

# Lake County, California

## Wildfire Evacuation Analysis and Preparedness Memo



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Prepared by



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## Table of Contents

Executive Summary.....	4
Purpose .....	4
Methodology.....	4
Wildfire History .....	4
Evacuation Coordination.....	6
Analysis and Recommendations .....	6
Hazard Planning Profile.....	8
Geographic Profile .....	8
Demographic Profile .....	9
Vulnerable Populations.....	12
Wildfire Risk and Vulnerability Profile .....	14
Existing Conditions Assessment.....	26
Existing Lake County Planning .....	26
Planning Regulations and Guidance .....	32
Population Information and References .....	35
Current Training, Drills, and Exercises .....	39
Current Communications and Preparedness.....	39
Analysis of Existing Transportation and Evacuation Routes.....	42
Evacuation Zones .....	42
Potential Primary Evacuation Routes .....	45
Potential Secondary Evacuation Routes .....	45
Potential Lakeport Evacuation Routes.....	47
Potential Clearlake Evacuation Routes .....	48
Highway Infrastructure .....	49
Highway Capacity.....	54
Transportation Resources .....	54
Community and Neighborhood Infrastructure .....	57
Vulnerable Populations.....	58
Evacuation Needs.....	60
Evacuation Coordination.....	61
Technical Advisory Group and Public Outreach .....	63
Technical Advisory Group (TAG) .....	63
Public Outreach.....	65
Press Release .....	65
Project Website.....	66



Public Information Sessions .....	67
Public Outreach Events .....	67
Community Planning Outreach .....	67
Public Input Survey .....	68
Resiliency Recommendations .....	69
Community Prioritizations .....	69
Emergency Communications .....	70
Training, Exercise, and Drills .....	71
Network Improvements .....	71
Next Steps .....	72
Annex 1: Survey Results .....	77
<i>Public Input Survey</i> .....	78
Annex 2: Potential Evacuation Route Map Inserts .....	97

## Executive Summary

The Lake County Evacuation Analysis and Preparedness Memo assesses the current planning actions within Lake County for evacuations and will provide recommendations for how Lake County can build resiliency in the transportation systems from the impacts of wildfires and the methods used to develop the memo.

## Purpose

This Wildfire Evacuation Analysis and Preparedness Memo aims to strengthen existing evacuation and preparedness strategies by comprehensively analyzing current protocols, transportation networks, and evacuation routes. It also aims to enhance emergency response and community resilience by improving communication methods, evacuation logistics, and agency coordination, particularly in wildfire events.

## Methodology

The methodology for developing this Wildfire Evacuation Analysis and Preparedness Memo is centered on a multi-faceted approach that thoroughly reviews current evacuation protocols, infrastructure, and community needs within the **Analysis of Existing Transportation and Evacuation Routes**. The **Existing Conditions Assessment** section analyzes the existing emergency plans, transportation networks, and communication strategies; this methodology aims to identify both strengths and gaps within current preparedness efforts. Additionally, our approach prioritizes the needs of vulnerable populations, ensuring equitable and accessible evacuation options as reviewed through the lens of wildfires in **Hazard Planning Profile**. This methodology provides a comprehensive foundation to strengthen wildfire evacuation planning and enhance community resilience through collaborative evaluation of agency practices, public communication, and route maintenance. Throughout the project, the **Technical Advisory Group and Public Outreach** were engaged to bring forth the community stakeholders, responders, and overall public input into the planning process.

## Wildfire History

Over the past decade, Lake County, California, has faced many wildfires, becoming one of the regions in California most impacted by fire activity, as visualized in Figure 3 on page 14. Its rugged terrain, dry conditions, and vegetation have contributed to an environment where fires spread rapidly and cause extensive damage. Over the last ten years, Lake County has experienced several wildfires, with some of the key ones being:

### **2015 Valley Fire<sup>1</sup>**

One of the most devastating fires in the county's history, the Valley Fire burned over 76,000 acres, destroyed nearly 2,000 structures, and claimed four lives. The fire was spotting over a mile ahead, which led to widespread evacuations and severely impacted the communities of Middletown, Cobb, and Hidden Valley Lake. The Valley Fire highlighted the need for comprehensive wildfire preparedness and resilience measures

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<sup>1</sup> <https://www.fire.ca.gov/incidents/2015/9/12/valley-fire>

and underscored the need to evacuate immediately.

### **2015 Rocky Fire<sup>2</sup>**

The Rocky Fire consumed 69,636 acres near Morgan Valley Road and Rocky Creek Road east of Clearlake. This was the first significant evacuation of Lower Lake and Clearlake.

### **2016 Clayton Fire<sup>3</sup>**

The Clayton Fire burned approximately 4,000 acres and destroyed nearly 200 structures in Lower Lake, causing significant damage to the small, rural town. This fire, reportedly started by arson, underscored the vulnerability of communities in fire-prone areas.

### **2017 Sulphur Fire<sup>4</sup>**

The Sulphur Fire burned for 122 days off of Hwy 20 and Sulphur Bank Road in Clearlake Oaks. The fire destroyed 162 structures and damaged an additional eight across the 2,207 acres that burned.

### **2018 Mendocino Complex Fire<sup>5</sup>**

Consisting of two fires, the Ranch and River Fires, the Mendocino Complex Fire became California's largest wildfire on record at the time, burning more than 459,000 acres across multiple counties, including most of Lake County. Although the Ranch Fire contributed most of the acreage, Lake County communities saw extensive impacts from both fires. This fire required the evacuation outside of the county, and the importance of MOUs with surrounding counties.

### **2020 LNU Lightning Complex Fire<sup>6</sup>**

Sparked by dry lightning, this complex fire burned across multiple Northern California counties, including parts of Lake County. The LNU Lightning Complex burned over 363,000 acres in total, causing widespread evacuations and infrastructure damage. This fire highlighted the challenges posed by dry lightning in wildfire-prone regions.

### **2021 Cache Fire<sup>7</sup>**

While smaller than previous fires, the Cache Fire impacted the City of Clearlake, destroying over 80 structures, including homes. It intensified efforts to strengthen defensible space measures and fire mitigation strategies around residential areas.

### **2024 Boyles Fire<sup>8</sup>**

The Boyles Fire burned 81 acres, impacting the City of Clearlake. The fire destroyed 33 structures and damaged an additional six. The cause of the fire is currently still under investigation.

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<sup>2</sup> <https://www.fire.ca.gov/incidents/2015/7/29/rocky-fire>

<sup>3</sup> <https://www.fire.ca.gov/incidents/2016/8/13/clayton-fire>

<sup>4</sup> <https://www.fire.ca.gov/incidents/2017/10/9/sulphur-fire-mendocino-lake-complex>

<sup>5</sup> <https://www.fire.ca.gov/incidents/2018/7/27/ranch-fire-mendocino-complex>

<sup>6</sup> <https://www.fire.ca.gov/incidents/2020/8/17/lnu-lightning-complex>

<sup>7</sup> <https://www.fire.ca.gov/incidents/2021/8/18/cache-fire>

<sup>8</sup> <https://www.fire.ca.gov/incidents/2024/9/8/boyles-fire>

## 2024 Glenhaven Fire<sup>9</sup>

The Glenhaven Fire burned approximately 417 acres, impacting the Glenhaven and Clearlake Oaks communities. The fire destroyed two structures and damaged a third. The cause of the fire is currently still under investigation.

## *Evacuation Coordination*

The information reviewed, collected, and analyzed in the development of this memo will then be used to create the Lake County Wildfire Evacuation Plan. The wildfire evacuation plan will support Lake County with **Evacuation Coordination and Communication** needed for an evacuation by outlining the roles and responsibilities, coordination elements, and communication. Note that law enforcement agencies are the lead entities for evacuations. Lake APC and Caltrans are supporting organizations in an evacuation. This memo and the corresponding evacuation plan have been created through consultation with Lake County law enforcement and emergency services, as outlined in the **Technical Advisory Group (TAG)**.

## Analysis and Recommendations

Lake County's wildfire history has spurred community resilience efforts, with an increased focus on fire prevention, defensible space, and emergency preparedness. Firefighters, local government, and residents have worked to implement fuel reduction projects, increase evacuation readiness, and develop early-warning systems to protect communities and natural resources. The cumulative impact of these fires has made wildfire mitigation a top priority for the region, along with strengthening infrastructure and resources to manage future fire threats. The **Resiliency Recommendations Section** provides recommendations for implementation strategies for supporting emergency communications, a comprehensive evacuation plan, training, exercises, drills, transportation improvements, and funding opportunities.

- **Emergency Communications**
  - **Resilient Emergency Communications Network:** Enhance backup power and network reliability for emergency alerts and coordination.
  - **Additional Changeable Message Signage:** Improve evacuation communication and potentially reduce evacuation congestion by diverting traffic before a potential roadblock.
  - **Inclusive Communication:** Provide evacuation information in multiple languages and accessible formats to cater to diverse communities through the development of translated standing messaging, Memoranda of Agreement (MOAs)/Memoranda of Understanding (MOUs) with translation services, and translated preparedness resources.
- **Training, Exercise, and Drills**
  - **Community-Based Evacuation Assistance & Transit Support Workshop:** Develop a workshop to address concerns and provide resources to those who need assistance during an emergency.

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<sup>9</sup> <https://www.fire.ca.gov/incidents/2024/10/4/glenhaven-fire>



- **Zone Familiarization Workshops:** Conduct sessions to help residents, especially those in high-risk areas, understand their specific evacuation zones and routes.
- **Community Partner Evacuation Drills:** Establish a drill and exercise program that incorporates community partners.
- **Network Improvements**
  - **Rural Road Hardening & Alternative Evacuation Routes:** Improve and maintain secondary evacuation routes, particularly for isolated communities in Cobb, Lake Pillsbury, and Loch Lomond.
  - **Strategic Fuel Breaks Along Evacuation Corridors:** Maintain the reduction of wildfire intensity along major roads by continuing the fuel break work to keep them passable during emergencies.
  - **Intelligent Evacuation Traffic Management Systems:** Deploy real-time traffic monitoring and smart signage along evacuation routes that can connect to the Operational Area for data-driven decision-making.

# Hazard Planning Profile

## Geographic Profile

Lake County, California, is a scenic region in Northern California known for its picturesque landscapes, unique natural features, and small-town charm. Centered around Clear Lake, the largest natural freshwater lake entirely in California, Lake County is famous for its outdoor recreational opportunities, including fishing, boating, hiking, and wine tasting.

Clear Lake is a major draw, attracting visitors for water sports, birdwatching, and lakeside activities. The region is also home to Mt. Konocti, a dormant volcano offering hiking trails with panoramic views of the lake and the surrounding countryside. This rugged and rural county has a rich agricultural history, producing top-quality wines and pears. It has recently gained recognition for its wine production, with several wineries in the area.

Lake County's small towns, such as Lakeport, Kelseyville, and Clearlake, offer a laid-back vibe with charming shops, local eateries, and annual festivals celebrating the area's culture and natural beauty. The county's warm Mediterranean climate provides ideal conditions for vineyards, making it part of California's growing wine region. Known for its clean air and close-knit communities, Lake County is a peaceful and naturally beautiful destination ideal for both outdoor enthusiasts and those seeking a slower pace of life.

Lake County, California, is landlocked with a land area of 1,255.1 square miles. It is ranked the 38th largest county out of the 58 counties in California by total area. Glenn County, Mendocino County, Napa County, Sonoma County, Yolo County and Colusa County border Lake County.

The county is divided into three different responsibility areas: Federal Responsibility Areas (FRA), State Responsibility Areas (SRA), and Local Responsibility Areas (LRA). The majority of the county's physical area is considered SRA, while the population is primarily distributed between SRA and LRA. A small portion of the population and acreage is FRA, as demonstrated in Table 1.

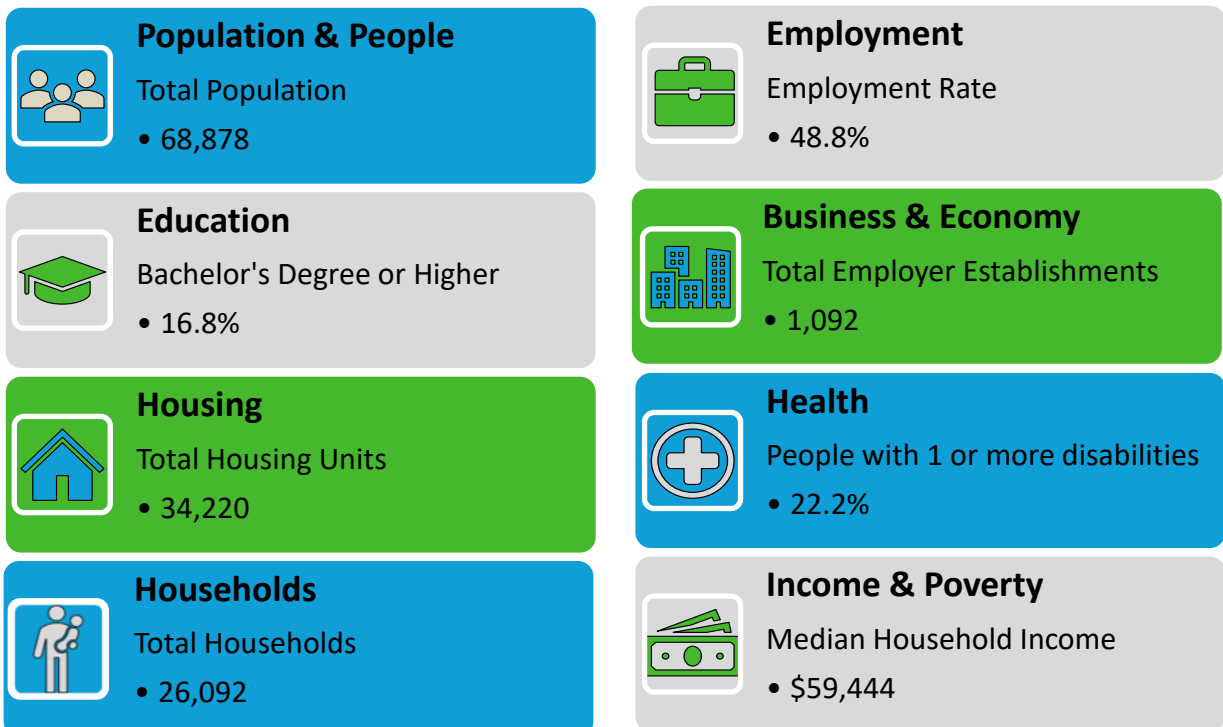
*Table 1: Responsibility Area Population and Parcels at Risk*

Area	Population	Parcels
FRA	725	1,259
SRA	30,800	37,469
LRA	36,700	8,478



# Demographic Profile

This demographic profile provides a comprehensive overview of the population characteristics within Lake County. By analyzing key demographic indicators such as age distribution, household composition, income levels, education, and employment trends, this profile offers valuable insights into the social and economic landscape of the county. By understanding local demographics, transportation networks, and communication needs, targeted evacuation strategies can be designed for all residents. This is especially important for vulnerable populations, such as seniors, individuals with disabilities, and families with young children, who may require additional support during an emergency.



## Population<sup>10</sup>

- Population: **68,878**
- Median age: **43.2**
- People 65 years and older: **26.1% of the population**
- People under 18 years old: **21.6% of the population**
  - Under 5 years: **5.4%**
  - 5-14 years: **13.4%**
  - 15-17 years: **2.9%**

## Education

- Percentage of the population 25 years and older who obtained a High School Degree or equivalent: **30.3%**
- Percentage of the population who have some college experience but no degree: **30.8%**
- Percentage of the population who obtained an associate's degree: **9.5%**
- Percentage of the population who obtained a bachelor's degree or higher: **16.8%**

## Housing

- Homeownership rate: **76.3%**
- Median gross rent in the county: **\$1,544**
- Housing units in the county: **34,220<sup>11</sup>**
- Classified as occupied: **27,622<sup>12</sup>**

## Households

- Total households: **26,092**
  - Married-couple households: **9,692**
  - Cohabiting couple households: **2,357**
  - Male householders, no spouse/partner present: **5,750**
  - Female householders, no spouse/partner present: **8,293**
  - Households with one or more people under 18 years: **6,867**
  - Households with one or more people 65 years and over: **12,952**

## Employment

- Estimated employment rate: **48.8%**
- Private company workers: **48.4%**
- Local, state, or federal government workers: **28.3%**
- Self-employed in own not incorporated business workers & unpaid family workers: **9.4%**
- Private, not-for-profit wage and salary workers: **10.3%**
- Self-employed in own incorporated business workers: **3.5%**

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<sup>10</sup> Unless otherwise noted, information was taken from the 2023 American Community Survey.

<sup>11</sup> 2020 Decennial Census

<sup>12</sup> 2020 Decennial Census

## Industry for the Civilian Employed Population 16 Years and Over

- Educational services, health care, social assistance: **29.9%**
- Public administration: **11.8%**
- Construction: **10.4%**
- Retail trade: **10.2%**
- Professional, scientific, management, administrative, and waste management services: **9.2%**
- Arts, entertainment, recreation, accommodation, and food services: **7.2%**
- Wholesale trade: **4.2%**
- Transportation, warehousing, and utilities: **4.2%**
- Manufacturing: **3.6%**
- Other services, except public administration: **2.9%**

## Business & Economy<sup>13</sup>

- Total establishments: **1,092**
- Industries with the highest number of establishments
  - Construction: **205**
  - Health care and social assistance: **152**
  - Retail trade: **150**
  - Accommodation and food services: **131**

## Health

- Percentage of the population who are classified as having one or more disabilities: **22.2%**
  - Hearing difficulty: **6.8%**
  - Vision difficulty: **6.2%**
  - Cognitive difficulty: **8.6%**
  - Ambulatory difficulty: **11.7%**
  - Self-care difficulty: **5.8%**
  - Independent living difficulty: **12.7%**

## Income

- Median household income: **\$59,444**
- Percentage of the population who live below the poverty line: **17%**

## Language<sup>14</sup>

- Percentage of Californians who live in a home where a language other than English is spoken within Lake County: **19%**
  - Spanish-speaking people: **16.8 %**
  - Indo-European: **1.5%**
  - Asian and Pasific Islander: **0.5%**

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<sup>13</sup> 2021 Economic Surveys Business Patterns

<sup>14</sup> <https://www.census.gov/acs/www/about/why-we-ask-each-question/language/>

## Supported by Redwood Coast Regional Centers

- **927** Total
- **101** uses Spanish as the primary language
- **64** coded as non-ambulatory
- **29** have electricity-dependent medical devices

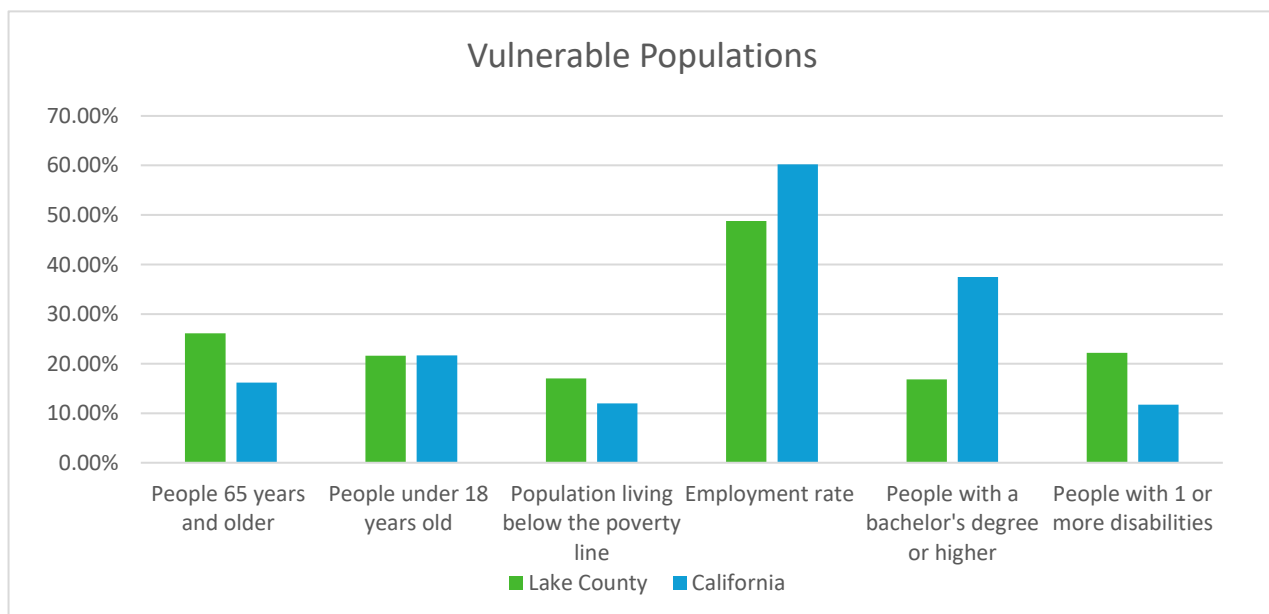
## Vulnerable Populations

Social vulnerability is the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood. Socially vulnerable populations include, but are not limited to:

- People with access and/or functional needs
- Socioeconomically disadvantaged
- People living at or below the poverty level
- People from marginalized communities
- People with limited English proficiency
- People who are geographically isolated
- People of color, children, and seniors

Lake County, when compared to California in general, has:

- A higher median age than in California
- A higher percentage of people who fall below the poverty line
- A lower employment rate
- A lower percentage of educational attainment
- A higher percentage of people with disabilities



*Figure 1: Vulnerable Populations Compared to California*

As part of FEMA's National Risk Index, a community's Social Vulnerability score indicates its relative social vulnerability compared to other communities. A higher Social Vulnerability score leads to a higher Risk Index score. According to FEMA's National Risk Index, Lake County's social vulnerability is **Very High**.

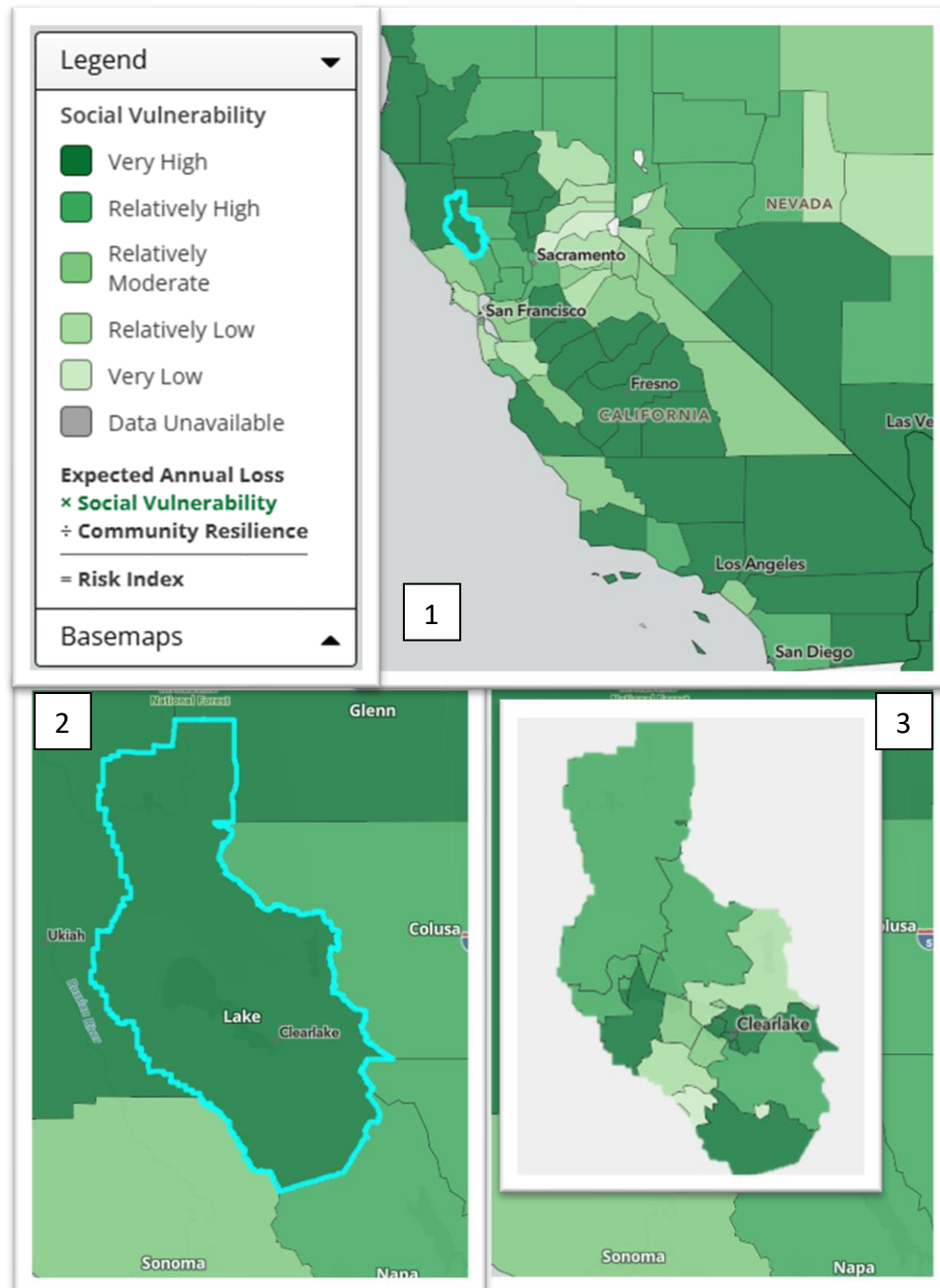
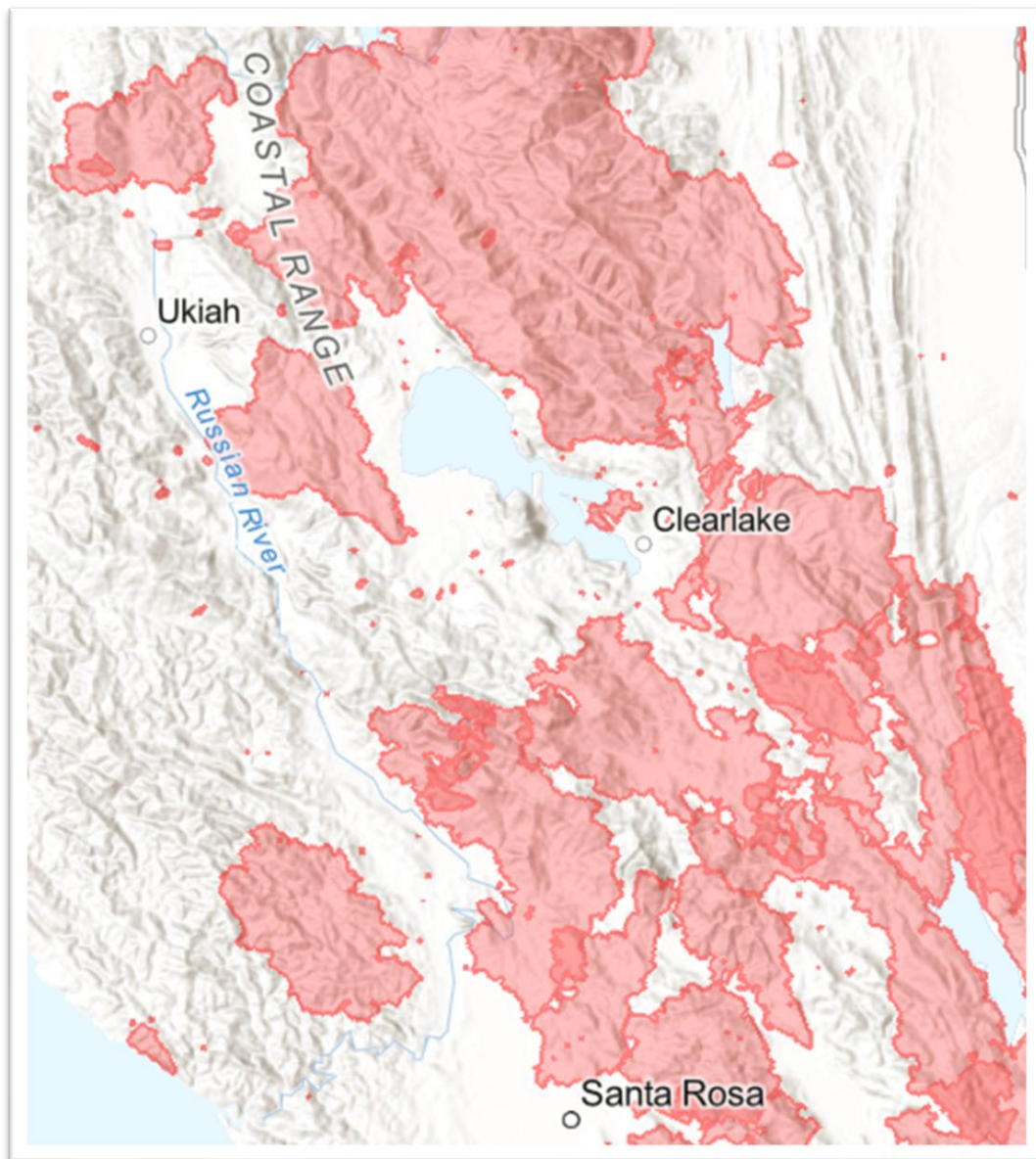


Figure 2: FEMA's Social Vulnerability Maps. Map 1: California's Ratings. Map 2: Lake County's Rating. Map 3: Lake County's Census Tract's Ratings

# Wildfire Risk and Vulnerability Profile

Due to its climate and geographical terrain, wildfires are a consistent hazard for Lake County. In previous decades, the risk of wildfires was mainly from early spring to late fall, often called fire season. However, due to climate change, particularly long drought periods, wildfires have been more common throughout the seasons. A detailed wildfire hazard profile for Lake County is available in the 2025 Multi-Jurisdictional Hazard Mitigation Plan.



