. Site inspections shall confirm the work is performed in compliance. An Elevation Certificate (EC) shall be completed by the surveyor at the beginning and end of construction. The City Floodplain Manager maintains a collection of all ECs issued within the City. |
| What are the barriers to running an effective NFIP program in the community, if any?             | Limited budgets and staff time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Compliance History</b>                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Is the community in good standing with the NFIP?                                                 | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Are there any outstanding compliance issues (i.e., current violations)?                          | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)? | CAV – 3/16/2015<br>CAC – 8/4/2016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Is a CAV or CAC scheduled or needed?                                                             | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Regulation</b>                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| When did the community enter the NFIP?                                                           | 1978                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Are the FIRMs digital or paper?                                                                  | Digital                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |



| NFIP Topic                                                                                                    | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways? | Exceed requirements. The City requires an additional one foot of freeboard, and for Substantial Improvement determinations, the City tracks cumulative improvement valuations for five years                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Provide an explanation of the permitting process.                                                             | All permit applications are reviewed to determine any SGHA designation by checking the information on the data card assigned to the address and checking the parcel boundaries in the GIS flood map layer. If the property is within a SFHA, then the Floodplain Manager advises the applicant of all restrictions and requirements that pertain to the proposed work. A Floodplain Plan must show compliance with the City's Floodplain Management Ordinance. When necessary, the owner shall provide a benchmark set on site by a land surveyor or civil engineer. Site inspections shall confirm the work is performed in compliance. An Elevation Certificate (EC) shall be completed by the surveyor at the beginning and end of construction. The City Floodplain Manager maintains a collection of all ECs issued within the City. |
| <b>Community Rating System (CRS)</b>                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Does the community participate in CRS?                                                                        | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



## CHAPTER SEVENTEEN: PLAN ADOPTION AND MAINTENANCE

### 17.1 Adoption

The 2025 Lake County Multi-Jurisdictional Hazard Mitigation Plan was approved by FEMA on August 12, 2025. The Lakeport City Council adopted Resolution No. 3003 (2025), A Resolution of the City Council of the City of Lakeport Adopting the 2025 Lake County Multi-Jurisdictional Hazard Mitigation Plan and Incorporating Hazard Mitigation Information into The Safety Element of the City of Lakeport General Plan, September 16, 2025. The resolution is available in [Attachment 1: City of Lakeport Adoption](#).

The Lake County Board of Supervisors resolutions for adoptions is in the Base Plan Section 18.1 and Clearlake City Council adoption in Section 17.1 of the Clearlake Annex.

### 17.2 Implementation

After Cal OES/FEMA review and approval and local adoption by all jurisdictions, the MJHMP will be ready to implement. All stakeholders will be notified that the Plan is current, and the mitigation strategy ready to begin.

#### 17.2.1 Continued Public Involvement

Residents of Lake County, Clearlake, and Lakeport will stay informed about MJHMP actions through the Lake County OES website and annual progress report updates. Upon the initiation of the MJHMP update process as outlined in 17.3.2, a new public involvement strategy will be initiated based on the guidance from the HMPC. This strategy will be based on the needs and capabilities of the jurisdictions at the time of the update.

#### 17.2.2 Integration with Other Planning Mechanisms

The effectiveness of the MJHMP depends on implementing the plan and incorporating the outlined actions into existing plans, policies, and programs. The MJHMP includes hazard, risk, and vulnerability profiles based on the best data available at the time of the plan. Additionally, the mitigation actions can be implemented through the creation of new educational programs, interagency coordination, or improved public partnership. Planning processes and programs to be coordinated with the recommended of the MJHMP include the following:

- Lakeport EOP
- Building Codes



- Climate Vulnerability Assessment

### **17.3 FEMA BRIC Information Maintenance**

#### **17.3.1 Ongoing**

No less than annually, and following any significant hazard event or disaster declaration, Lakeport will work with Lake County OES to conduct a maintenance review of the effectiveness and progression of the mitigation actions.

#### **17.3.2 Five-year Update**

Lake County OES will initiate the 2029 Update no later than January 30, 2028. If funding is necessary to complete the update, Lakeport will work with Lake County OES will seek funds in the 2027 grant cycle.

## **CHAPTER EIGHTEEN: DATA SOURCES**

The profiles were completed utilizing web-based research and a review of plans, current reports and other available documents. Only high-quality, consistent, peer reviewed, and publicly accessible data sources are used. Where possible, other County and State plans were incorporated. Data sources can be found in the Base Plan.

**Attachment 1: City of Lakeport Adoption****CITY OF LAKEPORT  
RESOLUTION NO. 3003 (2025)****A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEPORT  
ADOPTING THE 2025 LAKE COUNTY MULTI-JURISDICTIONAL HAZARD  
MITIGATION PLAN AND INCORPORATING HAZARD MITIGATION  
INFORMATION INTO THE SAFETY ELEMENT OF THE CITY OF LAKEPORT  
GENERAL PLAN**

**WHEREAS**, the City Council of the City of Lakeport recognizes the threat that natural and human-caused hazards pose to people, property, and the economy within the City of Lakeport; and

**WHEREAS**, the City of Lakeport has participated in the preparation of the Lake County Multi-Jurisdictional Hazard Mitigation Plan (“MJHMP”) in accordance with the Disaster Mitigation Act of 2000 and implementing regulations at 44 CFR Part 201; and

**WHEREAS**, the MJHMP identifies hazard mitigation goals and actions intended to reduce or eliminate long-term risk to people and property from the impacts of future hazards and disasters; and

**WHEREAS**, California Government Code §65302(g)(4) requires that upon the next revision of the housing element on or after January 1, 2017, the safety element of the general plan must be reviewed and updated as necessary to address climate adaptation and resiliency strategies, and must be consistent with the hazard mitigation plan adopted pursuant to federal law; and

**WHEREAS**, adoption of the MJHMP by the City Council of the City of Lakeport will allow the City to integrate relevant hazard mitigation data, goals, and actions into the Safety Element of the City’s General Plan, ensuring consistency between the MJHMP and the General Plan as required by state law; and

**WHEREAS**, adoption further ensures the City’s continued eligibility for certain federal disaster assistance and hazard mitigation funding through the Federal Emergency Management Agency (FEMA) and the California Disaster Assistance Act.

**NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Lakeport, State of California, that:**

**Section 1.** The City Council hereby adopts the 2025 Lake County Multi-Jurisdictional Hazard Mitigation Plan, attached hereto as Exhibit “A” and incorporated herein by reference, as the City’s official hazard mitigation plan.

**Section 2.**

408195.1



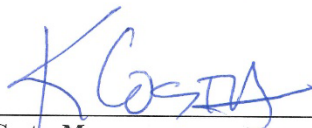
The City Council directs staff to initiate preparation of a future amendment to the Safety Element of the City of Lakeport General Plan, incorporating applicable data, goals, and policies of the MJHMP, to ensure consistency and compliance with California Government Code §65302(g).

**Section 3.** While the City-specific content within the MJHMP may require revisions to meet plan approval requirements, changes occurring after adoption will not require the City of Lakeport to re-adopt any further iterations of the plan until the next required update cycle.

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**ADOPTED** by a vote of five (5) in favor, zero (0) against, and zero (0) abstaining, this 16<sup>th</sup> day of September, 2025.

By:

  
\_\_\_\_\_  
Kim Costa, Mayor

**ATTEST:**

By:

  
\_\_\_\_\_  
Kelly Buendia, City Clerk