*Figure 3: Fire Outline 2013-2023*

## Wildfire Risk Factors

Generally, four major factors sustain wildfires and allow for predictions of a given area's potential to burn. These factors include fuel, topography, weather and human actions.

- Fuel – Fuel, which feeds fires and influences wildfire behavior, is classified by type and volume. It includes natural materials like dead leaves, twigs, branches, live trees, grasses, and human-made structures. Unlike other factors, fuel is the only one that humans can control.
  - Fuel in wildland areas presents ongoing hazards to residents without proactive management. Fuel reduction programs are essential for enhancing forest health and the safety of surrounding communities.
- Topography – Terrain and land slopes significantly influence wildfire spread, with fire intensity and spread rate increasing on steeper slopes due to rising heat. Vegetation arrangement also affects fire activity. In Lake County, elevation varies from 1,500 to 5,000-7,000 feet. The topography comprises broad, rounded, trending ridges running North/South, splitting around Clearlake. Slopes generally increase from the ridgeline to the drainage bottom. Steep slopes and timber fuels can complicate firefighting, while vineyards, roads, and other human-made structures provide a limited network of barriers that assist firefighting efforts.
- Weather – Factors like temperature, relative humidity, wind, and lightning significantly influence wildfire potential. High temperatures and low humidity dry out fuels, increasing ignition and intensity, especially during droughts. Wind is particularly hazardous, as stronger winds accelerate fire spread and intensity, while sudden shifts can occur due to temperature changes or topography. Lightning also contributes to wildfire ignition, often in difficult-to-reach terrain.
  - The "Konocti Wind" travels from Cow Mountain between Lakeport and Ukiah, moving inland from the coast. It descends into Kelseyville's Big Valley and the northern part of Clear Lake, gaining speed and creating whitecaps on the lake's surface. As the wind passes around Mt. Konocti, it accelerates due to pressure gradients influenced by the terrain. The wind then travels south and southeast along Hwy 20, through Morgan Valley and Butts Canyon, heading towards the Sacramento Valley and crossing over Cortina Ridge.
- Human Actions – Most wildfires are ignited due to arson, carelessness, or accidents. Common contributors include failure to maintain defensible space, using spark-producing equipment in dry conditions, and uncontrolled burn piles. Other causes include improper outdoor cooking, fires in encampments, unattended control burns, dragging tow chains, discarded cigarettes, and intentional ignitions.

Additionally, wildfires create secondary hazards such as smoke/lower air quality and increased risks of flooding, landslides, and erosion.



## Fire Evacuation Vulnerability

Many factors affect the physical vulnerability of the Lake County population and property, including limited ingress/egress routes, proximity to wildlands, type of surrounding vegetation, property fire mitigation practices, structure type, and proximity to fire response agency stations. Potential losses include human life, property, and income-generating activities. Lake County's risk of potential losses is increased due to limited ingress/egress routes.

Lake County has three major ingress/egress roads: State Roads 20, 29, and 175. These highways mainly circle and provide access to Clear Lake. People living in a Very High Fire Hazard Severity Zone (FHSZ), particularly those living outside incorporated areas, are more physically vulnerable. Additionally, the unpredictability of wildfires means that residents may have limited evacuation warning time.

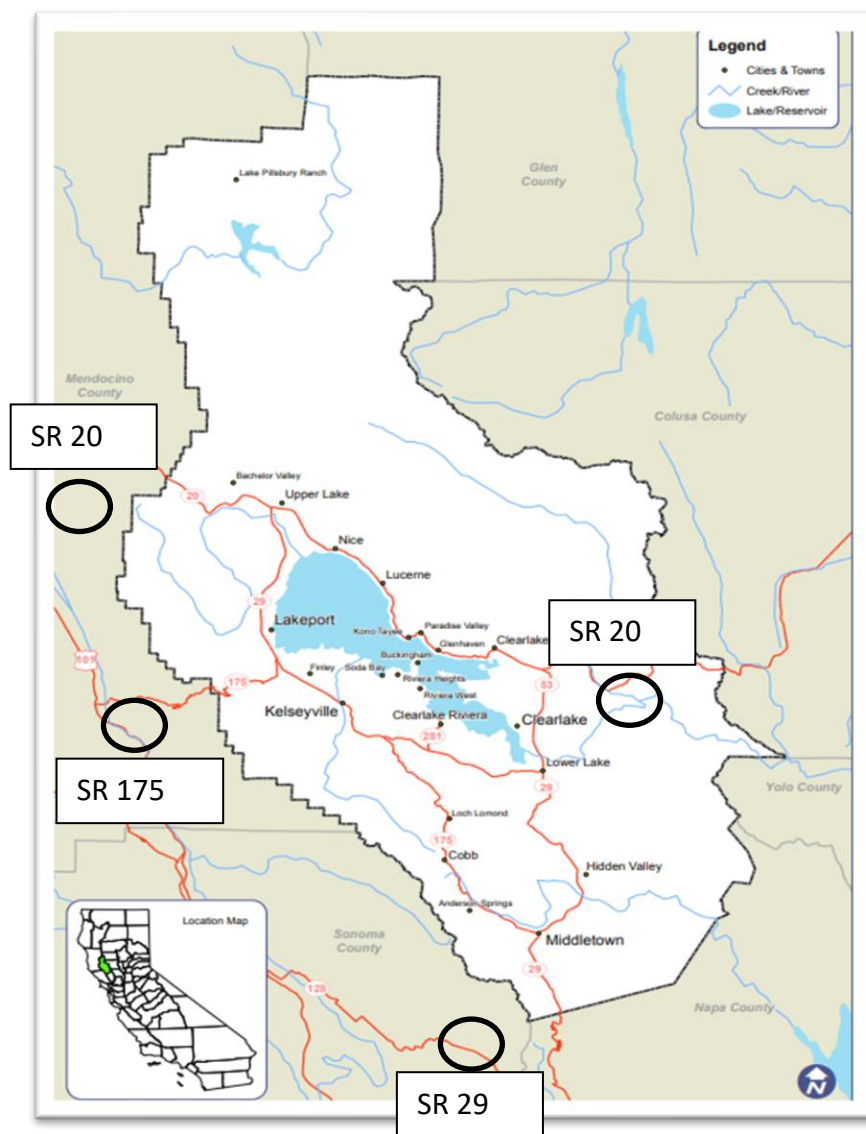


Figure 4: Evacuation Routes Out of the County



## Fire Hazard Severity Zones

The Fire Hazard Severity Zone (FHSZ) maps are developed using a science-based and field-tested model that assigns a hazard score based on the factors influencing fire likelihood and behavior by the State Fire Marshall. Many factors are considered, such as fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather.

### *State Responsibility Area Fire Hazard Severity Zones*

There are three levels of hazard in the State Responsibility Areas:

- Moderate
- High
- Very High

*Table 2: Community Risk Matrix - Community and Neighborhood FHSZ*

Community   Neighborhood	Fire Hazard Priority (predominant in the area)
Clearlake	Very High
Lakeport	Moderate / Non-Wildland
Finley	Non-Wildland / Non-Urban
Lucerne - Clearlake Oaks	Very High
Glenhaven	Very High
Spring Valley	Moderate / Very High
Clearlake Riviera	Very High
Cobb	Very High
Boggs Lake	Very High
Loch Lomond	High
Hidden Valley Lake	Moderate
Kelseyville	Moderate / Very High
Soda Bay	Very High
(Riviera Heights,	Very High
Kelseyville Riviera,	Very High
Riviera West, &	Very High
Buckingham)	Very High
Lower Lake	Moderate
Middletown	Very High
Nice- Upper Lake	Very High
Upper Lake	Very High & Moderate
Nice	Very High & High
Blue Lakes	Very High & High
Lake Pillsbury Area	Very High

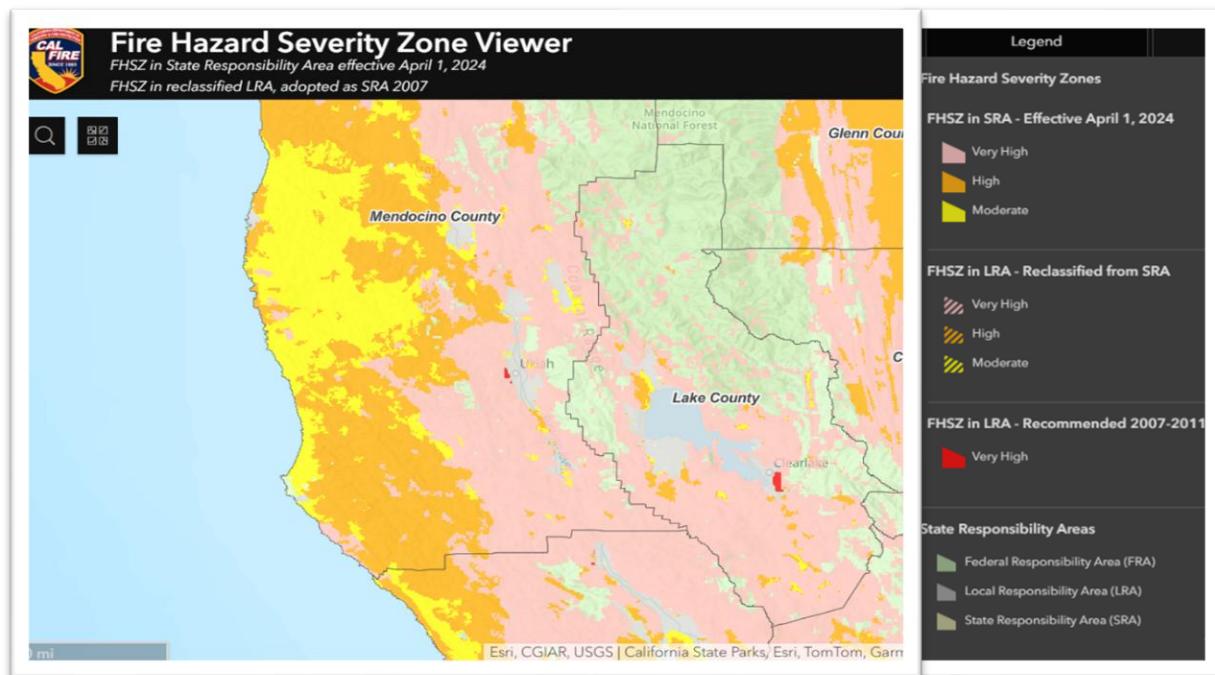


Figure 5: Fire Hazard Severity Zone Viewer<sup>15</sup>

### Local Responsibility Area Fire Hazard Severity Zones

The Fire Hazard Severity Zone Viewer<sup>16</sup>, from the Office of the State Fire Marshall in California, provides comprehensive information about the rollout of updated fire hazard severity zones within the Local Responsibility Areas (LRA) of Lake County, including the unincorporated areas, the City of Clearlake, and the City of Lakeport.<sup>17</sup> The maps aim to provide valuable information for land use planning, building code enforcement, and wildfire risk mitigation strategies. Public input can help identify concerns, validate data, and improve the understanding of how these zones may impact residents, businesses, and emergency response planning.

<sup>15</sup> <https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps>

<sup>16</sup> <https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones>

<sup>17</sup> <https://lakecountyca.gov/1800/Local-Responsibility-Area-LRA-Fire-Hazar>

## Lake County, CA LRA

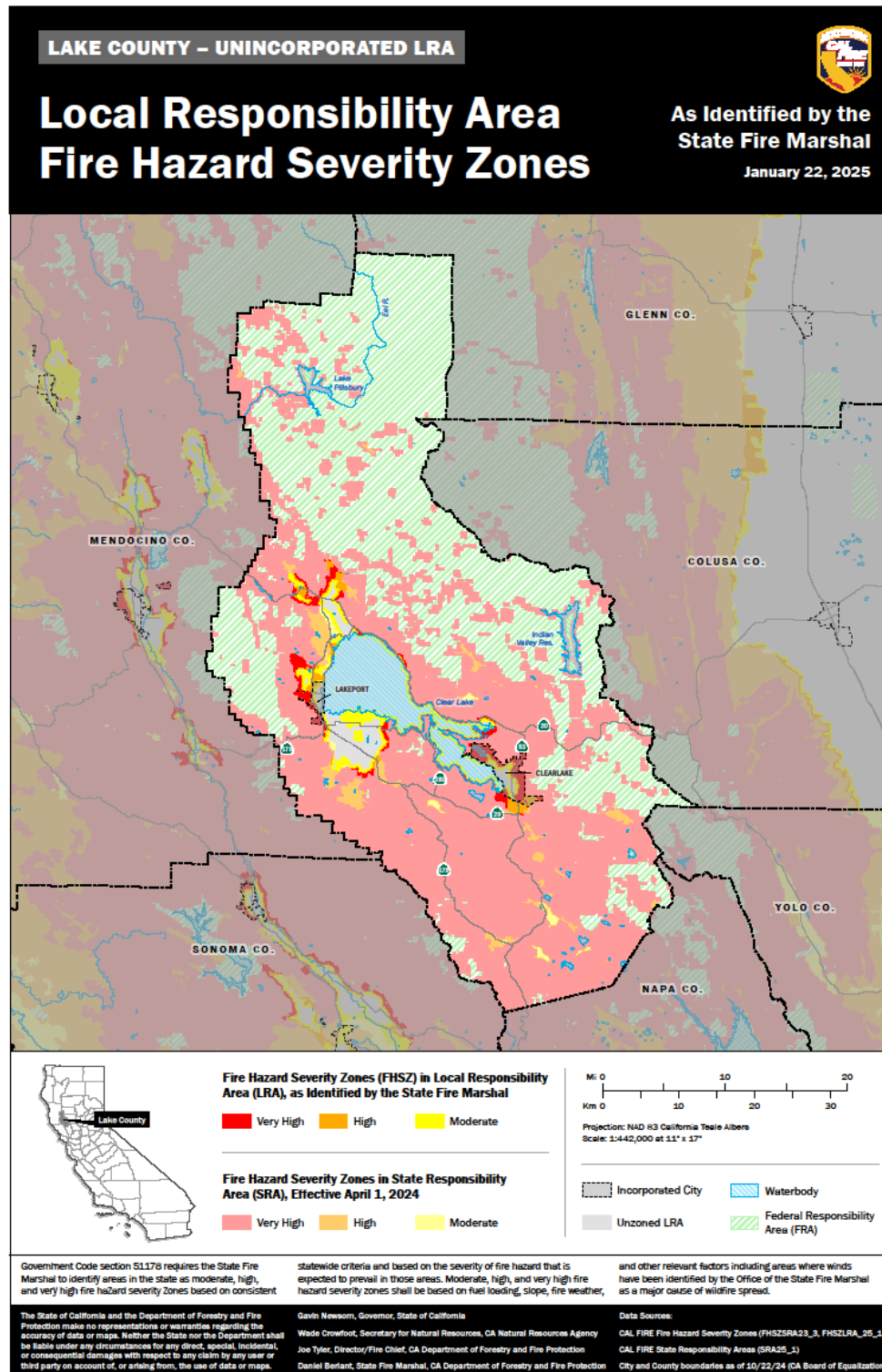


Figure 6: Lake County LRA Map

## Lakeport, CA LRA

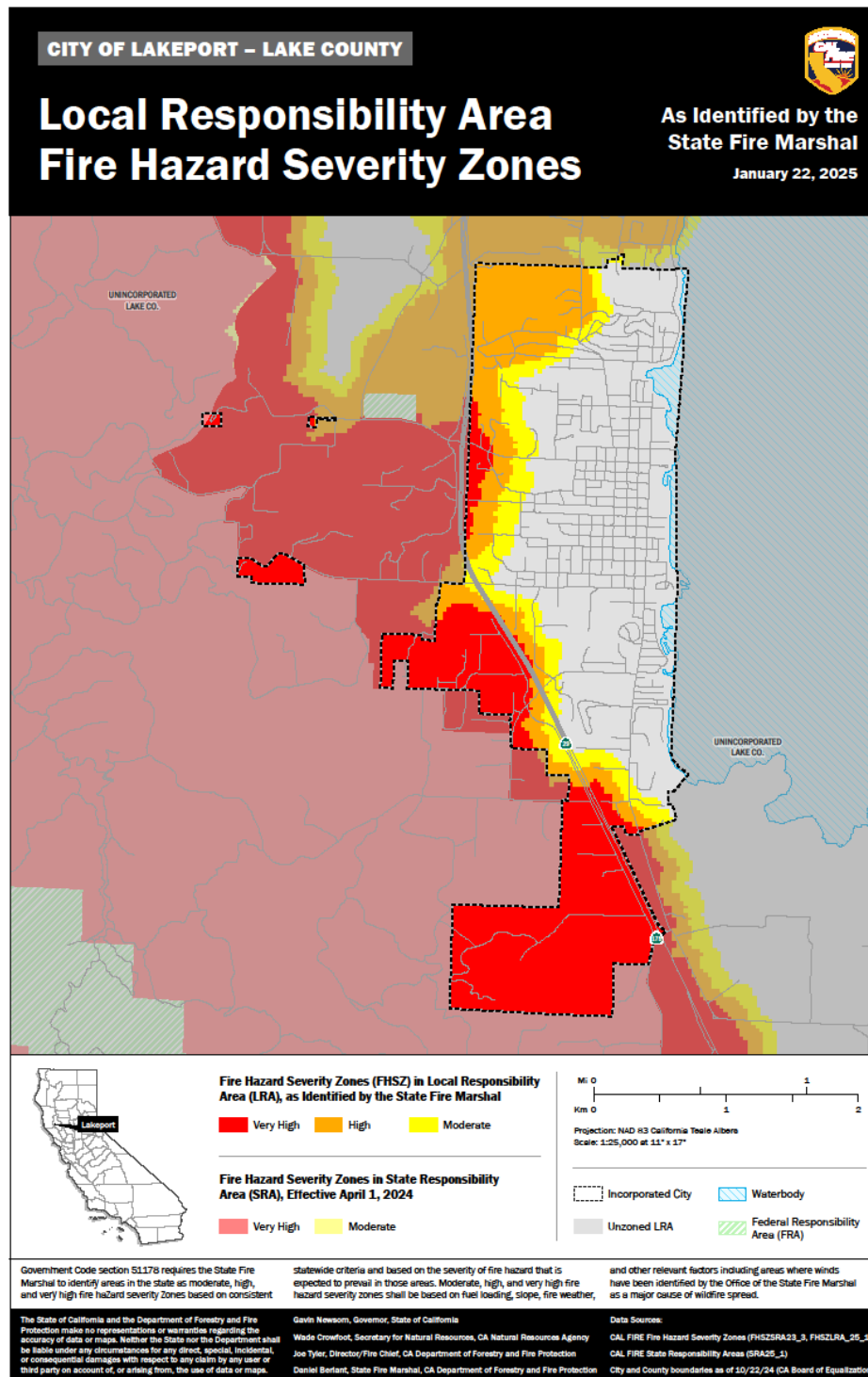


Figure 7: Lakeport LRA Map

## Clearlake, CA LRA

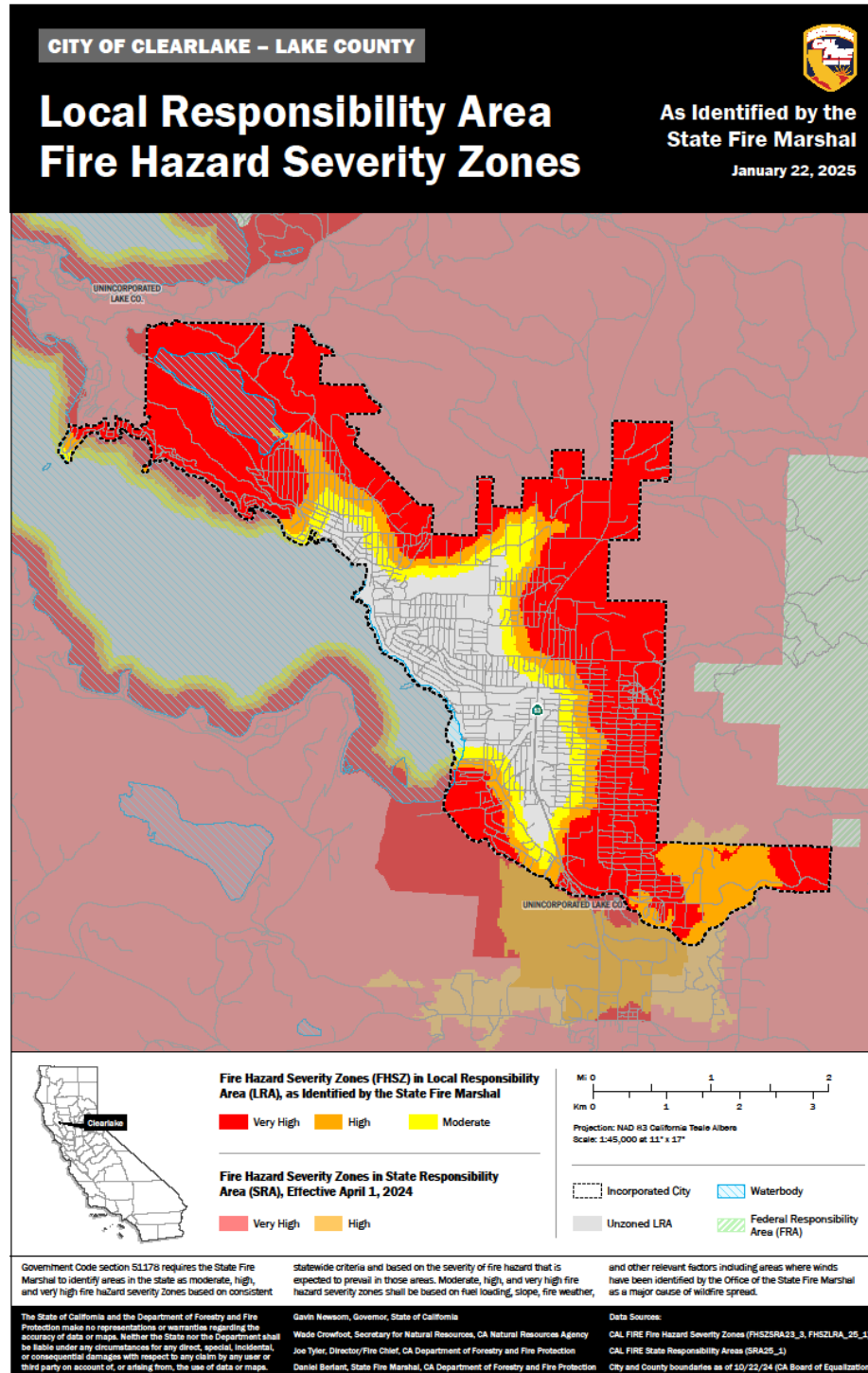


Figure 8: Clearlake LRA Map

## Critical Infrastructure

Wildfires disrupt county operations, tourism, and daily life, leading to casualties and destruction of buildings and infrastructure. Beyond physical damage, they create significant economic impacts. This includes disruptions in transportation and utility services, resulting in traffic delays and loss of essential resources like electricity and water. In Lake County, past wildfires have caused substantial damage, including loss of recreation and tourism, structural losses, decreased tax revenue, high firefighting costs, fatalities, and higher response costs that burden already strained local resources such as firefighting, sheltering, traffic control, EOC, etc.

*Table 3: Critical Infrastructure Identified*

Facility Category	Critical Facility Types	Lakeport	Clearlake	Unincorporated Lake County
<b>Hazardous Materials Facilities</b>	Hazardous Material	5	1	5
<b>At-Risk Population Facilities</b>	Assisted Living	4	2	0
	Child Care	2	4	2
	School	7	6	24
	Senior Apt Complex	2	2	0
	Shelter Site	1	1	3
<b>Essential Services Facilities</b>	Animal	2	2	4
	Commerce	6	8	2
	Communications	3	1	2
	Construction - Engineering	4	2	6
	Fire - Rescue	7	4	28
	Government	7	5	11
	Medical - Clinic	5	5	6
	Medical - Hospital	1	1	1
	Pump Stations	19	13	31
	Transportation	2	1	4
	Utilities	7	12	62
<b>Total Critical Infrastructure</b>		84	70	192



The State Highway System (SHS) is also an element of the critical infrastructure within Lake County. The SHS is the backbone of most county-level evacuation plans and often provides the only high-capacity evacuation routes from rural communities. In addition, state highways also serve as the main access routes for emergency responders and may serve as a physical line of defense (e.g., a firebreak, an embankment against floodwaters, etc.).

Caltrans plans how climate change and disasters like wildfires can impact SHS. High-concern areas appear along the SHS in southern Mendocino and Lake counties. The Caltrans Climate Change Vulnerability Assessment Report highlights the impact of wildfires experienced in Caltrans District 1.

“The Mendocino Complex Fire (comprised of the River and Ranch Fires) started in July 2018 and burned until September 2018 in Mendocino, Lake, Colusa, and Glenn Counties. The Complex caused the closure of SR 20, SR 175, and SR 29, caused resident evacuations, burned 459,000 acres, destroyed 280 structures, and killed one person. Triple-digit temperatures and high winds preceded the fires.”

### **Proposed Future Development**

Lake County has lost housing stock every year since 2015 due to wildfires. This housing shortage affects the community at all income levels. The County supports additional growth and development and incorporates measures to address potential hazards such as wildfires with the implementation and use of codes for decreasing fire threat, including PRC 4290 and 4291 regulations and home-hardening efforts based on the International Wildland Urban Interface Code. Notable proposed future developments include:

- The Guenoc Valley Project development, which proposes 1,400 single-family residential units, 500 workforce co-housing units, 850 hotel and resort rooms, commercial facilities, plus recreational facilities including a spa, golf course, equestrian facilities, polo grounds, a wilderness park, and two new wineries. The plan has alternative escape routes and on-site mitigations to suppress fire, and should be further considered as it fits into the regional evacuation planning.

Current proposed development projects in Lakeport include:

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

Current proposed development projects in Clearlake include:

- 2890 Old Highway 53 – 22-lot subdivision
- J&L 6673 Old Hwy 53, Clearlake, CA 95422 – Commercial mixed-use project
- 14775 Burns Valley Rd, Clearlake, CA 95422 – Sports complex
- 15837 18th Avenue – Affordable Housing Development of up to 80 units
- Airport Redevelopment Project – commercial mixed-use and residential development

### **Communities At Risk**

The following communities were designated Communities at Risk by the Lake County Fire Chiefs' Association, CAL FIRE (LNU), and U.S. Forest Service (Mendocino National Forest or MNF) in the Lake County Community Wildfire Protection Plan.<sup>18</sup> Communities were assigned a threat level between 1 and 3. Communities that are adjacent to federal lands are marked with an "(F)" immediately succeeding their name.

- "1" indicates the lowest threat - there are currently no communities within Lake County that are rated at 1.
- "2" indicates medium threat
- "3" indicates the highest threat

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<sup>18</sup> <https://lakecountyca.gov/DocumentCenter/View/14037/Lake-County-Community-Wildfire-Protection-Plan-042225>



Table 4: Community Ratings

Communities Rated 3	
Anderson Springs (F)	Lake Pillsbury – Homesites (F)
Benmore Valley (F)	Lake Pillsbury Ranch (F)
Blue Lakes (F)	Loch Lomond
Buckingham (F)	Lower Lake (F)
Clearlake (F)	Lucerne (F)
Clearlake Oaks	Middletown (F)
Clearlake Park	Morgan Valley (F)
Cobb (F)	Nice (F)
Coyote Valley	Noble Ranch
Donovan Valley (F)	Point Lakeview
Double Eagle (F)	Rice Fork – Lake Pillsbury (F)
Glenhaven	Riviera Heights (F)
Guenoc	Riviera West (F)
Harbin Hot Springs	Scotts Valley (F)
Hidden Valley Lake (F)	Soda Bay
Kelseyville (F)	Spring Valley (F)
Kelseyville Riviera	The Geysers (F)
Lake Pillsbury – Basin (F)	Twin Lakes
Lake Pillsbury – Dashiell's (F)	Westshore – Lake Pillsbury (F)

Communities Rated 2
Big Valley Rancheria
Finley
Kono Tayee
Lakeport
North Lakeport
Upper Lake (F)
Witter Springs (F)

# Existing Conditions Assessment

## Existing Lake County Planning

Throughout the Lake County Operational Area, several planning elements directly coordinate evacuation planning or support the evacuation process. Below are the key plans and programs established in Lake County.

- Lake County 2020 Emergency Operations Plan (EOP) | 2025 EOP Under Revision
  - Purpose: The 2020 Lake County Emergency Operations Plan (EOP) is designed to guide Lake County's response to significant emergencies, focusing on coordination among local, state, and federal agencies. The plan is rooted in California's Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS), ensuring alignment with broader emergency management protocols. It establishes structures, roles, and procedures for managing large-scale disasters, such as natural or technological incidents, while detailing specific organizational responsibilities to protect public health, property, and the environment.
  - Scope: The EOP's scope includes preparing for, responding to, and recovering from emergencies, as well as maintaining readiness through periodic reviews, training, and exercises.
  - Planning Agency: Lake County's Office of Emergency Services is the lead planning agency.
- Lake County 2020 EOP Annexes
  - Access and Functional Needs Annex
    - Purpose: The *Access and Functional Needs (AFN) Annex* of Lake County's Emergency Operations Plan (EOP) outlines protocols for supporting individuals with disabilities and those requiring additional assistance during disasters. Its purpose is to ensure that effective emergency communication, evacuation, transportation, and shelter services are accessible to AFN populations.
    - Scope: The scope includes providing resources and coordination with local health organizations, AFN coordinators, and other partners to meet these needs, covering essential functions like accessible transportation and AFN-compliant sheltering.
    - Planning Agency: Lake County's Office of Emergency Services is the lead planning agency.
  - Mass Care and Shelter Annex
    - Purpose: The *Mass Care and Shelter Annex* in Lake County's Emergency Operations Plan (EOP) is designed to ensure that essential support, including temporary food, water, shelter, and health services, is provided to residents and visitors affected by disasters. Its purpose is to protect the well-being of those impacted by guiding county agencies in effective emergency sheltering.

- practices
- Scope: The scope includes short-term sheltering (up to 30 days), coordinating resources with the Department of Social Services, American Red Cross, and local transit and health services, and addressing transportation, pet sheltering, and health needs in emergency situations
- Planning Agency: Lake County's Department of Social Services is the lead planning agency.
- Notification Annex
  - Purpose: Lake County Sheriff's Dispatch ("Central") is one of two Public Safety Answering Points within Lake County. All 9-1-1 calls originating in the unincorporated areas of Lake County and within the City of Lakeport are answered by the Sheriff's Office Central Dispatch Center. 9-1-1 calls originating in the City of Clearlake are answered by the Clearlake Police Dispatch Center, which maintains the second Public Safety Answering Point. Wireless 9-1-1 calls originating in Lake County are answered by the Sheriff's Office Central Dispatch Center, the California Highway Patrol's Ukiah Communications Center, or the Clearlake Police Department Dispatch Center, depending on the geographic location.
  - Scope: Lake County, California
  - Planning Agency: Lake County's Office of Emergency Services is the lead planning agency.
- Transportation:
  - Purpose: Transportation encompasses the means and equipment required to move goods and people between locations. The County's transportation resource support focuses primarily on coordinating activities that supplement emergency response agencies to safeguard the public. This Emergency Function (EF) sets priorities for allocating transportation resources, issuing transportation requests, managing traffic, repairing roads and highways, and coordinating transportation support operations with State agencies and neighboring jurisdictions in Mutual Aid Region II.
  - Scope: Lake County Operational Area
  - Planning Agency: Lake County's Department of Public Works is the lead planning agency.
- Wildland Fire:
  - Purpose: The purpose of this Contingency Plan is to outline priorities, responsibilities, and task assignments for coordinated response operations aimed at reducing impacts on life and property during major wildland-urban interface fire incidents within the Lake Operational Area (OA). This plan addresses the deployment of emergency services in response to extreme wildland fire conditions in these interface zones.
  - Scope: Lake County Operational Area
  - Planning Agency: Lake County Fire Chief's Association is the lead planning agency.

- Lake County Hazard Mitigation Plan (2023) | 2025 Lake County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) (2025 - Under Revision)
  - Purpose: Identifying and assessing risks posed by natural hazards and establishing long-term strategies for protecting people, property, and infrastructure. This plan aims to reduce the community's vulnerability through proactive measures, including policies, projects, and educational initiatives, to minimize the impacts of future disasters. This plan supports a resilient community prepared to withstand and recover from hazardous events by prioritizing mitigation actions. The Lake County HMP outlines the County's risk, vulnerability, and impact of wildfires on the community.
  - Scope: Unincorporated Lake County
  - Planning Agency: Lake County Office of Emergency Services. Lake County has an approved HMP from 2023 but is currently in the process of updating to a Multi-Jurisdiction Hazard Mitigation Plan (MJHMP), incorporating Clearlake and Lakeport as Jurisdictions. The 2025 MJHMP will incorporate information from the City of Lakeport Hazard Mitigation Plan and the City of Clearlake Hazard Mitigation Plan.
- Lake County Fire Protection District Community Wildfire Protection Plan (2025) | Lake County Community Wildfire Protection Plan (2023)
  - Purpose: The Lake County Fire Protection District Community Wildfire Protection Plan (CWPP) is a product of the Lake County Fire Protection District. The CWPP reflects community input on actions and projects that will assist residents and first responders in their efforts to protect lives, property, and the environment. Face-to-face engagement with citizens and local, state, and federal agencies was limited by the restrictions placed during the COVID-19 pandemic. Input was gathered primarily through virtual meetings, teleconferences, and individual phone calls. This report was created with the assistance of the Clear Lake Environmental Research Center (CLERC) and local, state, and federal fire personnel who provided community input and their expertise. The 2023 Lake County Community Wildfire Protection Plan (CWPP) is a product of the County of Lake, Lake County Fire Chief's Association (LCFCA), Lake County Fire Safe Council (LCFSC), and Lake County Resource Conservation District (LCRCD) and updates the approved 2009 version.
  - Scope: Lake County Fire Protection District
  - Planning Agency: Lake County Fire Protection District
- Coordinated Public Transportation Plan: Lake County (2021)
  - Purpose: Coordinated transportation is crucial for connecting people to social networks, employment, healthcare, education, social services, and recreational activities. Reliable transportation access is often challenging for vulnerable populations, including seniors, individuals with disabilities, and low-income residents. A coordinated transportation plan is essential to enhance access, improve service efficiency, and support independence for these groups. This plan establishes a unified, comprehensive strategy for public transportation services, focusing on the needs of three priority groups: 1) individuals with disabilities, 2) seniors, and 3) individuals with limited incomes. It outlines strategies to meet these needs and

- prioritizes delivery services to ensure equitable access.
  - Scope: Lake County, California
  - Planning Agency: Lake Area Planning Council
- Lake County Regional Transportation Plan (2022)
  - Purpose: The RTP is a long-range plan that is the primary guidance for the Lake Area Planning Council (APC), the Regional Transportation Planning Agency (RTPA) for the Lake County region. RTP is broken into elements that address multiple modes of transportation, including the state highway system, local streets and roads, public transit, active transportation, aviation, and tribal transportation.
    - State Highway System: This element analyzes issues involving the five State routes lying either all or partially within the Lake County region, including State Route (SR) 20, SR 29, SR 53, SR 175, and SR 281.
    - Local Streets and Roads: Local transportation systems are covered in this element, centered around streets and roads located within the cities of Clearlake and Lakeport, as well as those lying within the unincorporated regions of the County
    - Public Transit: This element analyzes fixed route bus services provided by the Lake Transit Authority and related programs assisting elderly or other target populations, such as those provided by the Consolidated Transportation Services Agency (CTSA) for the region known as Lake Links.
    - Tribal Transportation: This section of the RTP evaluates transportation issues and projects impacting the tribal lands of the seven recognized tribes.
  - Scope: Lake County, California
  - Planning Agency: Lake Area Planning Council
- Lake County General Plan (2008) | Safety Element Memo (2024 – 2025 Development)
  - Purpose: The Lake County General Plan (2008) serves as the comprehensive blueprint for guiding the county's physical development, resource conservation, and community well-being. Its purpose is to establish a cohesive framework that directs land use decisions, infrastructure development, and environmental stewardship to promote sustainable growth and enhance the quality of life for residents. As a component of the General Plan Element, the Safety Element was in development and will result in a Memo. Components of the Memo were reviewed as there was ongoing coordination with the team responsible for creating the Memo, since the topics and results align with one another.
  - Scope: The plan encompasses several key elements, including land use, housing, transportation, public facilities, health and safety, noise, open space, conservation, geothermal resources, water resources, and agricultural resources. Each element outlines specific goals, policies, and implementation measures tailored to address the county's unique characteristics and needs. By integrating these components, the General Plan provides a strategic approach to managing growth, preserving natural resources, and ensuring the long-term prosperity of Lake County.
  - Findings: The planning team conducted a Lake County Evacuation Study and produced a memo. Three of the five scenarios were focused on Wildfires and the



impacts on evacuations as displayed in Figure 9 below: Wildfire: Ranch Fire/ Mendocino Complex Fire Scenario, Wildfire: Valley Fire Scenario, and Wildfire: Rocky Fire/ Jerusalem Fire Scenario. Based on a review of major roadways in Lake County, the team identified likely evacuation routes as state routes (SR) throughout the county, including SR-20, SR-29, SR-53, SR-175, and SR-281.

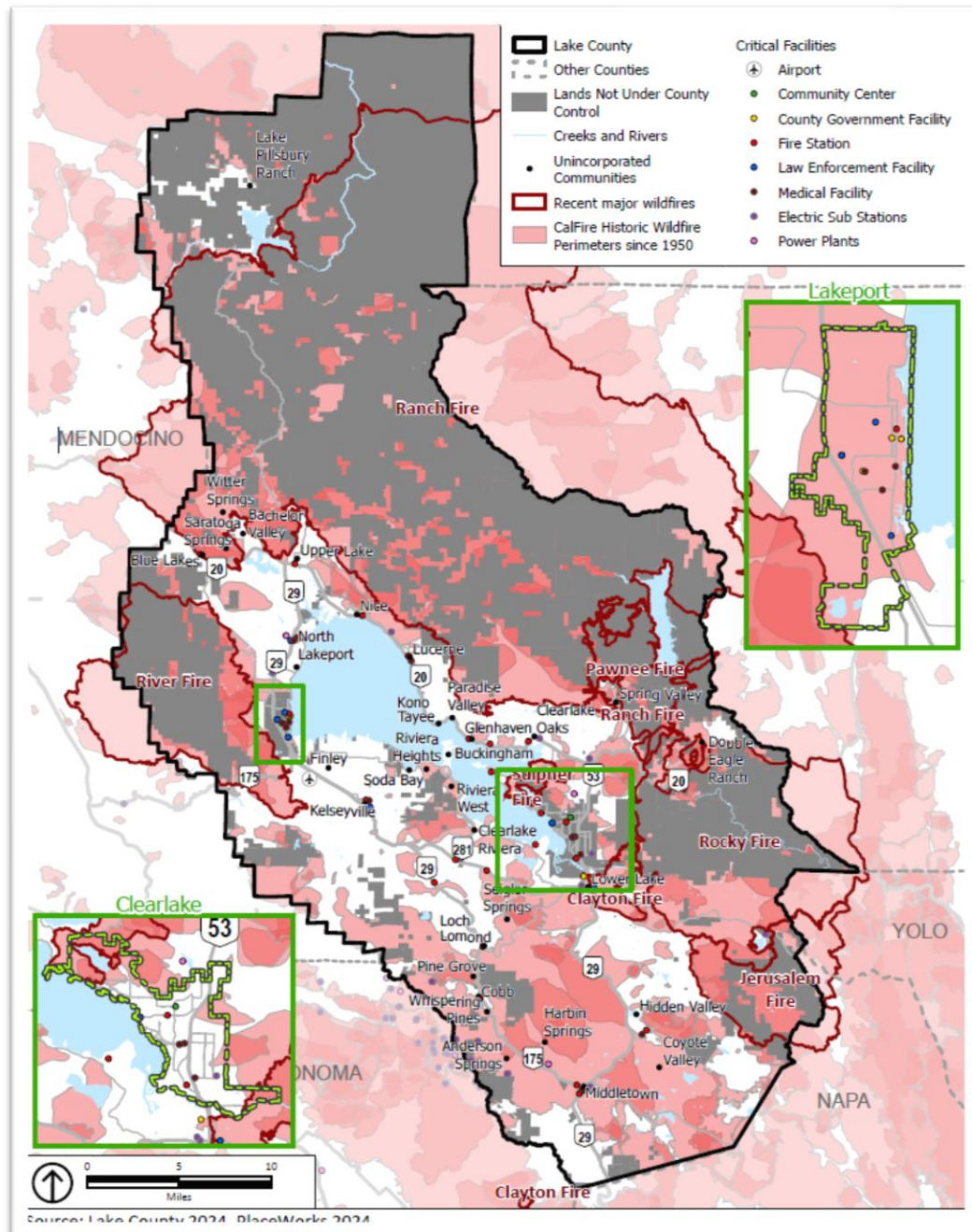


Figure 9: Lake County General Plan Recent Major Wildfire Perimeters

- Soda Bay Evacuation Plan (2024)
  - Purpose: This evacuation plan is designed to assist in short-term disaster preparedness and to plan for improvements that will facilitate future evacuation-related needs within the immediate Soda Bay region.
  - Scope: The Soda Bay Corridor consists of Soda Bay Road, State Route 281 (Soda Bay Road turns into SR 281 from Konocti Bay Road to SR 29), Point Lakeview Road, and the connecting routes. These roads serve as the evacuation route for the communities of Soda Bay, Kelseyville Riviera, Konocti Shores, Riviera West, Buckingham, Riviera Heights, and other neighborhoods/communities
  - Planning Agency: The plan was prepared in close coordination with Lake County Public Works, the Konocti Fire Safe Council, and Neighborhood Associations
- Caltrans Climate Change Vulnerability Assessment Report: District 1 (2019)
  - Purpose: Caltrans is actively working to assess the potential climate change vulnerabilities of the State Highway System (SHS). This report represents the latest phase of that effort, identifying sections of the SHS that may be susceptible to various climate-related stressors and highlighting Caltrans processes that might need adjustments in response. In planning for climate change, Caltrans must consider the SHS's critical role during disasters, as it forms the foundation of many county-level evacuation plans and often serves as the primary high-capacity evacuation route for rural communities.
  - Scope: Caltrans District 1
  - Planning Agency: Caltrans
- Konocti Unified School District (KUSD) Red-Flag Project 2024
  - Purpose: The KUSD Red-Flag Project 2024 aims to enhance emergency preparedness for Konocti Unified School District (KUSD) during Red Flag fire weather events. Its primary goal is to ensure student and faculty safety by coordinating standby transportation resources for potential evacuations in collaboration with the Lake County Fire Protection District and other partners.
  - Scope: The project focuses on having a percentage of KUSD bus drivers and buses on standby during National Weather Service-issued Red Flag warnings for Lake County. It also explores the possibility of involving additional transportation resources, such as Lake Transit, to support evacuation needs. The initiative sets a precedent for other districts to adopt similar preparedness measures, emphasizing effective and safe evacuation during critical fire-weather conditions.

# Planning Regulations and Guidance

As part of the Existing Conditions Assessment, relevant planning regulations and guidance documents that shape evacuation planning were reviewed.

- California Department of Transportation's Rural Transit Emergency Planning Guidance (2008)
  - Purpose: The Rural Transit Emergency Planning Guidance aims to improve the preparedness of rural transit agencies to handle emergencies, including natural disasters, accidents, and security threats. It provides best practices for emergency planning, response, and recovery, tailored to the unique needs of rural transit systems. The guidance emphasizes enhancing collaboration between transit agencies, first responders, and emergency managers to ensure coordinated and effective actions during emergencies.
  - Scope: The guidance covers four key phases of emergency management: prepare, prevent, respond, and recover. It outlines steps for risk assessments, creating emergency plans, and conducting drills to improve readiness. It also includes strategies for preventing risks, responding to incidents using standardized systems like NIMS/SEMS, and recovering through continuity planning and service restoration. By integrating these principles, the guidance helps rural transit agencies build resilient and effective emergency operations.
- California Office of Emergency Services' Integrated Evacuation Planning for Jurisdictions and Individuals with Access and Functional Needs
  - Purpose: This document aims to empower local jurisdictions and individuals with access and functional needs to create effective evacuation plans that serve the entire community and provide guidance, best practices, and resources that enhance the inclusivity and comprehensiveness of evacuation strategies.
  - Scope: The guide outlines inclusive planning best practices, emphasizing collaboration with community stakeholders to develop evacuation plans that address the diverse needs of all individuals. It offers personal planning resources for individuals with access and functional needs, including tips on recognizing regional hazards, developing personal evacuation plans, and preparing necessary items for emergencies. The guide also discusses the importance of establishing contracts with transportation providers and neighboring jurisdictions to ensure accessible evacuation options are available during emergencies.
- California Assembly Bill-781 (AB-781): Accessibility to emergency information and services, emergency shelters, and people with pets.
  - This bill requires a county, on or before July 1, 2024, to update its emergency plan to designate emergency shelters that accommodate persons with pets. The bill requires a city that has previously adopted an emergency plan designating emergency shelters to update its emergency plan to designate



emergency shelters able to accommodate persons with pets on or before July 1, 2024.

- California Assembly Bill- 1638 (AB-1638): The bill requires local agencies to use data by January 1, 2025, as specified, to determine which languages are spoken jointly by 5% or more of the population in its jurisdiction and to reassess that data every 5 years. The bill imposes various requirements on the manner in which information is provided in languages other than English. The bill also requires the Office of Planning and Research to survey a sample of local agencies every 3 years to determine compliance with these requirements and to report its findings to the Legislature.
- California Assembly Bill- 2645 (AB-2645): A county, including a city and county, shall, upon the next update to its emergency plan, integrate access and functional needs into its emergency plan by addressing, at a minimum, how the access and functional needs population is being served.
- Lake County Code of Ordinances
  - Purpose: Ordinance Chapter 6 Civil Defense provides a structured approach for managing emergencies and disasters in Lake County and defines the roles and responsibilities of county officials and agencies during such events
  - Scope: The ordinance outlines the procedures for declaring a local emergency, including the authority of the Director of Emergency Services to make such proclamations. It specifies the requirement for the Board of Supervisors to ratify the emergency proclamation within seven days. The chapter details the organization of the county's emergency services, including the establishment of an emergency council and the roles of various county departments in emergency preparedness and response.
- Caltrans Memo: Evacuation Route Design Guidance -Design Information Bulletin 93<sup>19</sup>
  - Purpose: To provide guidance on design procedures and recommendations for developing projects on evacuation routes, primarily for rural communities where access to and from the community is limited and where a state highway will be used as an evacuation route.
  - Considerations:
    - Lanes: Parking lanes may be cleared of vehicles during an emergency and used for vehicular movement. Additionally, a Class II bicycle lane, especially with a buffer, may provide additional width to serve emergency purposes and still satisfy Complete Streets goals. Wider shoulders may also be used to compensate for narrow lanes. If not used as an extra evacuation lane, shoulder widths should be such that vehicles that break down can pull out of the travel lane.
    - Intersections: Intersections present operational and geometric challenges to evacuation routes. The need to move a large volume of traffic in one direction may not necessarily align with non-emergency use.

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<sup>19</sup> Evacuation Route Design Guidance, Caltrans Dec. 2020  
Lake APC

- Roundabouts provide opportunities to maintain a uniform traffic flow in the evacuation route, but consideration must be given to volumes and vehicle size so that the roundabout does not become a bottleneck.
- Note that power may not be available to operate the signal, so signage or supplemental power sources should be made available.
- Signage: The use of Changeable Message Signs to provide direction and information to the evacuating traffic can be very effective, but this takes time to deploy and may be unavailable during the emergency. The installation of signs on turnable posts that can be turned to display their message during the emergency may be a more effective solution. Sign locations should be visible but not impede traffic operations. Use highly retroreflective sheeting for sign panels, as power may not be available during the evacuation. Metal posts are preferred due to their inflammable nature.
- National Response Framework<sup>20</sup> (Fourth Edition, October 2019)
  - Purpose: The National Response Framework (NRF) sets the strategy and doctrine for how the whole community builds, sustains, and delivers the response core capabilities.
  - Scope: The NRF is a framework for all types of threats and hazards, ranging from accidents, technological hazards, natural disasters, and human-caused incidents. This Framework is utilized to implement NIMS and describes whole community coordinating structures and response activities; in particular, the Framework outlines government, private sector, and nongovernmental roles to reinforce collaborative incident response.
  - The seven community lifelines represent only the most basic services a community relies on and which, when stable, enable all other activity within a community. Two key lifelines for this review are:
    - Safety and Security: Law enforcement and government services, as well as the associated assets that maintain communal security, provide search and rescue, evacuations, and firefighting capabilities, and promote responder safety.
    - Transportation: Multiple modes of transportation that often serve complementary functions and create redundancy, adding to the inherent resilience in overall transportation networks. Transportation infrastructure generally includes highway/roadways, mass transit, railway, aviation, maritime, pipeline, and intermodal systems.

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<sup>20</sup> [https://www.fema.gov/sites/default/files/documents/NRF\\_FINALApproved\\_2011028.pdf](https://www.fema.gov/sites/default/files/documents/NRF_FINALApproved_2011028.pdf)

# Population Information and References

Throughout the Lake County Operational Area, there are several communities. It is important to understand the population, demographics, and overall profile of each community. The following references were used to create the community profiles.

- 2020 Census Data<sup>21</sup>
  - Purpose: The 2020 Census provides a comprehensive and official count of the population in Lake County, California, as part of the nationwide effort conducted by the U.S. Census Bureau every ten years. The primary purpose of the census is to ensure accurate representation and fair distribution of resources at the federal, state, and local levels. The data collected is critical for apportioning congressional seats, redistricting, allocating federal and state funding, and informing public policy decisions that affect communities across Lake County.
  - Scope: The 2020 Census includes data collection and reporting across several key areas:
    - Population Count and Demographics
    - Housing Data
    - Geographic and Community Insights
  - Unlike the American Community Survey (ACS), which provides ongoing estimates of economic and social characteristics, the 2020 Census focuses on a full population count to establish a foundational dataset used for policy-making, infrastructure planning, public services, and community development for the next decade. The data influences decisions on funding allocations for education, healthcare, transportation, and emergency response services, ensuring that Lake County receives appropriate resources based on its population needs.
- County Level Data (ACS Demographics- 2023)<sup>22</sup>
  - Purpose: The purpose of the American Community Survey (ACS) is to provide detailed demographic, economic, housing, and social data for Lake County, California, on an annual basis. The survey serves as a critical resource for local government agencies, businesses, researchers, and community organizations to make informed decisions regarding policy, economic development, public services, and resource allocation. Unlike the decennial census, which provides a snapshot every ten years, the ACS delivers continuous, up-to-date data, ensuring that communities like Lake County have access to the most relevant insights for planning and decision-making.
  - Scope: The ACS collects and reports data across several key categories:
    - Demographic Characteristics
    - Economic Indicators

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<sup>21</sup> <https://data.census.gov/all?q=Lake+County,+California>

<sup>22</sup> <https://data.census.gov/all?q=Lake+County,+California>

- Housing Data
- Social Factors
- Geographic and Mobility Trends
- The ACS data is released in 1-year and 5-year estimates, with 1-year estimates providing more current data for larger populations and 5-year estimates offering higher accuracy and reliability for smaller communities like those within Lake County. This information supports data-driven decision-making in areas such as urban planning, infrastructure development, public health initiatives, economic strategies, and community services.
- Glenhaven, CA: Compare Cost of Living, Education, Income, Population, and More.<sup>23</sup>
  - Purpose: This website provides a comprehensive profile of Glenhaven, California, highlighting key demographic, economic, housing, and geographic characteristics. It serves as a resource for residents, local government officials, businesses, and researchers who seek insights into the community's structure and trends.
  - The scope of this profile includes:
    - Demographic Data
    - Economic Insights
    - Housing Information
    - Geographic Context
    - Community Features
  - This information is gathered from publicly available sources and aims to support data-driven decision-making for urban planning, economic development, and community engagement efforts in Glenhaven. The data is periodically updated to ensure accuracy and relevance for stakeholders.
- Spring Valley Census Designated Place (CPD) (Lake County), California Census Data<sup>24</sup>
  - Purpose: This website provides an overview of the demographic, economic, housing, and social characteristics of Spring Valley CDP (Lake County), California, using data sourced from the U.S. Census Bureau. This profile serves as a valuable resource for researchers, policymakers, businesses, and residents seeking to understand the community's composition, trends, and needs.
  - Scope: The scope of this profile includes:
    - Demographics
    - Economic Data
    - Housing Characteristics
    - Social Characteristics
  - This information is intended to support data-driven decision-making in areas

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<sup>23</sup> <https://places.us.com/california/glenhaven/>

<sup>24</sup> [https://data.census.gov/profile/Spring\\_Valley\\_CDP\\_\(Lake\\_County\),\\_California?g=160XX00US0673690](https://data.census.gov/profile/Spring_Valley_CDP_(Lake_County),_California?g=160XX00US0673690)

such as urban planning, public policy, business development, and community services within Spring Valley CDP. The data reflects the most recent census estimates and is subject to periodic updates to ensure accuracy and relevance.

- Loch Lomond, CA: Compare Cost of Living, Education, Income, Population, and More.<sup>25</sup>
  - Purpose: This website provides a comprehensive profile of Loch Lomond, California, outlining key demographic, economic, housing, and geographic characteristics. It serves as a resource for residents, businesses, policymakers, and researchers seeking insights into the community's composition, trends, and development opportunities.
  - The scope of this profile includes:
    - Demographic Data
    - Economic Insights
    - Housing Information
    - Geographic Context
    - Community Features
  - This information is compiled from publicly available sources and aims to support data-driven decision-making for urban planning, economic growth, and community development in Loch Lomond. The data is periodically updated to reflect the latest insights and trends affecting the area.
- Census profile: Clearlake Riviera Census County Division (CCD), Lake County, CA<sup>26</sup>
  - Purpose: This profile provides an in-depth statistical overview of Clearlake Riviera CCD, Lake County, California, using data from Census Reporter and other public sources. The purpose of this report is to equip residents, local officials, businesses, and researchers with key insights into the community's demographics, economy, housing, and social characteristics. By analyzing these data points, stakeholders can make informed decisions regarding urban planning, public services, economic development, and resource allocation in the area.
  - Scope: The profile covers multiple key aspects of Clearlake Riviera CCD, including:
    - Demographic Insights
    - Economic Conditions
    - Housing & Living Conditions
    - Educational & Social Indicators
    - Geographic & Community Overview
  - The data used in this profile is periodically updated to reflect the most recent

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<sup>25</sup> <https://places.us.com/california/loch-lomond/>

<sup>26</sup> <https://censusreporter.org/profiles/06000US0603390505-clearlake-riviera-ccd-lake-county-ca/>

trends, offering an accurate and current snapshot of Clearlake Riviera CCD. This information serves as a valuable tool for policymakers, businesses, and community organizations working to enhance local development, economic growth, and overall quality of life in the region.

- DATAUSA: Nice, CA<sup>27</sup>
  - Purpose: This data profile provides a detailed overview of Nice, California, offering insights into its population, economy, housing, and social characteristics. The purpose of this report is to support decision-making for residents, businesses, policymakers, and researchers by presenting key statistical information about the community. By leveraging data from Data USA, this profile helps identify trends, opportunities, and challenges that shape the area's development.
  - Scope: This profile covers several core aspects of Nice, CA, including:
    - Population & Demographics
    - Economic Overview
    - Housing & Living Conditions
    - Education & Social Factors
    - Geographic & Infrastructure Insights
  - The data presented in this profile is sourced from public databases and is regularly updated to reflect the most recent trends and figures. This information is valuable for urban planning, economic development, investment strategies, and community initiatives aimed at improving the quality of life in Nice, California.
- Lake Pillsbury, CA Demographics, Point2Homes<sup>28</sup>
  - Purpose: This profile provides a detailed statistical analysis of Lake Pillsbury, California, using demographic and housing data from Point2Homes. The goal of this report is to offer residents, real estate professionals, investors, policymakers, and researchers valuable insights into the area's population, housing trends, and socioeconomic conditions. This information can be used to support real estate decisions, urban planning, infrastructure development, and community improvement efforts in Lake Pillsbury.
  - Scope: The profile includes key data points covering:
    - Demographic Composition
    - Housing Market & Real Estate Trends
    - Community & Lifestyle Indicators
    - Geographic & Infrastructure Insights
  - The data presented in this profile is periodically updated to reflect market trends and demographic changes, making it a valuable resource for those

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<sup>27</sup> <https://datausa.io/profile/geo/nice-ca>

<sup>28</sup> <https://www.point2homes.com/US/Neighborhood/CA/Lake-Pillsbury-Demographics.html>

seeking a comprehensive understanding of Lake Pillsbury's residential and economic landscape.

## Current Training, Drills, and Exercises

Over the past decade approximately 70% of the county's land mass has burned, therefore, training and exercises have been real-life with the addition of annual tabletop exercises that include evacuation. To date, there has not been a drill or full-scale exercises within communities.

## Current Communications and Preparedness

Lake County has several community preparedness, alert, warning, and communication programs. The following is a list of available resources that can help facilitate communications/preparedness:

### Genasys Protect

Current Evacuation Zones established for Lake County, California, are identified with prefixes for the communities throughout the county. The Zone numbers are established with the lowest to the north and the highest numbers to the south. Figure 10 shows the zones established in Lake County. Lake County has a Know Your Zone campaign for residents and visitors to know their evacuation zone. The Zones can be found by entering an address into the site, as seen in Figure 11, and found at <https://Ready.LakeCountyCA.gov>.

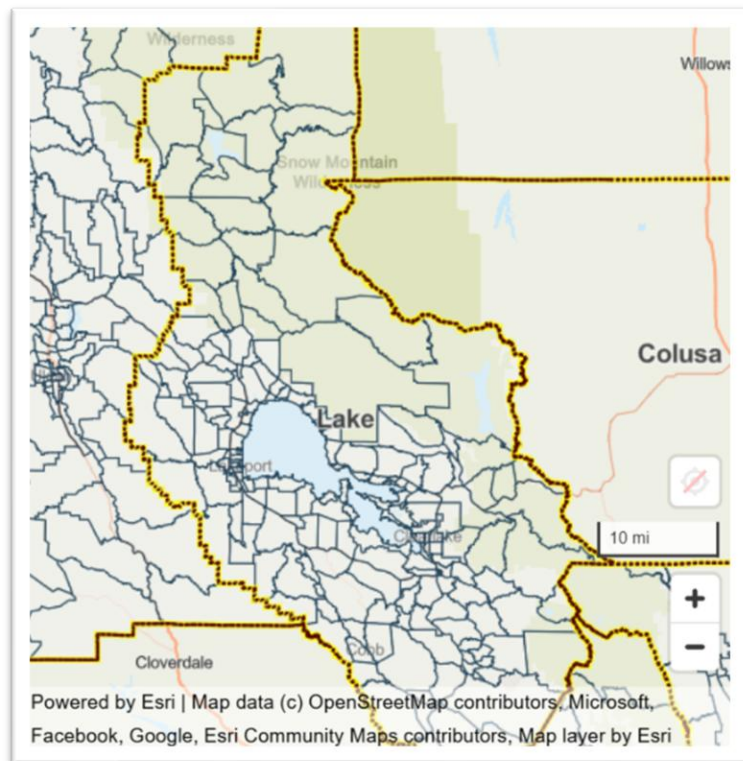


Figure 10: Lake County Evacuation



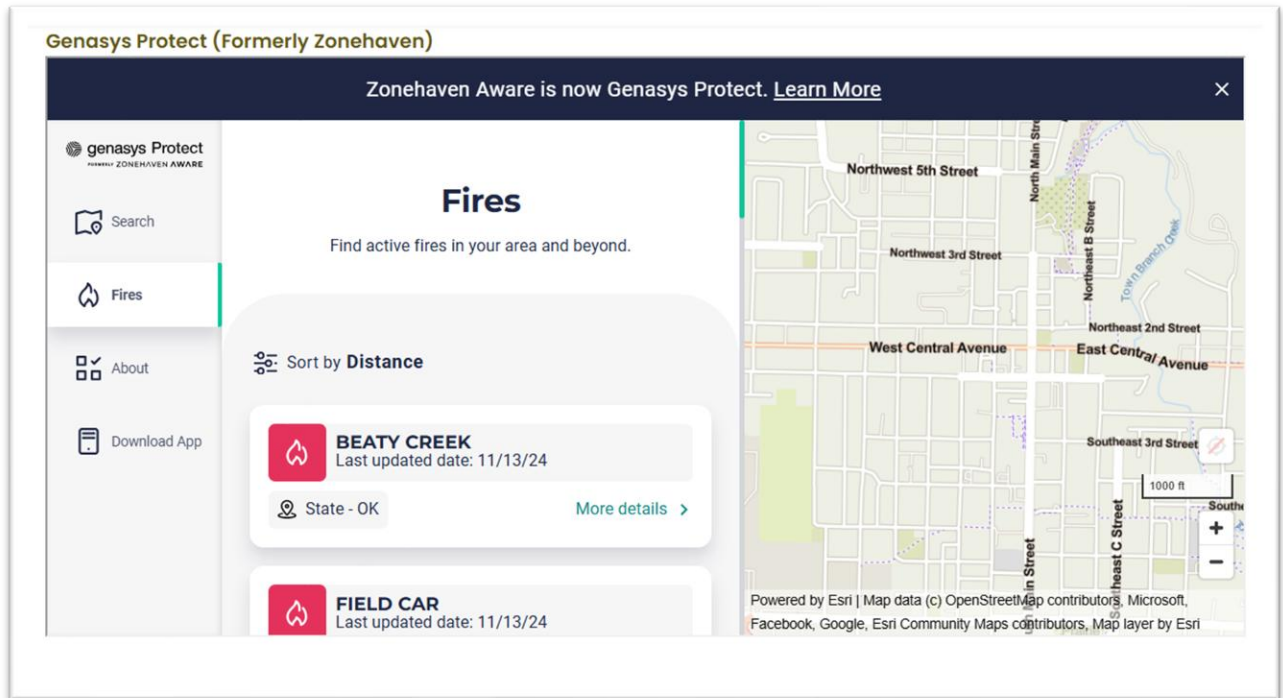


Figure 11: Genasys Protect Map

## Caltrans

Caltrans has a [QuickMap](https://quickmap.dot.ca.gov)<sup>29</sup> to check road closures, road conditions during emergencies, and to coordinate with law enforcement to ensure accurate road information is posted for public use.

## Ready Lake County

Preparedness information and non-emergency response information are available online at <https://Ready.LakeCountyCa.gov>.

## LakeCoAlert

Lake County's official emergency notification system provides critical alerts via phone calls, text messages, emails, and public broadcast systems. Managed by the Lake County Sheriff's Office and Office of Emergency Services (OES), it enables officials to issue geographically targeted warnings and countywide alerts during major emergencies.

- Lake Co Alerts will utilize these zone numbers, as found in Genasys Protect, to issue targeted warnings, evacuation orders, and shelter-in-place advisories.
- While landline numbers are automatically included, residents and visitors are encouraged to register their cell phones, VoIP numbers, and email addresses to ensure they receive important updates.
- LakeCoAlerts is integrated with the *Integrated Public Alert and Warning System (IPAWS)*; it can also broadcast messages through the *Emergency Alert System (EAS)* and *Wireless Emergency Alerts (WEA)*.

<sup>29</sup> <https://quickmap.dot.ca.gov>.



### **Emergency Alert System EAS**

The Emergency Alert System (EAS) is a dedicated system that interlinks all commercial radio and television stations in Mendocino and Lake Counties. A direct transmitter in the Sheriff's Dispatch Center in Mendocino County can activate this system. Special countywide advisories and warnings can be issued on a live air feed during major emergencies if necessary.

### **Clearlake NIXLE Information**

Clearlake utilizes NIXLE as a dedicated system that interlinks registered cell phone holders. During major emergencies, special advisories and warnings can be issued to an individual's cell phone.

### **Integrated Public Alert Warning System**

IPAWS The Integrated Public Alert Warning System (IPAWS) is a dedicated system that interlinks all cell phone users in a geographical area within Lake County. If necessary, special countywide advisories and warnings can be issued during major emergencies.

### **Redwood Coast Regional Center**

RCRC amplifies LakeCoAlerts through their Everbridge Reverse 911 and will activate individual phone calls to their clients and vendors through service coordinators.

### **Reverse Notification Systems**

The local school districts utilize a communication tool to alert parents, guardians, students, and staff about emergencies, school closures, or important updates. It operates by sending out mass notifications via phone calls, text messages, emails, and sometimes through social media platforms in urgent situations.

### **California Emergency Services Radio System**

California Governor's Office of Emergency Services (OES) maintains three statewide microwave inter-tied communications systems with dial-in access in the North Coastal Area: Mt. Pierce in Humboldt County, Red Mountain in Lake County, and Laughlin Ridge in Mendocino County.

# Analysis of Existing Transportation and Evacuation Routes

## Evacuation Zones

In Lake County, California, evacuation zones are systematically organized to enhance emergency response and public safety during wildfire incidents. These zones are designated with unique identifiers and are managed through platforms like Genesys Protect, which provides real-time status updates and critical notifications. Zone numbers are established with the lowest to the north and the highest numbers to the south. The Zones can be found by entering an address into the site at <https://Ready.LakeCountyCA.gov>.

- **Zone Identification:** Each zone is assigned a specific code, such as "MNF-E024," representing a particular geographic area within the county.
  - MNF – Mendocino National Forrest
  - UPP – Upper Lake
  - LAK – Lakeport
  - NIC – Nice
  - LUC – Lucerne
  - CLE – Clearlake
  - CLO – Clearlake Oaks
  - KEL – Kelseyville
  - LOW – Lower Lake
  - COB – Cobb
  - MID – Middletown
  - HID – Hidden Lake
- **Search Functionality:** Users can quickly access relevant information about their area by entering an address or zone ID into the search bar.
- **Status Indicators:** Zones are monitored continuously, with statuses indicating current conditions:
  - Normal: No active incidents reported.
  - Evacuation Warning: Potential threat identified; residents should prepare for possible evacuation.
  - Evacuation Order: Immediate threat; residents must evacuate promptly.
- **Online Map:** Residents can view an interactive map on the Genasys Protect website, allowing them to locate their specific zone and check its current status.

By utilizing Genasys Protect, Lake County has the ability to provide real-time information for residents to:

- **Stay Informed:** Regularly check the status of your zone, especially during high-risk periods, to stay informed about potential threats.
- **Emergency Preparedness:** Familiarize yourself with your zone's boundaries and have a clear evacuation plan in place.
- **Notifications:** Sign up for alerts from local authorities to receive timely updates about changes in your zone's status.

## Evacuation Routes

Evacuation Routes in Lake County will depend on the reason for evacuation and the determination of which direction the evacuees need to travel. The potential evacuation routes identified in this analysis are designated based on roadway classification. This does not ensure that these routes are accessible, are the preferred evacuation routes in all situations, or are the conditions of the roadway. Always follow the instructions of emergency personnel.

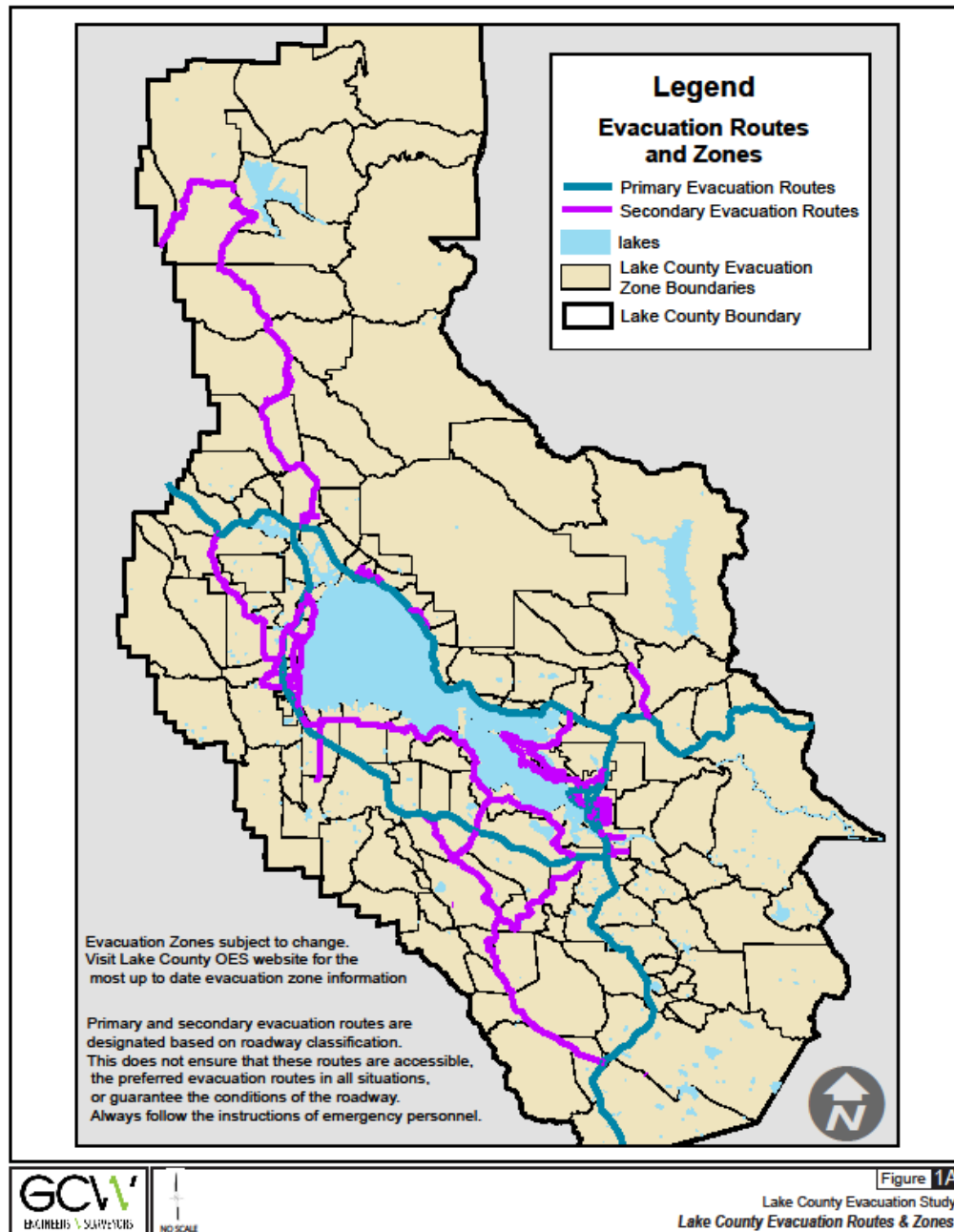


Figure 13: Lake County Potential Evacuation Routes

## *Potential Primary Evacuation Routes*

The identification of the potential primary evacuation routes through Lake County that are major thoroughfares, has the capacity and infrastructure for traffic to flow through. The key roads identified were:

- Calistoga St
- E State Hwy 20
- Lakeshore Dr
- Old Hwy 53
- Olympic Dr
- S State Hwy 29
- State Hwy 29
- State Hwy 53
- W State Hwy 20

## *Potential Secondary Evacuation Routes*

Identifying the potential secondary evacuation routes through Lake County was based on identifying routes that are connectors or minor arterial roads that could connect to a primary route or get out of the county. The following key roads were identified:

- |                    |                       |
|--------------------|-----------------------|
| ○ 18th Ave         | ○ Davis St            |
| ○ 40th Ave         | ○ Eleventh St         |
| ○ Alvita Ave       | ○ Elk Mountain Rd     |
| ○ Arrowhead Rd     | ○ Emerford Rd         |
| ○ Bevins St        | ○ Foothill Dr         |
| ○ Big Bear Rd      | ○ Harrington Flat Rd  |
| ○ Big Valley Rd    | ○ Hartley Rd          |
| ○ Boyles Ave       | ○ Hartley St          |
| ○ Bryant Rd        | ○ Highland Springs Rd |
| ○ Burns Valley Rd  | ○ Hill Rd             |
| ○ Burpee Dr        | ○ Hill Road East      |
| ○ Bush St          | ○ Hoberg Dr           |
| ○ Butts Canyon Rd  | ○ Howard Ave          |
| ○ Central Park Ave | ○ Keeling Ave         |
| ○ Clear Lake Ave   | ○ Laddell Ave         |
| ○ Clover Dr        | ○ Lake St             |
| ○ Compton St       | ○ Lakeport Blvd       |
| ○ Copsey Creek Wy  | ○ Lakeshore Blvd      |
| ○ Country Club Dr  | ○ Lakeshore Dr        |
| ○ Crawford Ave     | ○ Lakeview Dr         |
| ○ Crestview Dr     | ○ Loch Lomond Rd      |
| ○ Crystal Lake Wy  | ○ Main St             |
| ○ Dam Rd           | ○ Martin St           |
|                    | ○ Mendenhall Ave      |



- Middle Creek Rd
- Mill St
- Moss Ave
- Mullen Ave
- N Brush St
- N Forbes St
- N High St
- N Main St
- N Russell St
- New Long Valley Rd
- North Dr
- Old Hwy 53
- Osprey Ct
- Palmer Ave
- Park St
- Park Wy
- Phillips Ave
- Point Lakeview Rd
- Quarterhorse Ln
- Red Hills Rd
- Riggs Rd
- Rumsey Rd
- S Forbes St
- S Main St
- S Russell St
- San Joaquin Ave
- Scotts Valley Rd
- Second St
- Seigler Canyon Rd
- Sixth St
- Soda Bay Rd
- Spurr St
- State Hwy 175
- State Hwy 281
- Sulphur Bank Dr
- Summit Blvd
- Uhl Ave
- W 40th St
- Winchester St

## Potential Lakeport Evacuation Routes

The key roads identified for the City of Lakeport are:

- Park Way
- Lakeshore Blvd
- 11th St
- Martin St
- Scotts Valley Rd
- Hill Rd
- Hartley St



Figure 14: Lakeport Potential Evacuation Routes



## Potential Clearlake Evacuation Routes

Clearlake has identified roads that are utilized in a mandatory evacuation for the entire City of Clearlake.<sup>30</sup>:

- Ogulin Canyon Rd
- Polk Ave
- 40<sup>th</sup> Ave
- Dam Rd Exit via 18<sup>th</sup> Ave
- Dam Rd
- Old Hwy 53
- Olympic Dr
- Burns Valley Rd
- Hwy 53

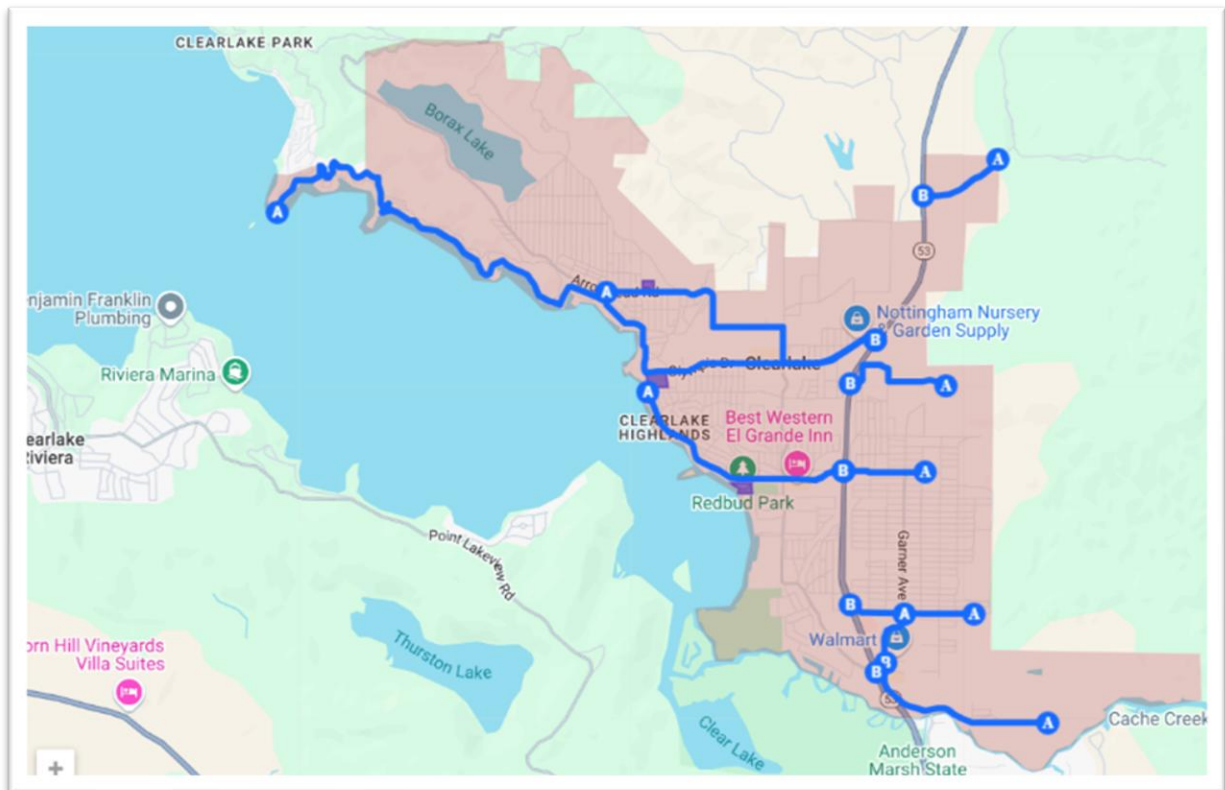


Figure 15: Clearlake Mandatory Evacuation Map

<sup>30</sup> <https://drive.google.com/open?id=1GPI1We0eH2di7NlipKBIsEhIEHzAQc9T&usp=sharing>

## *Highway Infrastructure*

Beyond the location of hazards, the highway infrastructure significantly influences the capacity and timeliness of evacuations. Critical factors include road clearance and fuel reduction, road classifications, key intersections, and maintaining communication along these routes.

### **Fuel Reductions**

Fuel reduction on and near roadways creates breaks that change fire behavior, reduce negative ecosystem impacts, and enable firefighters to protect communities by removing overgrown vegetation through prescribed fire, tree thinning, pruning, chipping, and roadway clearance.

Caltrans, CalFire, and local government have accelerated the fuel reduction efforts in Lake County. These efforts strengthen the ability of this infrastructure to serve as evacuation routes, access routes for firefighting, and in some cases as fire lines.

### **Road Classifications**

It is essential to categorize and understand the infrastructure that supports vehicular movement in our area. This section focuses on classifying the primary arteries: state highways, county roads, and city streets. Each category plays a crucial role in shaping traffic patterns, connectivity, and overall transportation dynamics within our region.

- State highways are major roadways maintained and operated by the state's department of transportation. These roads typically serve high traffic volumes and provide critical regional and intercity connectivity. They often function as primary routes for commuters, commercial transportation, and long-distance travel.
- County roads are managed by the county government and serve to connect rural areas, small communities, and local points of interest to state highways and city streets. These roads support moderate traffic volumes and often provide access to agricultural, residential, and light commercial areas.
- City streets are under the jurisdiction of local municipalities and primarily serve local traffic within urban or suburban areas. These roads provide access to residential neighborhoods, businesses, schools, and local services. They typically experience lower traffic volumes and speeds compared to state and county roads.

Identified four four-lane highways or segments of highways in Lake County:

- Hwy 53
- Hwy 29

### **Intersections**

Intersections are critical points in the transportation network where traffic flow, safety, and operational efficiency converge. The design and control of intersections directly influence travel time, congestion, and accident rates. This section provides an overview of the primary intersection types within the study area: roundabouts, signalized intersections, and one-way in and one-way out. It evaluates their roles in managing traffic movement and improving roadway performance.

## Roundabouts

- Nice – Lucerne Cutoff
- Upper Lake Hwy 20/ Hwy 29
- Clearlake Hwy 20/ Hwy 53
- Hidden Valley Lake, Hwy 29

## Signalized Locations

- Hwy 53/ Hwy 29 in Lower Lake
- Hwy 53/ Old Hwy 53 in Clearlake
- Hwy 53/ 18<sup>th</sup> Ave. in Clearlake
- Hwy 53 / Lakeshore Dr/ 40<sup>th</sup> Ave in Clearlake
- Lakeshore Dr / Old Hwy 53 in Clearlake

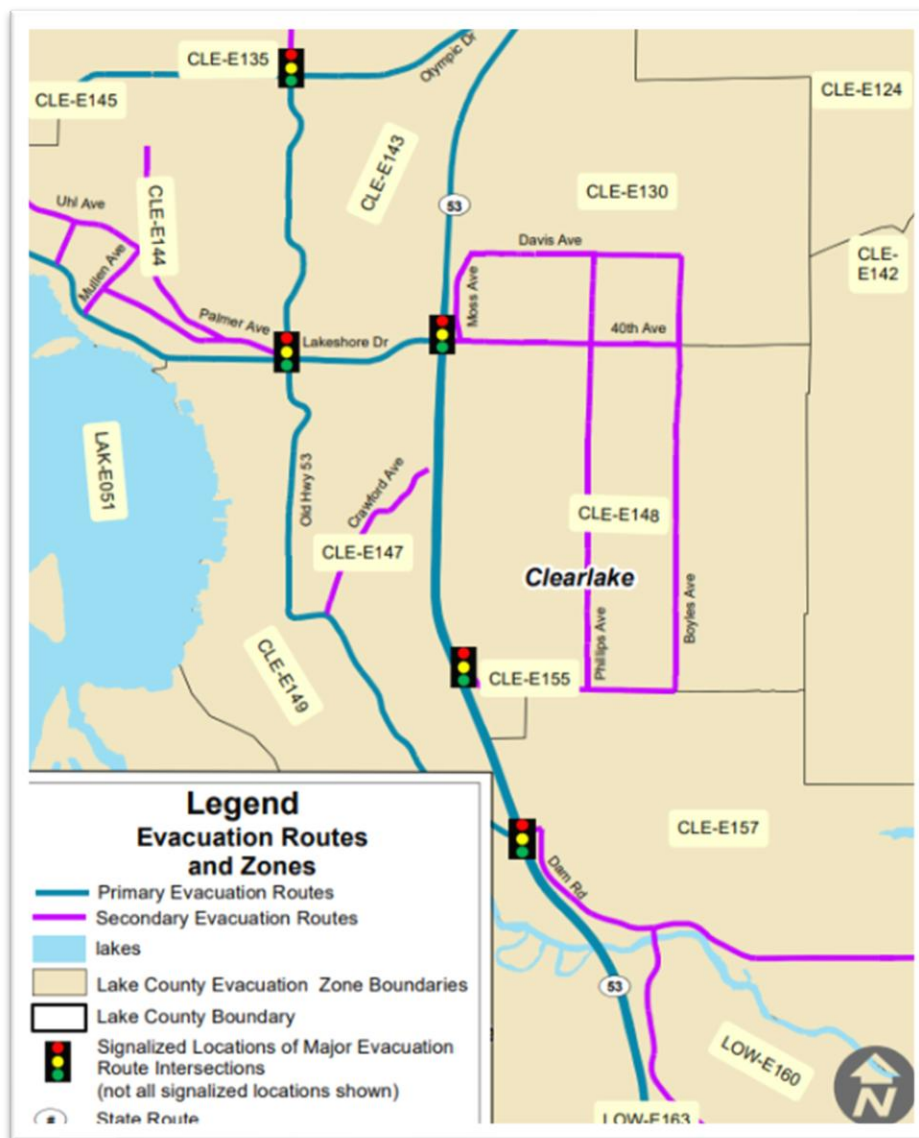


Figure 16: Signalized Intersection Location Map

### One-way In/ One-way Out

- There were 176 locations identified by community members as having One-way in and One-way out during the Public Input Survey
  - 73 of these locations were identified as neighborhoods
  - 47 of these locations were identified as dead-end roads
  - 13 of these locations were identified as other
  - 43 of these locations were marked, but a type was not provided

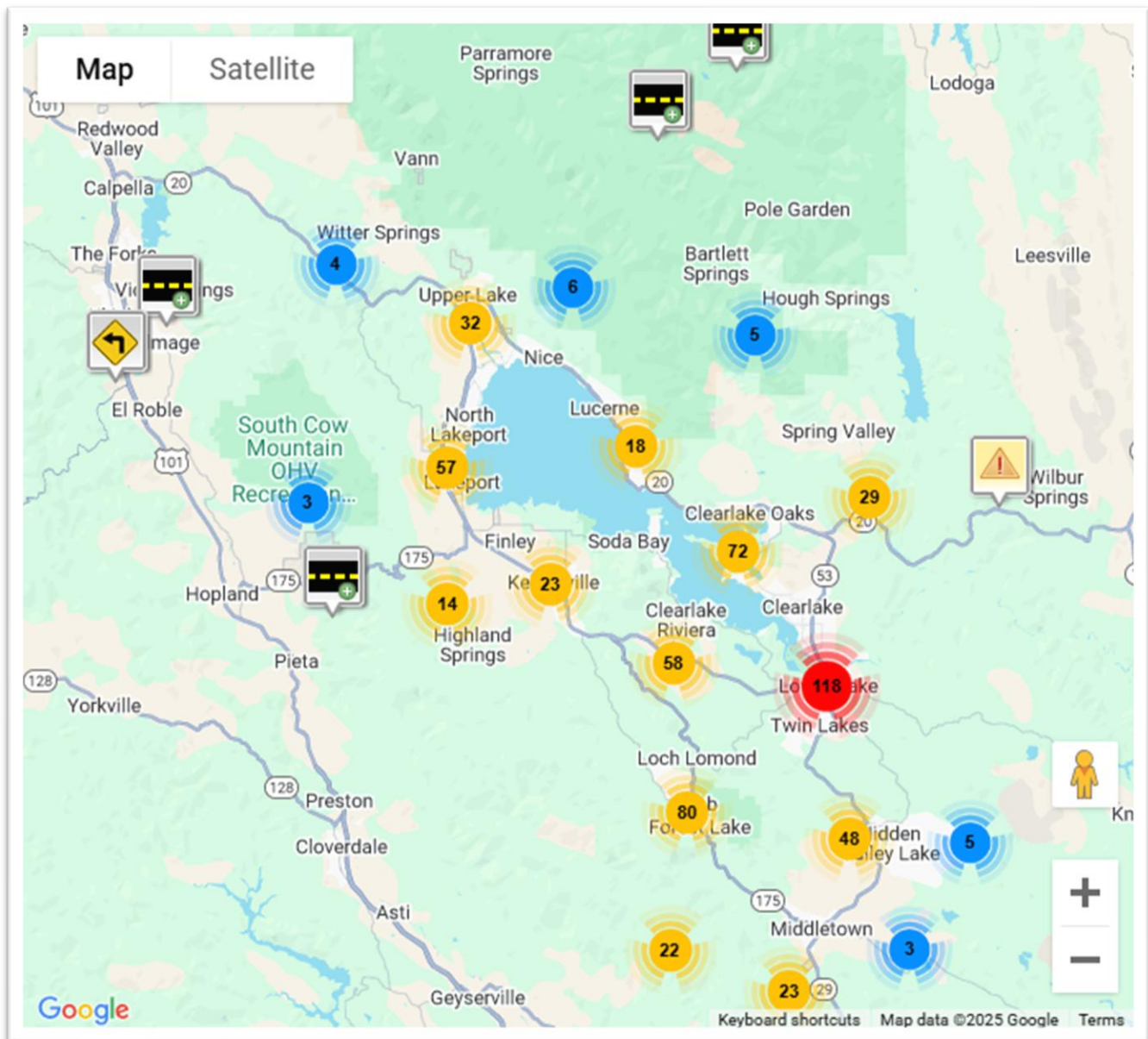


Figure 17: Transportation Concerns Survey Mapping Results

The latitude and longitude for each identified location will be provided to the Lake County Office of Emergency Services to have these locations identified for evacuation and planning coordination.

## **Roadway Communications**

Effective roadway communication enhances driver awareness, improves traffic flow, and supports incident management. Changeable Message Signs (CMS) play a key role in this effort by providing real-time information to motorists. These electronic signs are strategically placed along key corridors to convey dynamic messages about traffic conditions, construction zones, detours, weather alerts, and emergency notifications, contributing to safer and more responsive roadway operations.

### **Changeable Message Signs in Lake County**

- West of JCT. 29
- East of Lucerne Roundabout
- West of JCT. 53
- East of JCT. 53
- South of Lower Lake
- West of Lower Lake
- North Lakeport
- South of Clearlake
- South of 20/53 interchange
- South Hwy 29 at Lake St/ Hwy 175 interchange
- South Hwy 29 South of the 29/53 interchange



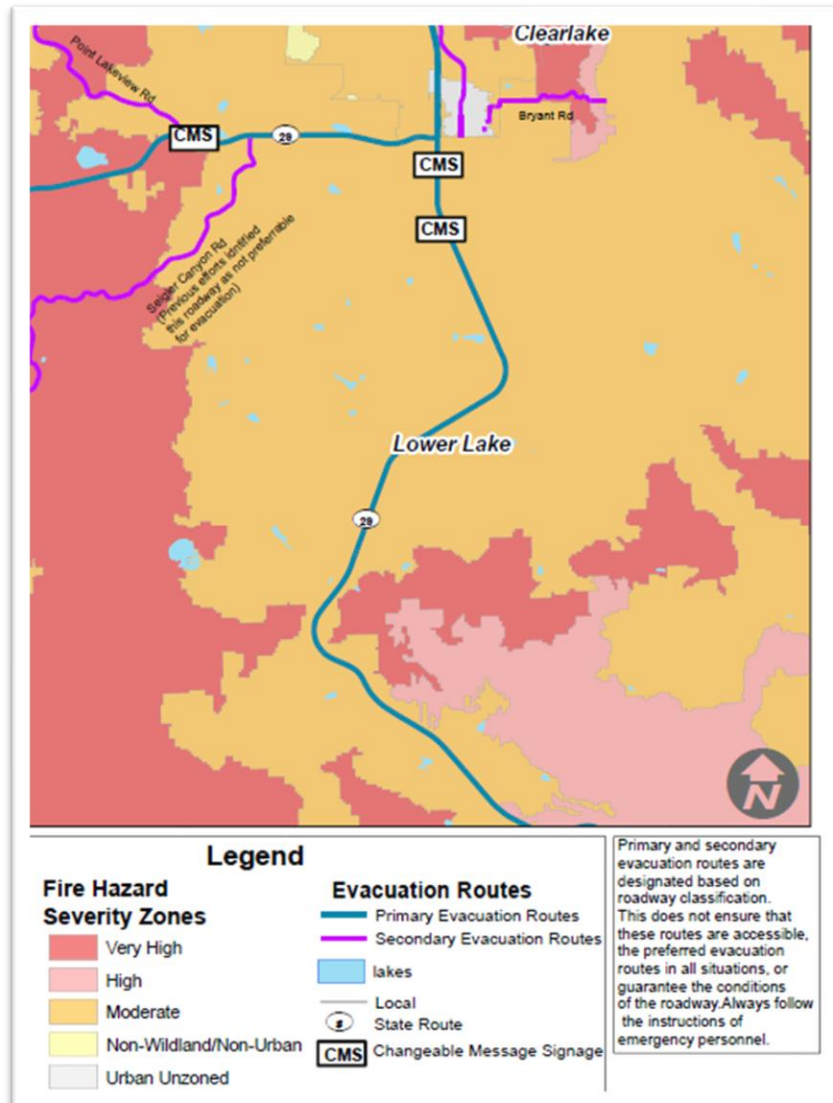


Figure 18: Changeable Message Signs Map

## Highway Capacity

This memo section provides an overview of highway capacity in Lake County, focusing on traffic volumes and roadway infrastructure relevant to evacuation planning. The data and analysis presented here are drawn from the ongoing Lake County Evacuation Study, which is being developed concurrently with the revision of the General Plan Health and Safety Element.<sup>31</sup> The Evacuation Study offers critical insight into current roadway capacity and traffic conditions that inform evacuation preparedness and planning efforts.

*Roadway segments in Lake County that operate from near capacity to over-capacity during the existing AM and PM peak hours. During the AM peak hour, 62% are near capacity, 21% are at or just over capacity, and 17% are well over capacity. During the PM peak hour, 86% are near capacity, while 14% are well over capacity. Notably, all capacity-constrained roadway segments identified as near-capacity, at capacity, or over-capacity are also designated evacuation routes, except for Dam Road in Clearlake and 11th Street in Lakeport.*

Key roadways that were identified as over-capacity through this study include:

- SR 29 between Hwy 175 & Callayomi St in Middletown
- Dam Road East of SR 53 in Lower Lake
- W 40th Ave West of SR 53 in Clearlake, SR 20
- Between Nice-Lucerne Cutoff & Hammond Ave in Nice/Upper Lake

Additionally, the Evacuation Study identified evacuation-constrained parcels throughout the county. The study categorized parcels by the distance to evacuation routes: 1-2 miles, 2-3 miles, and over 3 miles. It also identified parcels with less than two ingress/egress points.

## Transportation Resources

Available transportation resources will also impact the ability of evacuees to leave the area. Based on the Public Input Survey, 95% of respondents would utilize their personal vehicle or a friend/neighbor. There is still going to be a need for transportation resources during an evacuation due to unforeseen circumstances or those who require assistance. Individuals should work on their personal plans for evacuation. The responding agencies will coordinate resources as issues arise during the response. Potential transportation resources identified were:

- **Public Schools in Lake County:** According to recent data, **Lake County has 37 public schools** with school buses, which can be utilized during emergencies.
- **Lake Transit Authority:** Lake Transit has established routes, schedules, and buses that can be utilized in an evacuation.<sup>32</sup>
  - Fixed Routes:
    - Route 1 - North Shore, Clearlake to Lakeport
    - Route 2 - Hwy 175, Kit's Corner to Middletown
    - Route 3 - Hwy 29, Clearlake to Deer Park

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<sup>31</sup> <https://www.lakecountyca.gov/554/Lake-County-General-Plan> | 2025 Plan to be uploaded

<sup>32</sup> <https://laketransit.org/routes-Noschedules/>



- Route 4 - South Shore Clearlake to Lakeport
- Route 4a - Soda Bay Kit's Corner to Lakeport
- Route 7 - Lakeport to Ukiah
- Route 8 - Lakeport City
- Route 10 - Clearlake to Clearlake Park North Loop
- Route 11 - The Avenues Loop

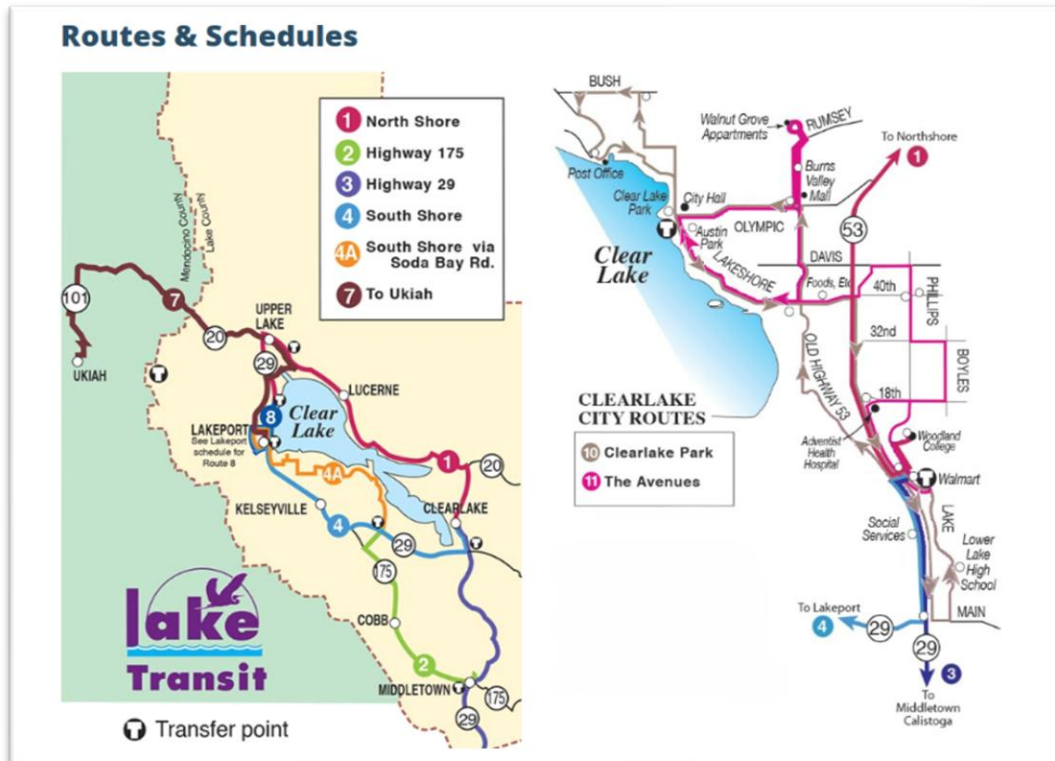


Figure 19: Lake Transit Route Map

- Dial-a-Ride: Lake Transit offers Clearlake/Lower Lake Dial-A-Ride and Lakeport Dial-A-Ride during the same days and hours as the local bus routes. Dial-A-Ride provides curb-to-curb service.
- Flex Stop: In areas not served by Dial-A-Ride, Lake Transit offers “Flex Stop” service. The bus will travel up to one mile off of its regular route to provide Flex Stop service at the curb.
- Medi-Links: A transportation service connecting Lake County residents with medical providers in and out of Lake County. Many Lake County residents are referred to specialized medical care in and out of Lake County. For those who lack transportation, this presents a significant challenge since there is no easy way to get there. Medi-Links has been developed as a shared rider service to provide non-emergency medical transportation throughout Lake County and out-of-county destinations such as Deer Park/St. Helena, Napa, Santa Rosa, Ukiah, Willits, and the Sacramento and SF Bay areas.

- **Lake Links<sup>33</sup>** Lake County's Consolidated Transportation Service Agency (CTSA) provides social service transportation services for vulnerable, transit-dependent populations (elderly, disabled, and low-income residents).
  - Lake County Tribal Health Center <sup>34</sup> provides limited transportation services to eligible patients seeking clinic services for a better opportunity to access a car.
  - Partnership HealthPlan of California <sup>35</sup> provides the partnership's transportation services. The Transportation Services Department coordinates Non-emergency medical transportation (NEMT), non-medical transportation (NMT), gas mileage reimbursement, and other travel-related services for our members.
  - Veteran's Shuttle Services <sup>36</sup> It is a system operated by San Francisco VA Medical Center staff and provides service to and from: Clearlake VA Clinic, Eureka VA Clinic, Ukiah VA Clinic, Santa Rosa VA Clinic, Oakland Clinics, and UCSF/Parnassus.
- **Redwood Coast Regional Center:** Community-based resource coordination to connect those with needs to resources. RCRC has vendors that could potentially provide transportation resources, such as People Services.

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<sup>33</sup> <https://www.lakelinks.org/>

<sup>34</sup> <https://www.lcthc.com/services/transportation/>

<sup>35</sup> <https://partnershiphp.org/Members/Medi-Cal/Pages/Transportation-Services.aspx>

<sup>36</sup> <https://www.va.gov/san-francisco-health-care/programs/transmetro-transportation-schedule/san-francisco-va-medical-center-patient-transportation/>

## Community and Neighborhood Infrastructure

Each neighborhood in Lake County has a unique infrastructure, and there are needs and potential issues with evacuation. Table 5 illustrates the risk levels for evacuation based on the access, people, and infrastructure that the communities throughout Lake County will have to use for the evacuation.

	4-Lane Evac Routes	Est. Persons per Primary Evacuation Routes	Est. Persons per Total Evacuation Routes	Est. Persons per Major Evac Route Intersection
Range	Yes	<3,000	<1,000	<1,000
Range	-	3,000-6,000	1,000-3,000	1,000-3,000
Range	No	>6,000	>3,000	>3,000

Note: Ranges were set based on breaks in the data with the intention of determining high/medium/low categories. The criteria in each category do not necessarily indicate where threats exist.

*Table 5: Community Risk Matrix - Community and Neighborhood Infrastructure*

Community   Neighborhoods	Primary Evacuation Routes	Secondary Evacuation Routes	4-Lane Evac Routes	Est. Persons per Primary Evacuation Routes	Est. Persons per Total Evacuation Routes	Major Intersections of Evacuation Routes	Est. Persons per Major Evac Route Intersection
Clearlake	5	10	Yes	3,400	1,100	5	3,400
Lakeport	1	10	Yes	10,200	900	4	2,500
Finley	1	1	No	700	300	1	700
Lucerne - Clearlake Oaks	1	1	no	6,800	3,400	1	6,800
Glenhaven	1	1	No	200	100	0	N/A
Spring Valley	-	1	No	N/A	1,000	1	1,000
Clearlake Riviera	-	2	No	N/A	3,700	1	7,500
Cobb	-	1	No	N/A	2,900	1	2,900
Boggs Lake	-	-	No	N/A	N/A	0	N/A
Loch Lomond	-	1		N/A	3,400	0	N/A
Hidden Valley Lake	1		No	7,500	7,500	0	N/A

Community   Neighborhoods	Primary Evacuation Routes	Secondary Evacuation Routes	4-Lane Evac Routes	Est. Persons per Primary Evacuation Routes	Est. Persons per Total Evacuation Routes	Major Intersections of Evacuation Routes	Est. Persons per Major Evac Route Intersection
Kelseyville	1	1	No	6,800	3,400	1	6,800
Soda Bay (Riviera Heights, Kelseyville, Riviera, Riviera West, & Buckingham)		1	No		7,500	3	2,500
Lower Lake	2	3	Yes	1,500	600	1	3,000
Middletown		2	No	N/A	4,100	1	8,200
Nice- Upper Lake	1	1	No	5,600	2,800	2	2,800
Upper Lake	1	1	No	1,000	500	1	1,000
Nice	1	1	No	2,400	1,200	1	2,400
Blue Lakes	1	-	No	N/A	N/A	0	N/A
Lake Pillsbury Area	-	-	No	N/A	N/A	0	N/A

## Vulnerable Populations

Lake County, California, has several vulnerable populations that require targeted support in emergency preparedness, response, and recovery efforts. Due to socioeconomic, health, and geographic factors, these groups face increased risks during disasters such as wildfires, floods, and public health crises. By addressing the unique needs of these vulnerable populations, Lake County can enhance disaster resilience, ensuring that all residents receive timely support and equitable access to emergency resources. Table 6 provides the community risk profile of the Lake County communities based on vulnerable population indicators.

	Median Household Income	Percent Elderly Population	Elderly Population
Range	\$75k-\$100k	<20%	<1,500
Range	\$50k-\$75k	20%-25%	1,500-2,000
Range	\$35k-\$50k	>25%	>2,500

Note: Ranges were set based on breaks in the data with the intention of determining high/medium/low categories. The criteria in each category do not necessarily indicate where threats exist.

Table 6: Community Risk Matrix - Vulnerable Populations

Community   Neighborhoods	Est. Dwelling (Households)	Population	Median Household Income	Percent Elderly Population	Elderly Population	Social Vulnerability Index
Clearlake	5,895	17,199	\$42,090	18%	3,046	Highest
Lakeport	3,924	10,164	\$63,826	26%	2,682	High/ Lowest
Finley		657	N/A	N/A	N/A	Medium
Lucerne - Clearlake Oaks	3,024	6,769	\$ 46,862	29%	1,948	High
Glenhaven		233	N/A	N/A	N/A	Highest/ High
Spring Valley		964	N/A	N/A	N/A	High
Clearlake Riviera	3,938	7,458	\$ 85,564	27%	1,981	Medium
Cobb	1,302	2,895	\$ 75,395	38%	1,086	Medium / Lowest
Boggs Lake			N/A	N/A	N/A	Medium
Loch Lomond		3,413	N/A	N/A	N/A	Medium
Hidden Valley Lake		7,500	N/A	N/A	N/A	Lowest
Kelseyville	2,446	6,777	\$ 57,229	17%	1,174	Medium / Lowest
Soda Bay (Riviera Heights, Kelseyville Riviera, Riviera West, & Buckingham)		7,458	N/A	N/A	N/A	Medium
			N/A	N/A	N/A	Medium
			N/A	N/A	N/A	Medium
			N/A	N/A	N/A	Medium
			N/A	N/A	N/A	Medium
Lower Lake	1,407	3,036	\$62,173	30%	904	High
Middletown	2,974	8,213	\$83,622	24%	1,991	High
Nice- Upper Lake	2,354	5,628	\$72,813	23%	1,293	High
Upper Lake		954	N/A	N/A	N/A	High
Nice		2,389	N/A	N/A	N/A	High
Blue Lakes			N/A	N/A	N/A	High
Lake Pillsbury Area		1,323	N/A	N/A	N/A	High

County-wide	Est. Dwelling (Households)	Population	Median Household Income	Percent Elderly Population	Elderly Population	Social Vulnerability Index
County Level Data ACS Demographics- 2023	27,264 (Total from Communities)	75,630 (Total from Communities)				Relatively Moderate

## Evacuation Needs

When it comes to the actual evacuation, people tend to have restrictions on evacuation due to having no desire to leave, lack of transportation, the lack of information, they are in need of assistance, their restrictions with pets and livestock, or they may have nowhere to go. Considering these restrictions. A public input survey was conducted throughout Lake County to understand the restrictions, needs, and current state of preparedness according to those who live in Lake County. The results of the **Public Input Survey**, which is available in **Annex 1**, provided insight into how these potential roadblocks impact the people of Lake County.

- The small percentage who would rely on public transit or need assistance may still represent vulnerable individuals. Ensuring accessible, responsive support for these individuals could prevent delays and improve safety.
- With only 14% planning to use shelters, demand for public facilities may be lower than expected. However, shelters should remain prepared to support residents who lack alternatives, particularly in case of unexpected shelter needs and increases in usage. This includes providing resources that outline all sheltering options, including hotels, shelters, and other local resources that could help alleviate uncertainty.
- Since 99% of respondents either have no medical needs or can evacuate with their resources, planning can largely focus on general population needs without extensive medical-specific infrastructure. However, there are still those who cannot evacuate with their medical resources, and the four respondents highlight a critical need for specialized plans, such as designated transport and shelter accommodations for those requiring stationary medical support.
- Residents may have unique requirements, as responses for the description of “other” ranged from gas money to CPAP Batteries, lodging, medications, and pet information.
- The specified pets/livestock identified were donkeys, chickens, pigs, goats, birds, and large dogs.

Respondents were asked to rank the following support and resources they would prioritize to assist in evacuating from a wildfire.

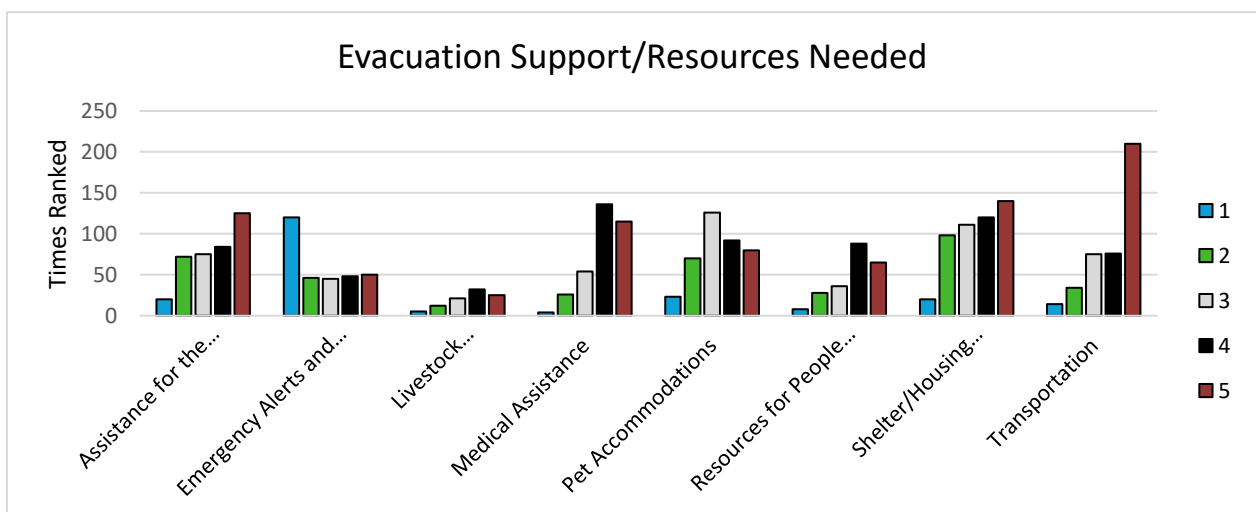


Figure 20: Evacuation Support and Resource Needs Results

**Emergency Alerts and Warnings** (Ranked one by 120 respondents, Average Rank: 1.71)

- With 120 respondents ranking it as the top priority, emergency alerts and warnings are the most critical need for wildfire evacuation. This shows that timely, reliable information is crucial for effective preparedness.

**Shelter/Housing Assistance** (Ranked one by 20 respondents, Average Rank: 2.98)

- Shelter and housing assistance are a significant priority, ranking second overall. This underscores the need for clear plans on where evacuees can go and stay safely during evacuations.

**Pet Accommodations** (Ranked one by 23 respondents, Average Rank: 2.81)

- Pet accommodations ranked third in importance, reflecting that many households have pets and consider their safety a key factor in evacuation planning.

**Assistance for the Elderly** (Ranked one by 20 respondents, Average Rank: 2.96)

- Assistance for elderly residents is also a high priority. Older individuals may face unique evacuation challenges, requiring targeted resources and accommodations.

**Resources for People with Children** (Ranked one by eight respondents, Average Rank: 3.26)

- Resources for families with children ranked moderately, suggesting that while important, they may be secondary to broader household evacuation needs.

**Transportation** (Ranked one by 14 respondents, Average Rank: 3.49)

- Transportation ranked lower in priority but remains essential, likely due to concerns about reaching evacuation sites or accessing resources during an emergency.

**Medical Assistance** (Ranked one by four respondents, Average Rank: 3.64)

- Medical assistance is a lower priority, perhaps because most respondents assume they can access care post-evacuation.

**Livestock Accommodations** (Ranked one by five respondents, Average Rank: 3.06)

- While livestock accommodation ranked lower, it is still a crucial concern for residents with farm animals.

## *Evacuation Coordination*

The decision to evacuate an area is not made lightly, and there is a significant impact on public safety and the economy. The information reviewed, collected, and analyzed in the development of this memo will then be used to create the Lake County Wildfire Evacuation Plan. The wildfire evacuation plan will support the Lake County Operational Area (OA). The overarching goal of evacuation planning in the OA is to maximize the preservation of life while reducing the number of people who must evacuate and the distance they must travel to seek safe refuge.

The Evacuation Plan will describe how emergency evacuation decisions within the OA will be coordinated, allowing emergency managers and other supporting response organizations to make collaborative decisions. It will also outline response partners, community partners, and supporting resources to support evacuation needs, such as emergency communication,





response communication, vulnerable populations support, transportation waivers, community needs, animal evacuations, and additional services.

The Evacuation Plan will describe how emergency personnel will cooperate and the decisions they must make and implement to respond to a disaster requiring evacuating people and their pets by outlining strategies, procedures, recommendations, and organizational structures to implement a coordinated evacuation effort in the OA. The Lake County Sheriff's Department will be the lead agency for evacuating the unincorporated areas of Lake County. In Lakeport and Clearlake, local law enforcement will be the lead agency for conducting evacuations. Lake County OA utilizes Unified Command as outlined in the Lake County Emergency Operations Plan (EOP). The Evacuation Plan will support the need for evacuation planning within this established framework.

As part of the Unified Command, the Sheriff's Department or local law enforcement will identify available and appropriate evacuation routes and coordinate evacuation traffic management with the California Department of Transportation (Caltrans), the California Highway Patrol (CHP), other supporting agencies, and jurisdictions.

# Technical Advisory Group and Public Outreach

## Technical Advisory Group (TAG)

The TAG aims to establish a collaborative effort to develop a comprehensive plan for coordinated wildfire evacuations in Lake County. It is crucial in defining the strategies, procedures, recommendations, and organizational structures necessary for effective preparedness and response to wildfire events. The TAG met three times throughout the development of the project and was also consulted via email between meetings.

### **TAG Meeting #1: Kick-off**

- Thursday, April 4, 9:30-11:30am PT
- City of Lakeport - Large Conference Room  
225 Park Street, Lakeport

### **TAG Meeting #2: Investment and Adaptation Strategy**

- Wednesday, November 20, 2024, 9:00 – 9:45am PT
- Zoom

### **TAG Meeting #3: Coordination and Communication**

- Wednesday, March 19, 2025, 1:00 – 2:30 pm PT
- Clearlake City Hall  
14050 Olympic Drive Clearlake, CA 95422

TAG Members were from the following stakeholder groups outlined in Table 7.

*Table 7: TAG Stakeholders*

FOCUS AREA	STAKEHOLDERS
Local Representatives	<ul style="list-style-type: none"> <li>• Lake APC</li> <li>• County of Lake Supervisor Board member</li> <li>• County Department of Public Works</li> <li>• County Community Development</li> <li>• City of Clearlake Council member</li> <li>• Dept of Public Works</li> <li>• Community Development</li> <li>• City of Lakeport Council member</li> <li>• Dept of Public Works</li> <li>• Community Development</li> <li>• Sheriff</li> </ul>
State Representatives	<ul style="list-style-type: none"> <li>• Cal OES</li> <li>• CalFire</li> <li>• Caltrans</li> <li>• Redwood Coast Regional Center</li> <li>• California Highway Patrol</li> </ul>
Tribal Representatives	<ul style="list-style-type: none"> <li>• Big Valley Band of Pomo Indians (Lakeport)</li> </ul>

FOCUS AREA	STAKEHOLDERS
	<ul style="list-style-type: none"> <li>• Elem Indian Colony of Pomo Indians (Clearlake Oaks)</li> <li>• Habematolet Pomo of Upper Lake</li> <li>• Koi Nation of Northern California</li> <li>• Middletown Rancheria of Pomo Indians</li> <li>• Robinson Rancheria of Pomo Indians (Nice)</li> <li>• Scotts Valley Band of Pomo Indians (Lakeport)</li> </ul>
Law Enforcement	<ul style="list-style-type: none"> <li>• Sheriff's Office/OES</li> </ul>
Fire and Rescue	<ul style="list-style-type: none"> <li>• Local Fire Councils/Agencies</li> <li>• Lake County Fire Protection District</li> </ul>
Care and Shelter	<ul style="list-style-type: none"> <li>• EOC Ops - County Department of Social Services</li> <li>• American Red Cross</li> </ul>
Transportation	<ul style="list-style-type: none"> <li>• Lake Transit Authority</li> <li>• Private Sector Transportation Representatives</li> </ul>
Private Sector	<ul style="list-style-type: none"> <li>• PG&amp;E</li> </ul>
Access and Functional Needs	<ul style="list-style-type: none"> <li>• Easter Seals Northern California</li> <li>• Bayberry. Inc.</li> <li>• Lake County Mental Health Services</li> <li>• Area Agency on Aging</li> <li>• School Representatives</li> <li>• Hospital Representatives</li> <li>• Senior Centers</li> <li>• Highlands Senior Service Center</li> <li>• Lakeport Senior Center, Inc.</li> <li>• Live Oak Seniors</li> <li>• Middletown Senior Center</li> <li>• Redwood Coast Regional Center</li> <li>• COAD</li> </ul>
Public Works	<ul style="list-style-type: none"> <li>• Public Works</li> </ul>
Communications	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Private Sector Communication Representatives</li> </ul>

# Public Outreach

The project team has completed a press release, launched a website, and held public information sessions to engage the community. Additional efforts, including targeted public outreach, a community planning session, and a public input survey, have further expanded public awareness and involvement. Project outreach will continue through the remainder of the project.

## *Press Release*

FOR IMMEDIATE RELEASE - The Lake Area Planning Council Announces Comprehensive Wildfire Evacuation and Preparedness Plan Project

September 26, 2024 - In response to the increasing threat of wildfires in the region, the Lake County Area Planning Council (APC) is preparing a Wildfire Evacuation and Preparedness Plan. Hired consultants are leading this planning effort, The Resiliency Initiative (TRI). The Plan will help agency officials coordinate evacuation efforts, standardize response protocols for potential wildfires, and inform community members of practices and procedures to better prepare for future emergencies. Community input will be vital in shaping this effort to ensure evacuation plans are comprehensive, effective, and responsive to community needs. TRI will lead efforts to engage community members both virtually and in person with surveys ([Lake County Wildfire Evacuation and Preparedness Survey](#)) and public meetings to be held on October 23 and 24. Please visit [Lake County Wildfire Evacuation and Preparedness Plan – Lake Area Planning Council \(lakeapc.org\)](#) for more information about the Wildfire Evacuation and Preparedness Plan Project, including details on public meetings and the project survey.

The press release was shared with the following media outlets:

### **TV Stations:**

- KRCR (ABC) - Local News and Community Events
- Lake County Mediacom Public Education and Government (PEG) channel
- KTVU (FOX) - Local News and Community Events
- KQED (PBS) - Local News
- KOVR (CBS) - Local Community Events
- KNTV (NBC) - Local News

### **Print/Web/Social Media:**

- LakeCoNews.com- website and Facebook page
- Lake County Record-Bee
- Lake County Community Facebook Board
- The Press Democrat
- La Voz Bilingual E-Magazine

### **Radio Stations:**

- KPFZ 88.1 FM
- KNTI 95.5FM
- KQPM 105.9 FM
- KXBX 98.3 FM/1270 AM
- KUKI 103.3 FM

## Project Website

A project website was created to provide ongoing information on the project status, links to Public Outreach, Public Information Session Meetings, and the Public Input Survey. The website was maintained on the Lake Area Planning Council website.<sup>37</sup>

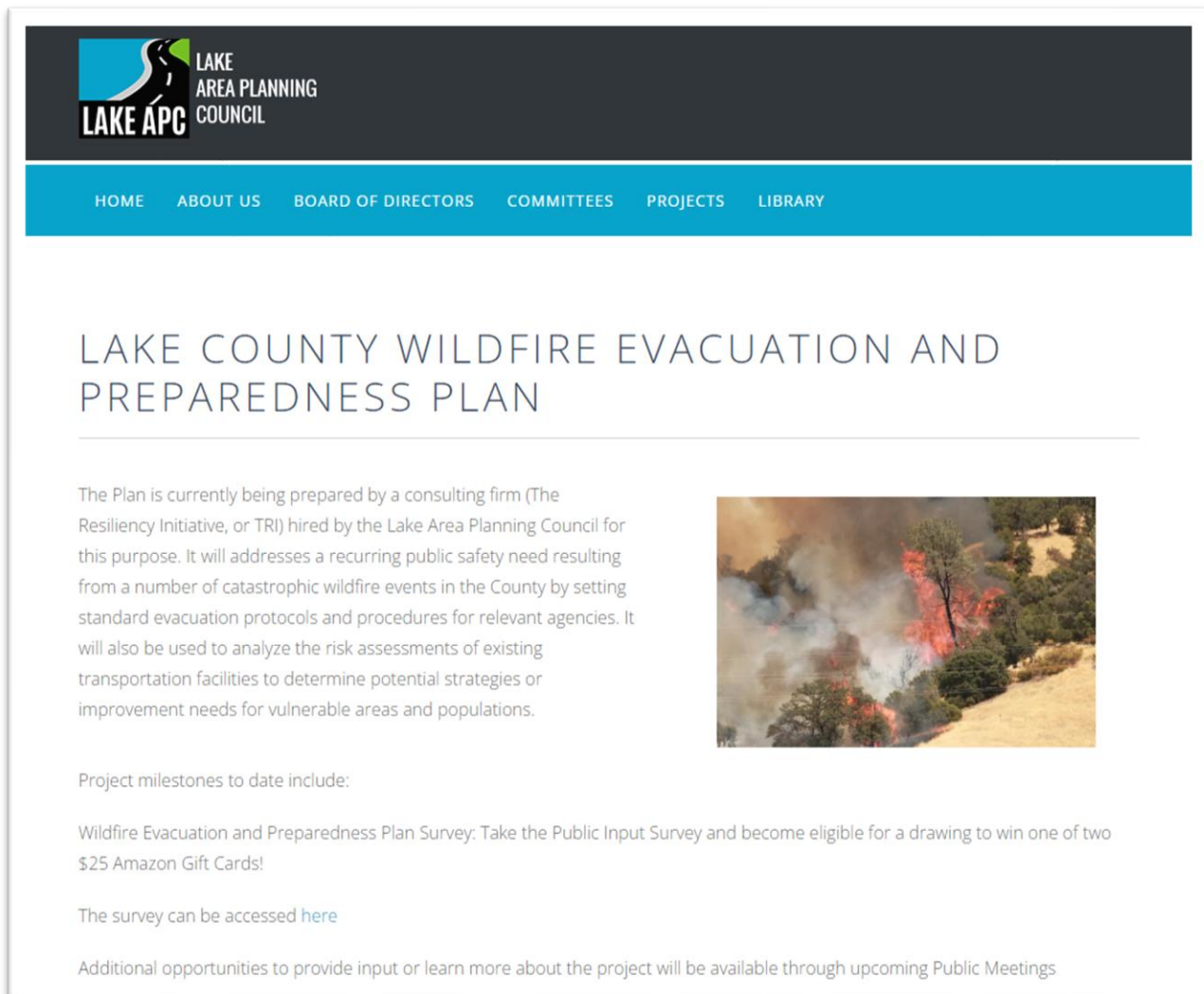


Figure 21: APC Project Website

<sup>37</sup> <https://www.lakeapc.org/lake-county-wildfire-evacuation-planning-underway/>

## *Public Information Sessions*

During the first series of public workshops, TRI provided an update on the needs and objectives of the project, the timeline, the various methods made available for public input, and the information compiled up until that point will be shared for public comment. This includes:

- Identification and mapping of locations
- Identification and mapping of planned land use developments and population characteristics
- Climate change projections are expected to impact on the transportation network

During this workshop, community members were provided with the opportunity to provide information about local experiences during extreme weather, concerns regarding wildfires, and evacuation route locations for further review as risk, opportunity, and constraint sites.

- **Session 1** - Wednesday, October 23, 2024
  - Clearlake City Hall and Zoom
  - 5:30 – 7:00 pm PT
- **Session 2** - Thursday, October 24, 2024
  - Lakeport City Hall and Zoom
  - 5:30 – 7:00 pm PT

The final workshops will inform the public of the overall project findings and solicit final comments that can be incorporated into an evacuation plan, including Evacuation Points and Sheltering, Emergency Public Information, Notification and Communications, and Traffic Routes and Evacuation Transfer Sites.

- Session 3 – TBD September 2025
- Session 4 – TBD September 2025

## *Public Outreach Events*

- 2024 Lake County Fair
- 2024 Lake County Health and Wellness Expo

## *Community Planning Outreach*

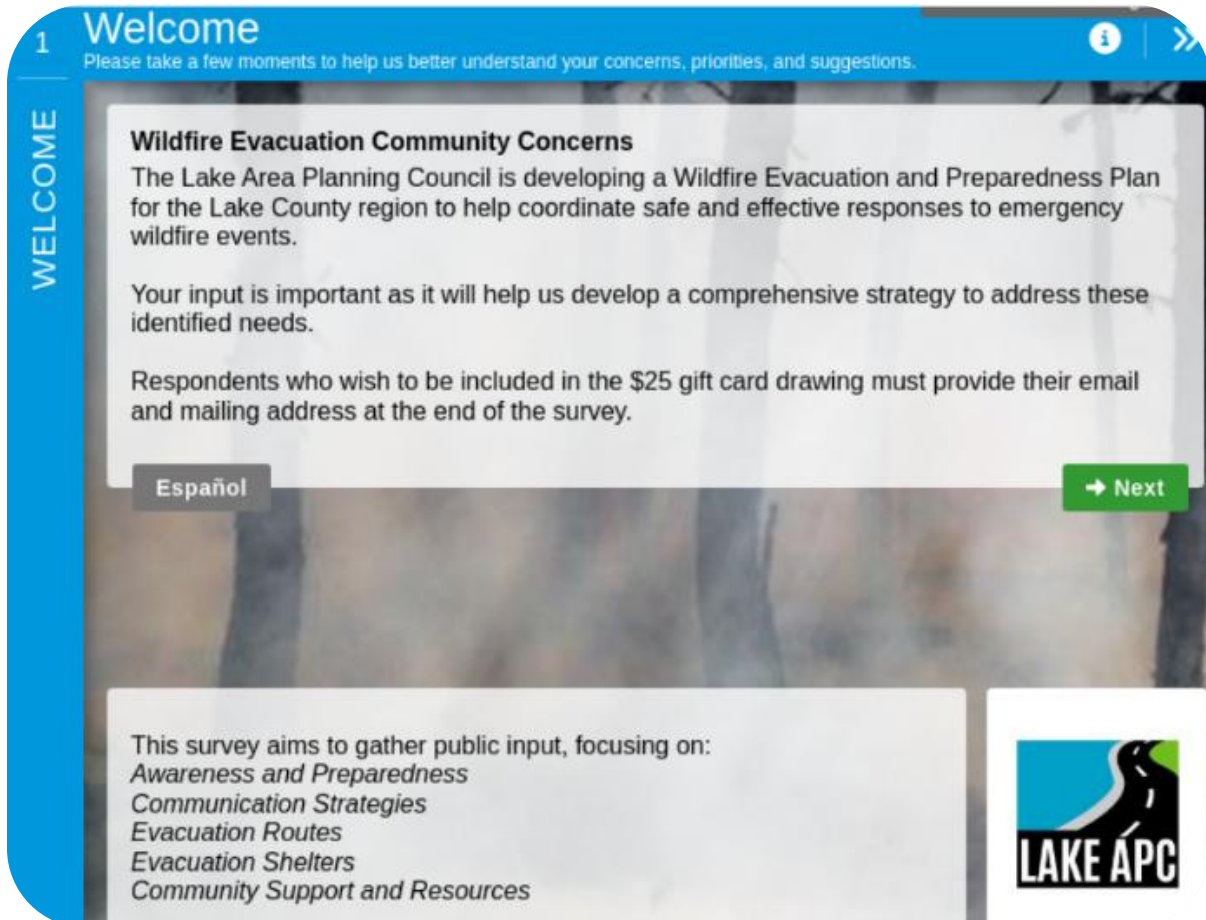
- Lake County Disaster Council, Lake County Courthouse, 10/23/24, 9:00 – 10:00am
- Big Valley Advisory Council (BVAC), Kelseyville, 9/11/24, 6:00 – 7:30pm, approx. 20 in attendance
- Cobb Advisory Council (CAC), Cobb, 9/19/24, 6:30 – 8:00pm, approx. 20 in attendance
- Eastern Region Town Hall (ERTH), Clearlake Oaks, 10/2/24, 4:00 – 5:30pm, approx. 35 in attendance
- Middletown Area Town Hall (MATH), Middletown, 10/10/24, 7:00 – 8:30pm, approx. 25 in attendance
- Western Region Town Hall (WRTH), Upper Lake, 10/16/24, 5:30 – 7:00pm, approx. 30 in attendance

## Public Input Survey

The survey was available for public input in English and Spanish from August 29, 2024, through November 8, 2024. The survey had 243 participants and responses. The survey results were presented to Lake APC's Social Services Transportation Advisory Council (SSTAC), and based on the discussions and feedback from the council, the survey was reopened for a specific campaign to ensure that the vulnerable populations within Lake County had the opportunity to complete the survey. The survey was conducted from November 26, 2024, through January 10, 2025. The survey respondents are now 304, an increase of 59 responses. Survey results are available in the [Survey Results Annex](#).

The survey consisted of three sections:

1. Tell Us About You
2. Evacuation Support Resources and Needs
3. Evacuation Routes and Concerns



The screenshot shows the first page of a survey titled "Welcome". The page has a blue header with the number "1" and the title "Welcome". Below the header, it says "Please take a few moments to help us better understand your concerns, priorities, and suggestions." The main content area has a background image of a forest. The text on the page reads: "Wildfire Evacuation Community Concerns", "The Lake Area Planning Council is developing a Wildfire Evacuation and Preparedness Plan for the Lake County region to help coordinate safe and effective responses to emergency wildfire events.", "Your input is important as it will help us develop a comprehensive strategy to address these identified needs.", and "Respondents who wish to be included in the \$25 gift card drawing must provide their email and mailing address at the end of the survey." There is a "Español" button and a "Next" button. At the bottom, it says "This survey aims to gather public input, focusing on:" followed by a list of topics: "Awareness and Preparedness", "Communication Strategies", "Evacuation Routes", "Evacuation Shelters", and "Community Support and Resources". The Lake APC logo is in the bottom right corner.

Figure 22: Survey Page 1



# Resiliency Recommendations

The following resiliency recommendations provide recommendations for implementation strategies for supporting emergency communications, a comprehensive evacuation plan, training, exercises, and drills, transportation improvements, and funding opportunities.

## Community Prioritizations

The results of the evacuation and preparedness analysis conducted within Lake County and outlined in this memo highlight key areas of concern within the communities of Lake County. The Community Risk Matrix, which is utilized throughout this memo, categorizes the potential concerns for each community, as noted in Table 8, into vulnerable populations, additional evacuation routes, and intersection control.

*Table 8: Community Risk Matrix - Potential Prioritization for Evacuation Planning*

Community	Neighborhood	Potential Prioritization for Evacuation Planning		
Clearlake		Vulnerable Populations		Intersection Control
Lakeport		Vulnerable Populations	Additional Evac Routes	
Lucerne  Clearlake Oaks	Spring Valley Glenhaven	Vulnerable Populations	Additional Evac Routes	Intersection Control
Kelseyville Riviera		Vulnerable Populations	Additional Evac Routes	Intersection Control
Cobb	Boggs Lake Loch Lomond	Vulnerable Populations	Additional Evac Routes	
Hidden Valley Lake			Additional Evac Routes	
Kelseyville			Additional Evac Routes	Intersection Control
Soda Bay	Riviera Heights Kelseyville Riviera Riviera West Buckingham		Additional Evac Routes	
Lower Lake		Vulnerable Populations	Additional Evac Routes	Intersection Control
Middletown		Vulnerable Populations	Additional Evac Routes	Intersection Control
Nice- Upper Lake		Vulnerable Populations		
Upper Lake		Vulnerable Populations		
Nice		Vulnerable Populations		
Blue Lakes		Vulnerable Populations		

### Vulnerable Populations

These communities identified had a High or Very High rating on the Social Vulnerability Index, a median household income of \$35k - \$50k, the percentage of the population identified as elderly was greater than 25%, the elderly population was greater than 2,500 or a combination of these categories. The communities identified in Table 8 as vulnerable populations should be considered when reviewing the recommendations for projects that will enhance emergency communication and evacuation preparedness through training, exercises, and drills.

### **Additional Evacuation Routes**

These communities identified for additional evacuation routes had one or more of the following criteria identified in the Community Risk Matrix; the estimated person per primary evacuation route was greater than 6,000, the estimated person per total evacuation route was greater than 3,000, or the estimated person per major evacuation route intersection was greater than 3,000. These communities should be considered when reviewing the network improvements and training recommendations, exercises and drills.

### **Intersection Control**

The communities identified for intersection control all had a community risk rating of greater than 3,000 estimated persons per major evacuation route intersection. These communities should be prioritized for the recommended projects within emergency communications, network improvements, and training exercises and drills that address evacuations through these intersections.

As noted above, Lake County's communities face risks associated with vulnerable populations, access to evacuation routes, and congested intersections. Translating these risks into recommended improvement strategies presented three key categories of projects that Lake County should focus on: Emergency Communications, Network Improvements, and Training, Exercises and Drills.

In addition to creating a comprehensive evacuation plan for the operational area, which will be completed in coordination with this project, the following recommendations have been identified to enhance Lake County's continued preparedness for wildfire evacuations.

## **Emergency Communications**

- **Resilient Emergency Communications Network:** Enhance backup power and network reliability for emergency alerts and coordination. Consider the Goat Mountain Repeater Project on the Grindstone Ranger District. This proposed action provides a long-term solution for improving radio communication capabilities for the Lake County Sheriff's Office and other emergency personnel by operating and maintaining a radio repeater site for two-way radio communication at an existing Forest Service site. This project is an ongoing project that, if completed, would enhance the redundancy and capability of the emergency response within Lake County.
- **Additional Changeable Message Signage:** Diverting traffic before a potential roadblock can improve evacuation communication and potentially reduce congestion. Consider locations such as North of Kelseyville on Hwy 29 before Hwy 175 and Hwy 53 in Clearlake at Lakeshore Drive. These locations were selected because they present an opportunity to communicate road closures, congestion, and or alternate routes before sending traffic into an area with limited alternate options. Additionally, consider mobile messaging boards that can be deployed within Lakeport, Clearlake, Kelseyville, Lower Lake, and the Riviera and/or creating a partnership program with community organizations and businesses that have digital message boards

to implement evacuation messaging.

- **Inclusive Communication:** Provide evacuation information in multiple languages and accessible formats to cater to diverse communities through the development of translated standing messaging. By establishing a Memorandum of Agreement (MOA) and a Memorandum of Understanding (MOU) with translation services and translated preparedness resources, providers will enhance Lake County's ability to provide critical information to all. Lake County response agencies can work with local Non-Profits, Public Television, and Local Radio to establish inclusive communications.

## Training, Exercise, and Drills

- **Community-Based Evacuation Assistance & Transit Support Workshop:** Develop a workshop to address concerns and provide resources to those who need assistance during an emergency. Coordinate with local non-profits, transportation agencies, and community support centers to create awareness of available resources and capture the communities' specific needs.
- **Zone Familiarization Workshops:** Conduct sessions to help residents, especially those in high-risk areas, understand their specific evacuation zones and routes.
- **Community Partner Evacuation Drills:** Establish a drill and exercise program incorporating community partners. These drills would aim to identify available resources, work through the functionality of coordinating the resources, and establish additional resources needed to support the community.

## Network Improvements

- **Rural Road Hardening & Alternative Evacuation Routes:** Improve and maintain secondary evacuation routes, particularly for isolated communities in Cobb, Lake Pillsbury, and Loch Lomond. Determine the resources needed to maintain the route as a potential evacuation route. Consider using private sector companies' access within these locations to enhance the need to maintain the route. The Elk Mountain Road project aims to widen the road in specific locations and perform pavement rehabilitation to make it more durable. Elk Mountain Road is the primary access road for emergency response through the US Forest Service Land to the Pine Mountain Lookout and Lake Pillsbury area. The road has been and will be heavily used for fighting forest fires and was significantly damaged during past fires. Example: PG&E's access route to Potter Valley Dam and the potential to remove the dam.
- **Strategic Fuel Breaks Along Evacuation Corridors:** Maintain the reduction of wildfire intensity along major roads by continuing the fuel break work to keep them passable during emergencies. Create an assessment program to review and prioritize routes in the community.
- **Intelligent Evacuation Traffic Management Systems:** Intelligent Transportation Systems (ITS) improve transportation safety and mobility and enhance productivity through the integration of advanced communications technologies into the transportation

infrastructure and in vehicles. ITS encompasses a broad range of wireless and wireline communications-based information and electronics technologies. Deploy real-time traffic monitoring and smart signage along evacuation routes that can connect to the Operational Area for data-driven decision-making.

## Next Steps

These next steps will guide implementation efforts across agencies and partners, ensuring a comprehensive and phased approach to enhancing community evacuation readiness over the next five years. Projects have been prioritized based on urgency, feasibility, and potential impact, and grouped into short-term (1 year), medium-range (2–3 years), and long-term (1–5 years) categories. Each project includes clearly defined roles and responsibilities to support effective coordination, resource allocation, and accountability.

### Short Term (1 Year)

These projects are prioritized because they are more feasible for implementation. They would be considered a lower budget, and minimal capital is needed. These projects will require time and community involvement. These strategies can be implemented within the next year, and some will initially be coordinated in the Lake County Wildfire Evacuation Plan. These strategies will enhance communication and coordination across Lake County for evacuations.

#### 1. Inclusive Communications

*Prioritization:* Enhance accessibility and reach of evacuation messaging.

*Roles and Responsibilities:*

- Through coordination within the Lake County Evacuation Plan, identify the organizations that can create MOUs to provide inclusive communications.
- Communications: Develop inclusive communication strategies and ensure messaging aligns with diverse community needs.
- Community Partners: Identify existing resources in the community.
- Unified Command: Establish and execute the MOU.

*Funding Opportunities:*

- **The National Endowment for the Humanities:** This federal program was built specifically to ensure language access for people with Limited English Proficiency (LEP) and provides grants to certain LEP institutions and individuals. Grantees are usually “cultural institutions, such as museums, archives, libraries, colleges, universities, public television, and radio stations.”
- **The Health Resources & Services Administration (HRSA)** provides various financial assistance for language access. Government organizations, non-profits, religious organizations, and educational organizations can also benefit from HRSA grants.
- **United Way:** The United Way provides grants in communities throughout the United States.

#### 2. Changeable Message Signs – Mobile Signs or Community Partners

*Prioritization:* Immediate implementation due to flexibility and quick deployment benefits.

*Roles and Responsibilities:*

- Through coordination within the Lake County Evacuation Plan, identify the organizations with resources and MOUs to provide evacuation communications.
- Community Partners: Provide locations and assist in messaging coordination.
- Unified Command: Determine communication messages and coordinate with partners.

*Funding Opportunities:*

- *FEMA's Emergency Management Performance Grant (EMPG) and Department of Homeland Security (DHS) Homeland Security Grant Program (HSGP) by supporting the building, sustainment, and delivery of core capabilities essential to achieving the National Preparedness Goal (NPG), such as emergency communications infrastructure.*
- *The Department of Transportation's Strengthening Mobility and Revolutionizing Transportation (SMART) discretionary grant program. The SMART program was established to provide grants to eligible public sector agencies to conduct demonstration projects focused on advanced smart community technologies and systems to improve transportation efficiency and safety.*

### **3. Community-Based Evacuation Assistance & Transit Support Workshop**

*Prioritization:* Establish community resilience and support networks.

*Roles and Responsibilities:*

- Community Leaders: Determine community location, lead organization for workshops, and engage in workshop participation and implementation.
- Community Partners: Determine community resources, provide content and resources for workshops, and engage in workshop participation and implementation.
- Workshop Facilitator: Organize and conduct training sessions.

*Funding Opportunities:*

- *Local jurisdiction funding, community partners, and non-profit organizations.*

### **4. Zone Familiarization Workshops**

*Prioritization:* Improve community preparedness and response times.

*Roles and Responsibilities:*

- Through coordination within the Lake County Evacuation Plan, identify the workshop curriculum and logistics.
- Local Authorities: Support outreach and participant engagement efforts.
- Lake County COAD: Support outreach and participant engagement efforts.

*Funding Opportunities:*

- *Local emergency management agencies and non-profits.*

- *FEMA's Emergency Management Performance Grant (EMPG) and Department of Homeland Security (DHS) Homeland Security Grant Program (HSGP) by supporting the building, sustainment, and delivery of core capabilities essential to achieving the National Preparedness Goal (NPG).*

### **Medium Range (2-3 Years)**

These projects are prioritized as medium range as they will require a larger budget, significant coordination effort, increased time commitments and greater community involvement. The impact of these strategies will continue to enhance the evacuation coordination in Lake County.

#### **1. Community Partner Evacuation Drill**

*Prioritization:* Validate coordination and response capabilities.

*Roles and Responsibilities:*

- Emergency Operations Center (EOC): Lead drill planning and execution.
- Community Partners: Participate actively in scenario-based exercises.

*Funding Opportunities:*

- *Community Development Block Grant Mitigation (CDBG-MIT) action plans must include a risk-based Mitigation Needs Assessment that identifies and analyzes all significant current and future disaster risks, which provides a substantive basis for the activities proposed. The mitigation needs assessment requires grantees to collaborate with a variety of stakeholders that currently administer the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) funds.*
- *Small Business Administration (SBA) disaster assistance loans, Economic Development Administration (EDA) **Funding Opportunities and Resources**, and state-level economic recovery grants.*

#### **2. Strategic Fuel Breaks Along Evacuation Corridors**

*Prioritization:* Continue to mitigate fire risks and enhance evacuation route safety.

*Roles and Responsibilities:*

- Environmental Specialist: Identify suitable funding opportunities and conduct resource assessments.
- Public Works and Transportation Departments: Implement fuel break construction and maintenance.

*Funding Opportunities:*

- *Bureau of Land Management (BLM), USDA Forest Service grants, and FEMA's Pre-Disaster Mitigation (PDM) grants for fuel break projects.*

### **Long Term (1-5 Years)**

These projects are prioritized as long-term because they will require a larger budget, significant capital investment, and significant implementation time. These long-range strategies should be considered in Lake County as part of the ongoing community planning and overall mitigation and response strategies.

## **1. Resiliency Emergency Communication Networks**

*Prioritization:* Establish a robust communication infrastructure.

*Roles and Responsibilities:*

- County Departments: Coordinate the implementation plans and continue to seek additional funding and resources as needed to complete the project.
- Telecom Partners: Provide technical support and integration expertise.

*Funding Opportunities:*

- *FEMA's Emergency Management Performance Grant (EMPG) and Department of Homeland Security (DHS) Homeland Security Grant Program (HSGP) by supporting the building, sustainment, and delivery of core capabilities essential to achieving the National Preparedness Goal (NPG), such as emergency communications infrastructure.*

## **2. Changeable Message Signs – Permanent Signs**

*Prioritization:* Enhance visibility and reliability of evacuation information.

*Roles and Responsibilities:*

- Lake County: Seek additional message signs to enhance communication in key locations.
- Caltrans: Install permanent signage along designated evacuation routes.
- Maintenance Crews: Ensure signage functionality and updates.

*Funding Opportunities:*

- *FEMA's Emergency Management Performance Grant (EMPG) and Department of Homeland Security (DHS) Homeland Security Grant Program (HSGP) by supporting the building, sustainment, and delivery of core capabilities essential to achieving the National Preparedness Goal (NPG), such as emergency communications infrastructure.*
- *The Department of Transportation's Strengthening Mobility and Revolutionizing Transportation (SMART) discretionary grant program. The SMART program was established to provide grants to eligible public sector agencies to conduct demonstration projects focused on advanced smart community technologies and systems to improve transportation efficiency and safety.*

## **3. Rural Road Hardening & Alternative Evacuation Routes**

*Prioritization:* Strengthen infrastructure resilience and expand evacuation options.

*Roles and Responsibilities:*

- Civil Engineers: Assess road conditions and recommend hardening measures.
- County Planning Department: Identify and secure funding for alternative routes.

*Funding Opportunities:*

- *USDA Rural Development grants, FEMA Hazard Mitigation Grant Program (HMGP), and DOT grants for rural road improvements and evacuation routes.*

## **4. Intelligent Evacuation Traffic Management Systems**

*Prioritization:* Optimize traffic flow during evacuations.

*Roles and Responsibilities:*



- Traffic Engineers: Design and deploy intelligent traffic management solutions.
- Emergency Services: Coordinate response and integration with evacuation plans.

*Funding Opportunities:*

- *DOT Intelligent Transportation Systems (ITS) grants: Safe Streets and Roads for All (SS4A) grant program. Strengthening Mobility and Revolutionizing Transportation (SMART) discretionary grant program. The SMART program was established to provide grants to eligible public sector agencies to conduct demonstration projects focused on advanced smart community technologies and systems to improve transportation efficiency and safety.*
- *FEMA's Emergency Management Performance Grant (EMPG) and Department of Homeland Security (DHS) Homeland Security Grant Program (HSGP) by supporting the building, sustainment, and delivery of core capabilities essential to achieving the National Preparedness Goal (NPG), such as emergency communications infrastructure.*

## Annex 1: Survey Results

# Lake County California

# Wildfire Evacuation Analysis and Preparedness Memo Survey Results Annex



April 2025

Prepared by



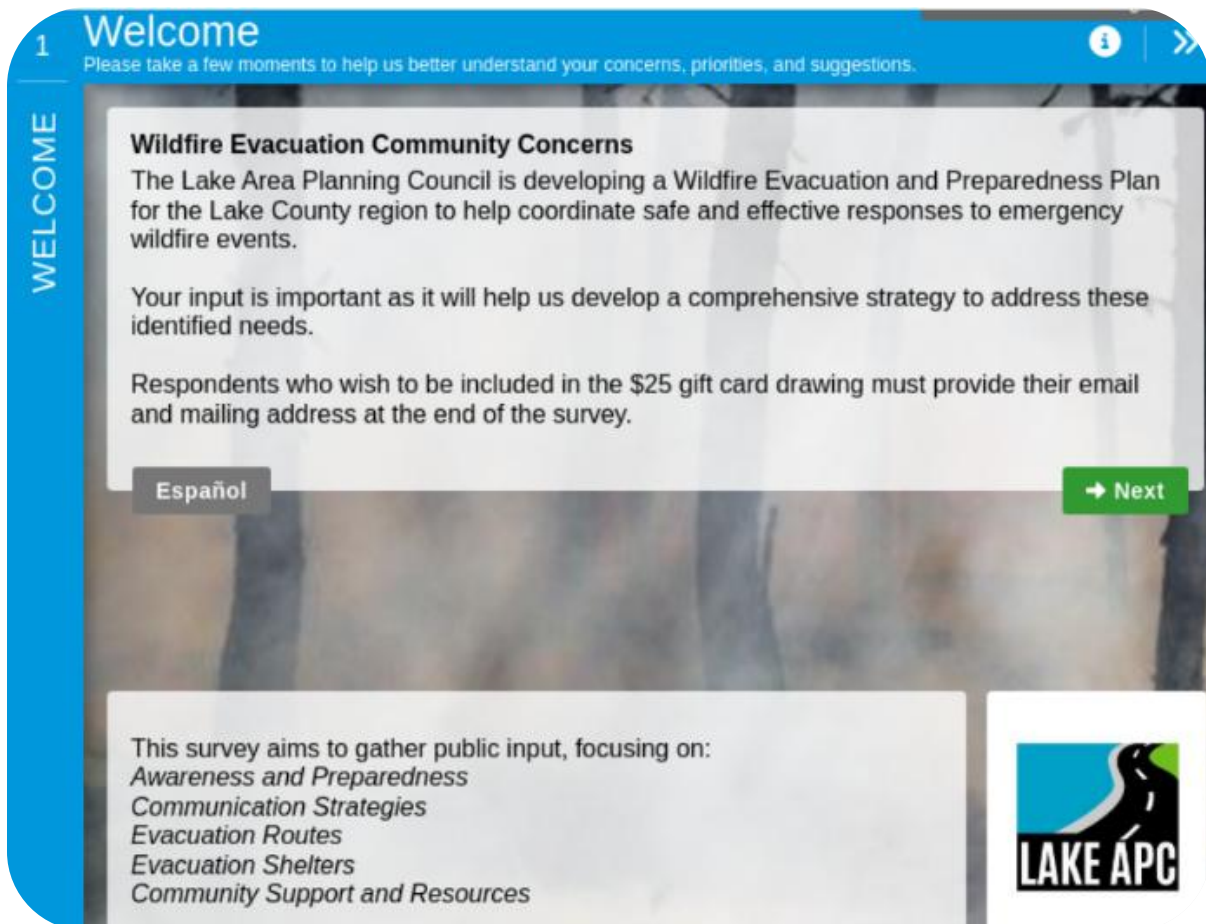
*The preparation of this report was funded through the Lake Area Planning Council's  
2023/24 Regional Transportation Planning Work Program, Work Element 615.*

## Public Input Survey

The survey was available for public input in English and Spanish from August 29, 2024, through November 8, 2024. The survey had 243 participants and responses. The survey results were presented to Lake APC's Social Services Transportation Advisory Council (SSTAC), and based on the discussions and feedback from the council, the survey was re-opened for a specific campaign to ensure that the vulnerable populations within Lake County had the opportunity to complete the survey. The survey was then conducted from November 26, 2024, through January 10, 2025. The survey respondents are now 304, an increase of 59 responses.

The survey consisted of three sections:

4. Tell Us About You
5. Evacuation Support Resources and Needs
6. Evacuation Routes and Concerns



The screenshot shows the first page of a survey titled "Welcome". The page has a blue header with the number "1" and the title "Welcome". Below the header, it says "Please take a few moments to help us better understand your concerns, priorities, and suggestions." The main content area has a background image of a forest. It features a section titled "Wildfire Evacuation Community Concerns" with the following text: "The Lake Area Planning Council is developing a Wildfire Evacuation and Preparedness Plan for the Lake County region to help coordinate safe and effective responses to emergency wildfire events." Below this, it says "Your input is important as it will help us develop a comprehensive strategy to address these identified needs." and "Respondents who wish to be included in the \$25 gift card drawing must provide their email and mailing address at the end of the survey." There is a "Español" button and a "Next" button. At the bottom, it lists the survey's focus: "This survey aims to gather public input, focusing on: Awareness and Preparedness, Communication Strategies, Evacuation Routes, Evacuation Shelters, and Community Support and Resources." The LAKE APC logo is in the bottom right corner.

Figure 23: Survey Page 1

## Section 1 - Tell Us About You

Your input helps us understand the needs of our community. Please answer each of the following survey questions.

### *Preparedness*

Q1: How would you rate your personal preparedness for evacuating due to a wildfire?

*Table 9: Question 1 Results*

Selections	Number of Respondents	Percentage
Excellent	43	14.4%
Good	139	46.5%
Fair	62	20.7%
Needs Improvement	55	18.4%

- The majority of respondents rated their preparedness as “Good,” indicating that many feel relatively ready for an evacuation but may not have optimal preparation.
- Only 14.4% rated themselves as “Excellent,” suggesting that few people feel highly confident in their evacuation readiness.
- About 39.1% of respondents selected “Fair” or “Needs Improvement,” showing that a substantial portion recognizes areas for improvement in their personal preparedness.
- With over 60% of respondents rating themselves as “Good” or “Excellent,” there is a solid foundation for evacuation readiness. However, the 39.1% in the “Fair” and “Needs Improvement” categories indicate an opportunity for targeted educational initiatives.
- Enhancing communication about evacuation procedures, providing resource checklists, and running preparedness workshops could help those who feel less prepared.

Q2: How prepared is your household to evacuate quickly? Select all that apply.

*Table 10: Question 2 Results*

Selections	Number of Respondents	Percentage
Familiarity with Ready, Set, Go	160	55.2%
Emergency Evacuation Plan	155	53.4%
Copies of Important Documents	150	51.7%
Go Kit Preparedness	136	46.9%
Not Prepared	66	22.8%

The 22.8% who feel “Not Prepared” underscores a sizable segment of the community that needs more focused resources and support.

## Emergency Communication

Q3: How do you receive information regarding wildfires and evacuations in Lake County? Check all that apply.

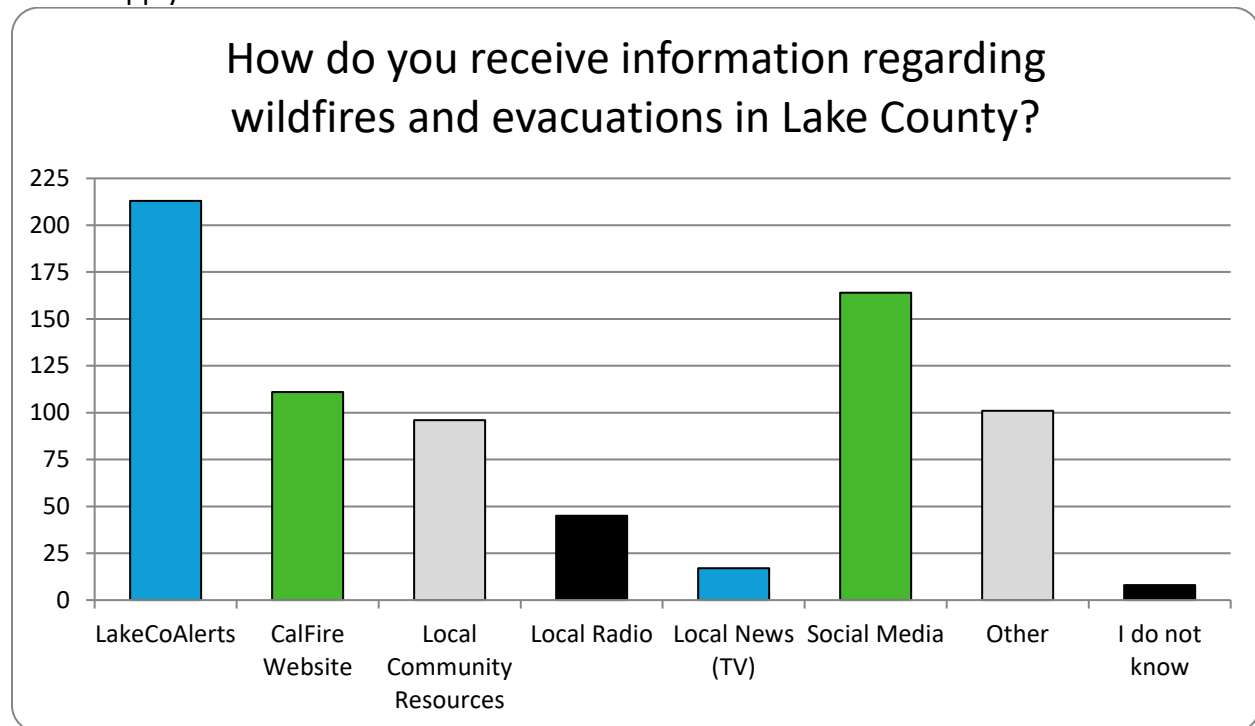


Figure 24: Wildfire Preparedness Information

Specific social media groups and other information sources provided were Watch Duty, Scanners, Neighborhood Phone Trees, Sirens, Dispatch, and Local Government.

## Evacuation Needs

Q4: What mode of transportation would you use in an evacuation situation?

Table 11: Question 4 Results

Selections	Number of Respondents	Percentage
Personal Vehicle	282	90%
Friend/Neighbor	17	5%
Public Transit	6	2%
Require Assistance	7	2%

- With 90% of respondents relying on personal vehicles, congestion could be a major issue in an evacuation. Planning should include strategies for managing high-traffic volumes, such as designated evacuation routes and traffic control support.
- The small percentage who would rely on public transit or need assistance may still represent vulnerable individuals. Ensuring accessible, responsive support for these individuals could prevent delays and improve safety.

Q5: What mode of sheltering would you utilize in an evacuation situation?

*Table 12: Question 5 Results*

Selections	Number of Respondents	Percentage
Shelter	53	14%
Friend/ Family	174	47%
Unsure	59	16%
Other	84	23%

- With only 14% planning to use shelters, demand for public facilities may be lower than expected. However, shelters should remain prepared to support residents who lack alternatives, particularly in case of unexpected shelter needs and increases in usage. This includes providing resources that outline all sheltering options—including hotels, shelters, and other local resources—that could help alleviate uncertainty.

Q6: Medical: Select the statement that reflects your needs during an evacuation.

*Table 13: Question 6 Results*

Selections	Number of Respondents	Percentage
Medical Resources – CAN Evacuate with them	120	42%
Medical Resources – CANNOT Evacuate with them	4	1%
No Needs	162	57%

- Since 99% of respondents either have no medical needs or can evacuate with their resources, planning can largely focus on general population needs without extensive medical-specific infrastructure. However, there are still those who cannot evacuate with their medical resources, and the four respondents highlight a critical need for specialized plans, such as designated transport and shelter accommodations for those requiring stationary medical support.

Q7: What additional resources would you need to support your evacuations?

*Table 14: Question 7 Results*

Selections	Number of Respondents	Percentage
Translated Resources – Spanish	4	5%
Translated Resources – Other	5	7%
ADA Transportation	12	4.5%
Other	53	72%

- The “Other” category diversity suggests that some residents have unique requirements. Responses for the description of “other” ranged from gas money, CPAP Battery, lodging, medications, and pet information.

## Pets and Livestock

Q8: Pets/Livestock: Select the statement that reflects your needs during an evacuation.

Q9: Type of Pet(s)/Livestock

- Respondents primarily identified that they do not need assistance with pets/livestock during an evacuation and that small household pets are the primary animals being evacuated.
- The specified pets/livestock identified were donkeys, chickens, pigs, goats, birds, and large dogs.

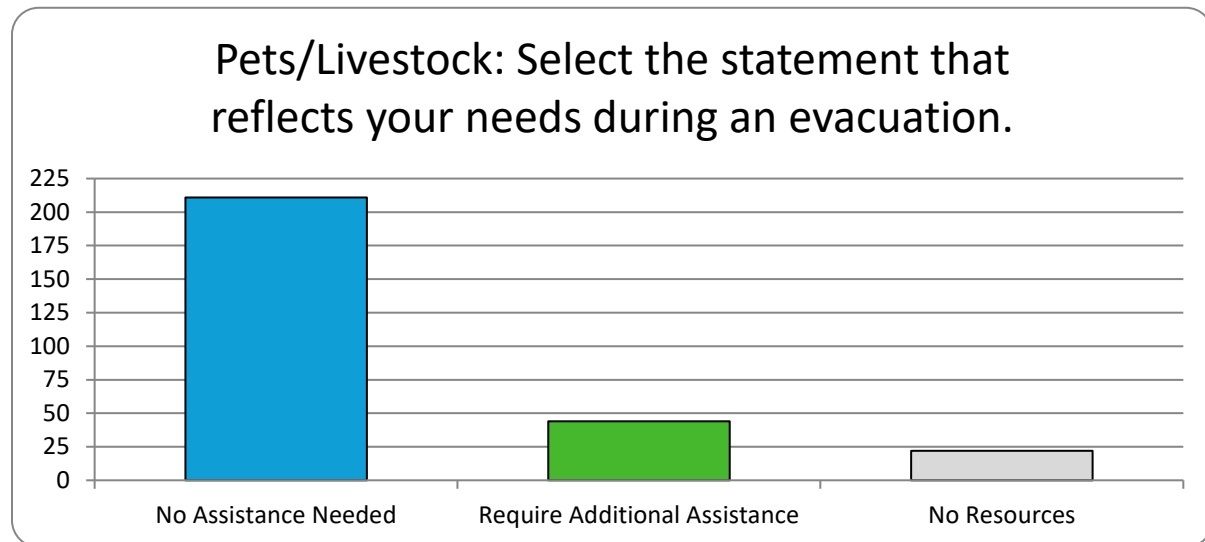


Figure 25: Question 8 Pets and Livestock

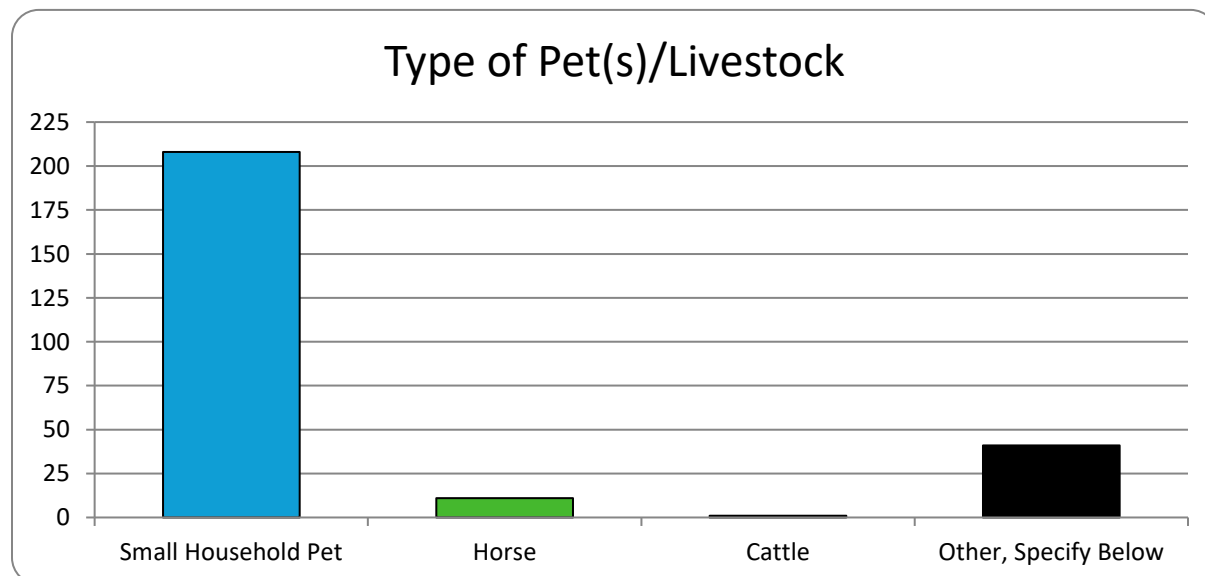


Figure 26: Question 9 Types of Pets and Livestock



## Demographics

Q10: Please indicate whether you're a resident, visitor or business owner in Lake County.

Q11: Please indicate which community you reside in or is your primary location in Lake County.

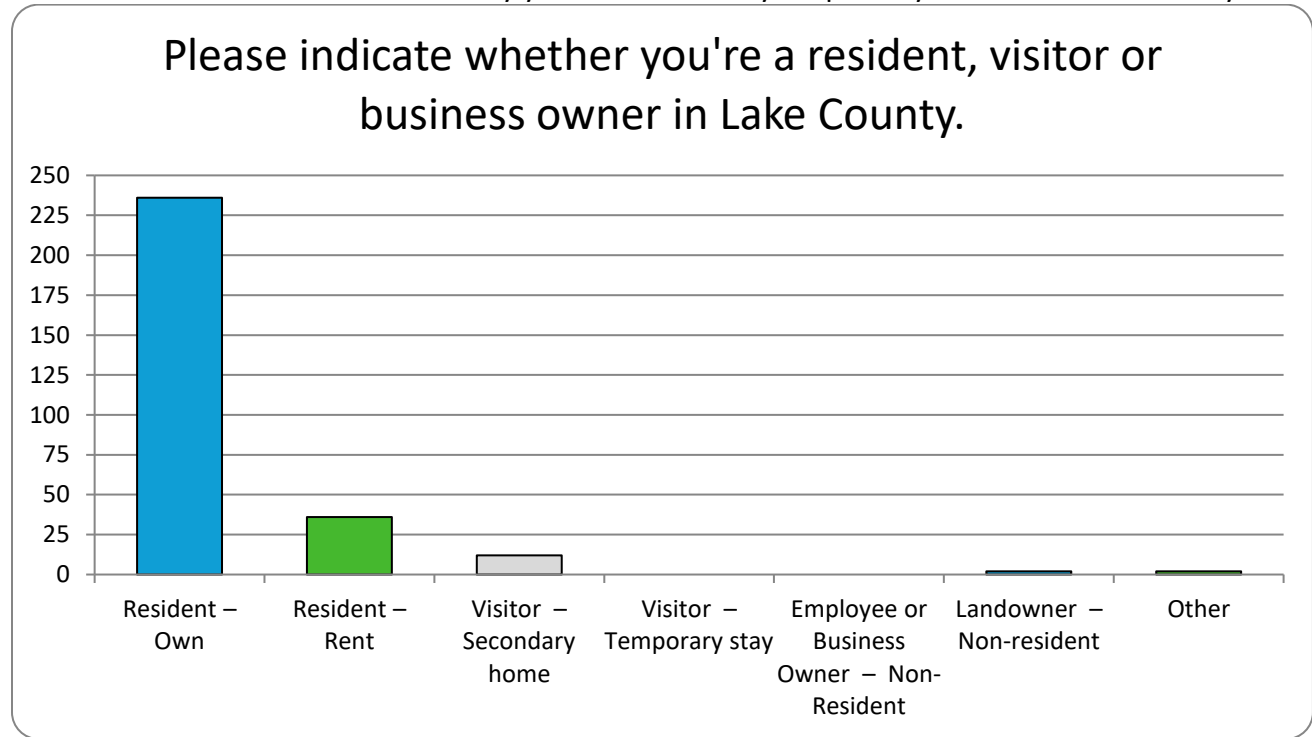


Figure 27: Question 10 Results

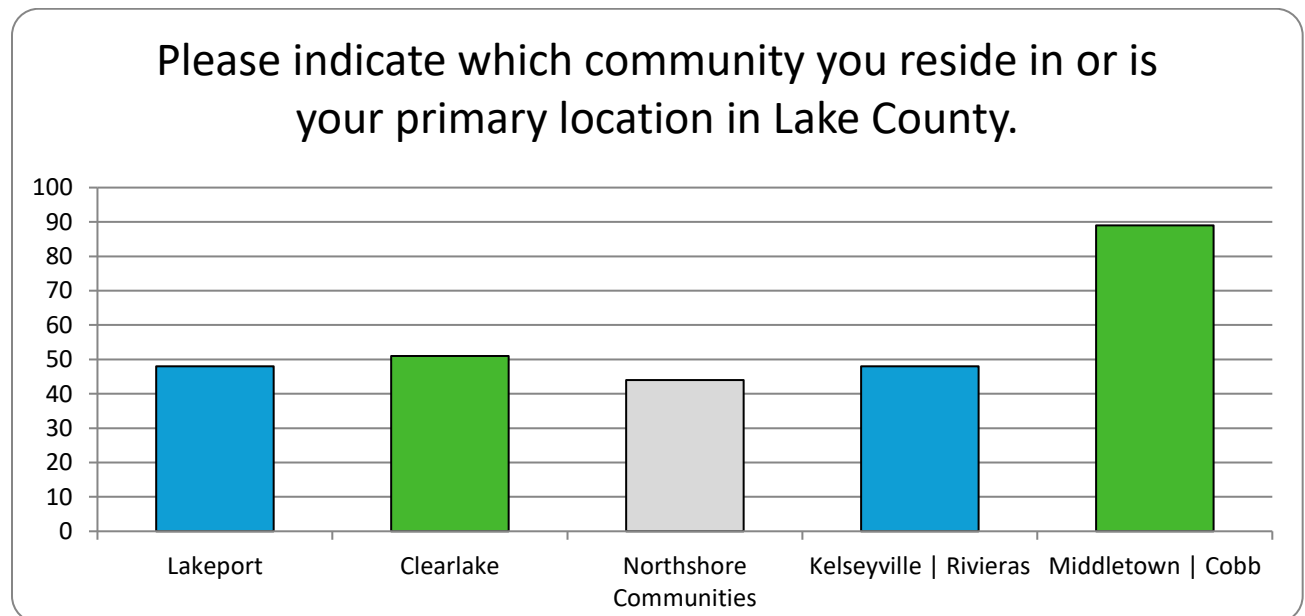


Figure 28: Question 11 Communities

Q12: Please indicate your age group:

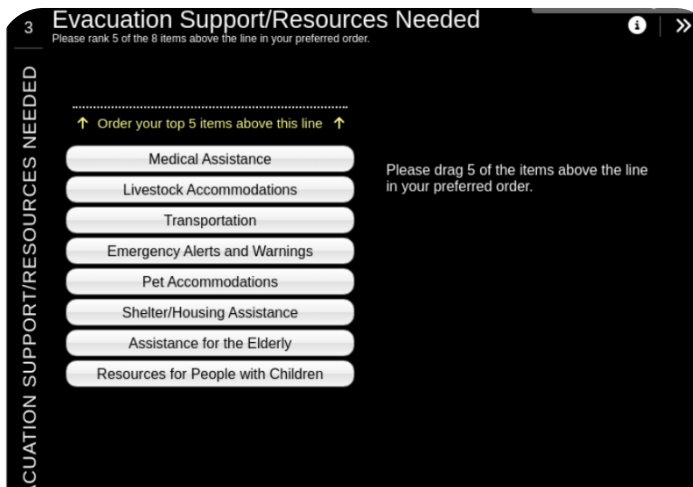
Table 15: Question 12 Results

Selections	Number of Respondents	Percentage
Under 18	4	1.3%
18-29	15	5.1%
30-44	28	9.5%
45-64	113	38.4%
65 or Older	134	45.5%

- The 65+ age group is the largest segment of respondents, which suggests a need for evacuation plans that accommodate elderly individuals, including accessible transportation, medical assistance, and sheltered environments.
- Given the relatively high number of respondents in the 45-64 age group, this group may require specific resources such as family care responsibilities.

### Section 3 - Evacuation Support and Resources Needed

What support and resources would assist you in evacuating from a wildfire?



*Please drag 5 of the items above the line in your preferred order.*

- Medical Assistance
- Livestock Accommodation
- Transportation
- Emergency Alert and Warnings
- Pet Accommodation
- Shelter/Housing Assistance
- Assistance for the Elderly
- Resources for People with Children

Figure 29: Survey Page 3

#### Emergency Alerts and Warnings (Ranked 1 by 120 respondents, Average Rank: 1.71)

- With 120 respondents ranking it as the top priority, emergency alerts and warnings are the most critical need for wildfire evacuation. This shows that timely, reliable information is crucial for effective preparedness.

#### Shelter/Housing Assistance (Ranked 1 by 20 respondents, Average Rank: 2.98)

- Shelter and housing assistance are a significant priority, ranking second overall. This underscores the need for clear plans on where evacuees can go and stay safely during evacuations.

#### Pet Accommodations (Ranked 1 by 23 respondents, Average Rank: 2.81)

- Pet accommodations ranked third in importance, reflecting that many households have pets and consider their safety a key factor in evacuation planning.

**Assistance for the Elderly** (Ranked 1 by 20 respondents, Average Rank: 2.96)

- Assistance for elderly residents is also a high priority. Older individuals may face unique evacuation challenges, requiring targeted resources and accommodations.

**Resources for People with Children** (Ranked 1 by 8 respondents, Average Rank: 3.26)

- Resources for families with children ranked moderately, suggesting that while important, it may be secondary to broader household evacuation needs.

**Transportation** (Ranked 1 by 14 respondents, Average Rank: 3.49)

- Transportation ranked lower in priority but remains essential, likely due to concerns about reaching evacuation sites or accessing resources during an emergency.

**Medical Assistance** (Ranked 1 by 4 respondents, Average Rank: 3.64)

- Medical assistance is a lower priority, perhaps because most respondents assume they can access care post-evacuation.

**Livestock Accommodations** (Ranked 1 by 5 respondents, Average Rank: 3.06)

- While livestock accommodation ranked lower, it is still a crucial concern for residents with farm animals.

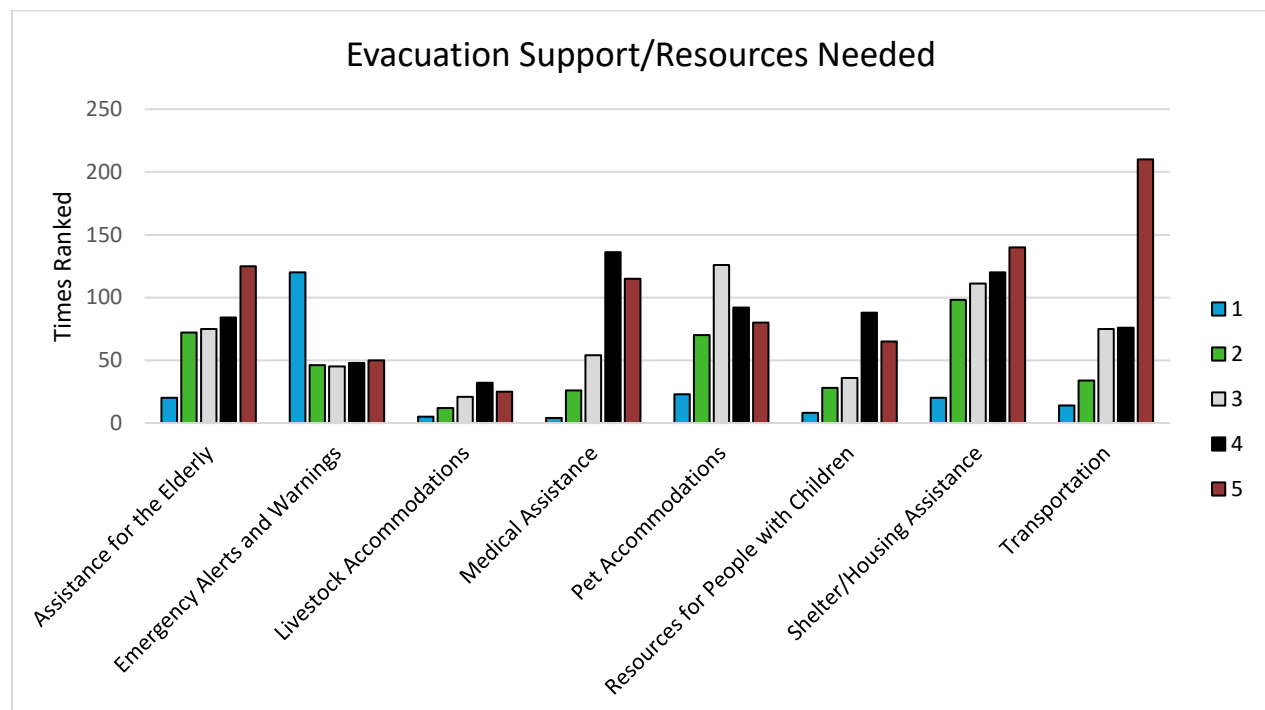


Figure 30: Evacuation Resources

### Section 3 - Evacuation Support and Resources Needed Comments

Resource Type	Comment
<b>Assistance for the Elderly</b>	Notification, help with actual evacuation
	Better communication to elderly persons. Instructions on how to access online resources. A way for elderly with no support systems to be alerted to emergencies.
	This is not a need of mine, but it is needed in our county
	Currently, no elderly people reside with us, but I am concerned for those who are elderly.
	Some folks do not have cell phones and might be unaware of a fire. We need a way to identify individuals who might need help during a fire. Also, people were told to go to the old airport and sit there due to no available place for them to go.
	Help transport my roommate, who will be on oxygen
	Help caregiver assistance for myself and my son with cognitive disability since our regular caregiver might not be available in an emergency.
<b>Emergency Alerts and Warnings</b>	The alerts sent to my cell phone came through at least 10 minutes after the alert from watch duty. The police flying through my neighborhood, (hi/low siren) could not be heard inside my home. I didn't even notice them until i was loading up my car.
	More education on Genysis, Watch Duty, and how to access information from local emergency agencies.
	Currently, I feel like I am kept abreast of emergency alerts, so I have no concerns for myself or my family. However, I do worry about the elderly who are not very computer savvy.
	I have hearing problems even with hearing aids. When monthly testing of our sirens is done, I can barely hear outside my home, let alone inside.
	Sirens on the LE card
	1 need sooner warnings
	During the recent fire in Clearlake Oaks, I was home alone and had surgery; I was unaware of the fire for a while. I didn't receive any calls, and watch duty did not send an alert. No one came to inform me of the mandatory evacuation. I later saw on my camera the police had driven the road but never any driveways to any houses. I heard on the portable scanner that the police reported that all residents were out of the valley. There needs to be a better plan to notify residents.
	Are you coordinating your efforts with the recently completed Soda Bay Corridor Evacuation Plan, which was completed in coordination with the Konocti Fire Safe Council and the Lake County Department of Public Works? The Evac report contains all of the issues you are asking about, along with 34 recommendations for improvement.

Resource Type	Comment
	There was a fire one block from my house - the wooded area in Riviera Heights. There was NOTHING, no sirens, no warnings, nothing
	I have a major concern. On September 6, 2023, I received an emergency alert on my cell phone saying An evacuation order was in effect for Zone Lowe E169. I moved here year ago and I had no clue what that meant. It wasn't very informative. I didn't know if that sent out by the state or what.
	We have Watch Duty on our phones & Genisys. Are there others we should have?
	Text
	Very important to get correct info we panic
	Sirens needed to sound in an emergency.
<b>Livestock Accommodations</b>	Evacuation support for farm animals
	I have no livestock, just concerned for those who do.
	We would not evacuate with our chickens, but after 4+ days we would need a wellness check for them to check on food and water levels
	Transportation issues
<b>Medical Assistance</b>	People who are required to use electric devices, especially in case of power outages. The disabled, demented, especially if they live alone.
	Don't need any assistance
	Asthma and COPD, I may require oxygen therapy and medications
<b>Pet Accommodations</b>	Although there are usually places where people can shelter their pets, finding interim housing that will accept pets can sometimes be difficult.
	I'm concerned about pet accommodations, however, I have no solutions for this.
	we need a location that can easily be set up for helping with placement of peoples pets. Maybe a local land owner whos property can be used as a safe place.
	Shelters with pet accommodations and support
	We need to shelter together with our therapy cat.
<b>Shelter/Housing Assistance</b>	Interim housing-Due to the continuing fires, housing stock in the county has been impacted. While there are processes for people with animals to shelter their pets, it can be sometimes difficult for persons with pets to find interim housing.

Resource Type	Comment
	<p>not a need of mine because I have family in the area but we need set locations with stored emergency items to enable a quick set up when needed. some areas of the county are hard to get to and people could be trapped if there is nowhere save to go</p> <p>I may need help finding a place to park my 5th Wheel trailer.</p> <p>2 quicker response</p> <p>We need a place that is readily available for people. I think that we need to do what it takes to be able to use the moose lodge as a set up place. They have been great in the past and it is sad that we cant use their place any longer. We need Lake County to be independent as the red cross is not a good resource.</p> <p>Knowing what shelter is going to be available and one that allows pets</p> <p>Hotel</p> <p>If we are unable to get out with our own car, we couldn't make it to our primary residence and would need shelter</p> <p>Find a way for residents to be able to set up a camping area</p> <p>Need private shelter due to my low immunity and son with cognitive disability and therapy cat.</p>
Transportation	<p>As evidenced by the Boyles Fire, traffic backup was a concern. The evacuation shelter being located 20 miles away made it difficult for persons with no vehicle, although there were resources in place to assist them with transport, not everyone was aware of such.</p> <p>some housing locations are isolated and not close to public transportation or they are located on unmaintained roads. we need to set up better infrastructure for road improvement in unincorporated areas</p> <p>Others need help getting out</p> <p>I find that in the event of fires our police are slow to close the roads. If the Rivera had a fire, the highway would need to be shut down to incoming traffic and the roads open both ways for everyone to evacuate quickly!</p> <p>Concerns regarding road access on Soda Bay Road</p> <p>We need to stop allowing projects in areas with only one way in or out. Living in the country and only having one way in is very dangerous.</p> <p>Don't have any concerns</p> <p>one-way road and only one route out</p> <p>During the 2 previous evacuations in the Clearlake Avenues, the traffic has been severely backed up and slow due to the limited areas to escape. New areas must be identified and opened for evacuations</p>

## Section 4 - Evacuation Routes and Concerns

Place the markers on the map to help us understand the concerns on your evacuation route.

Drag and drop MARKERS onto the map where you have potential concerns.

You can use the same markers more than once.

- Traffic Bottleneck
- One Way In/One Way Out
- Narrow Roads
- Infrastructure Concerns
- Other

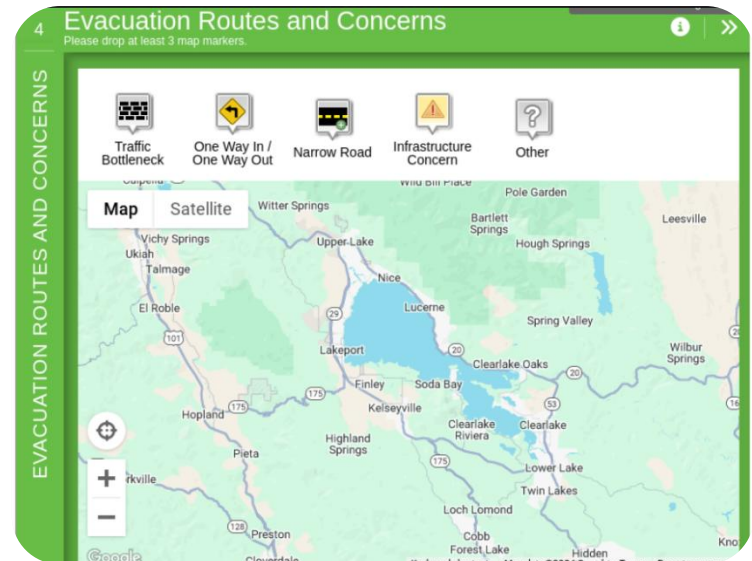


Figure 32: Survey Page 4

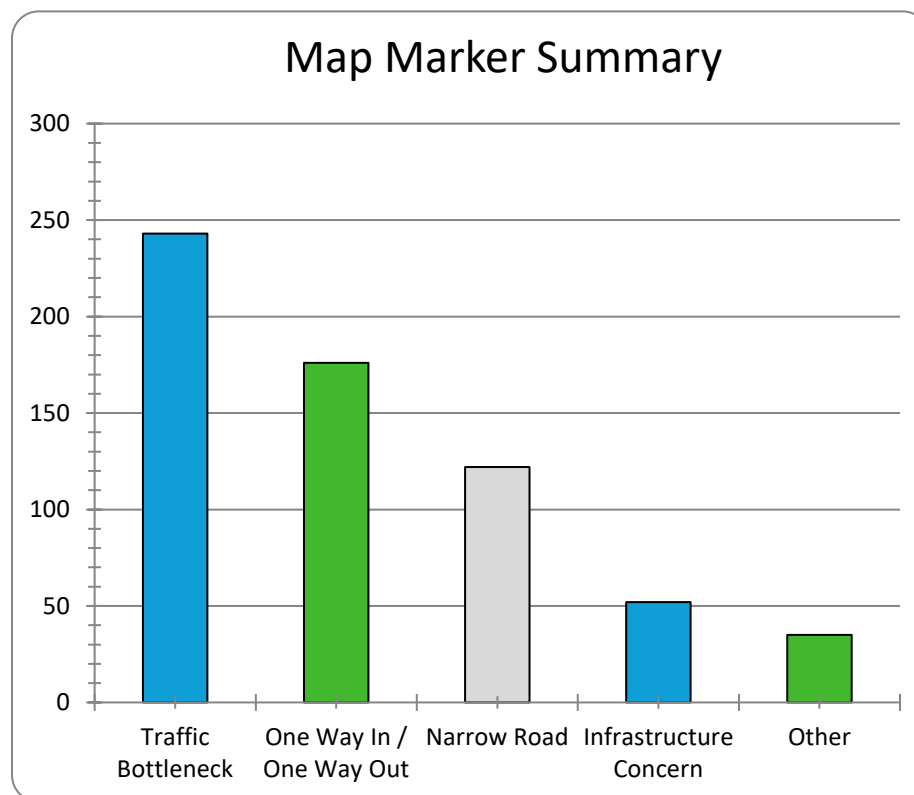


Figure 33: Map Marker Results

Respondents plotted markers throughout the county with 243 markers for Traffic Bottlenecks, 176 One-Way-In and One-Way-Out locations, 122 Narrow Road markers, 52 Infrastructure Concerns, and 35 other markers.

The other concerns listed were:

- Steep Curving Roads
- Minimal Egress
- Power Concerns
- Mobile Home Parks
- Charlie Jolin Way
- High Valley Road
- Fuel
- Pot Holes



The map below in Figure 34 shows the markers that the respondents placed.

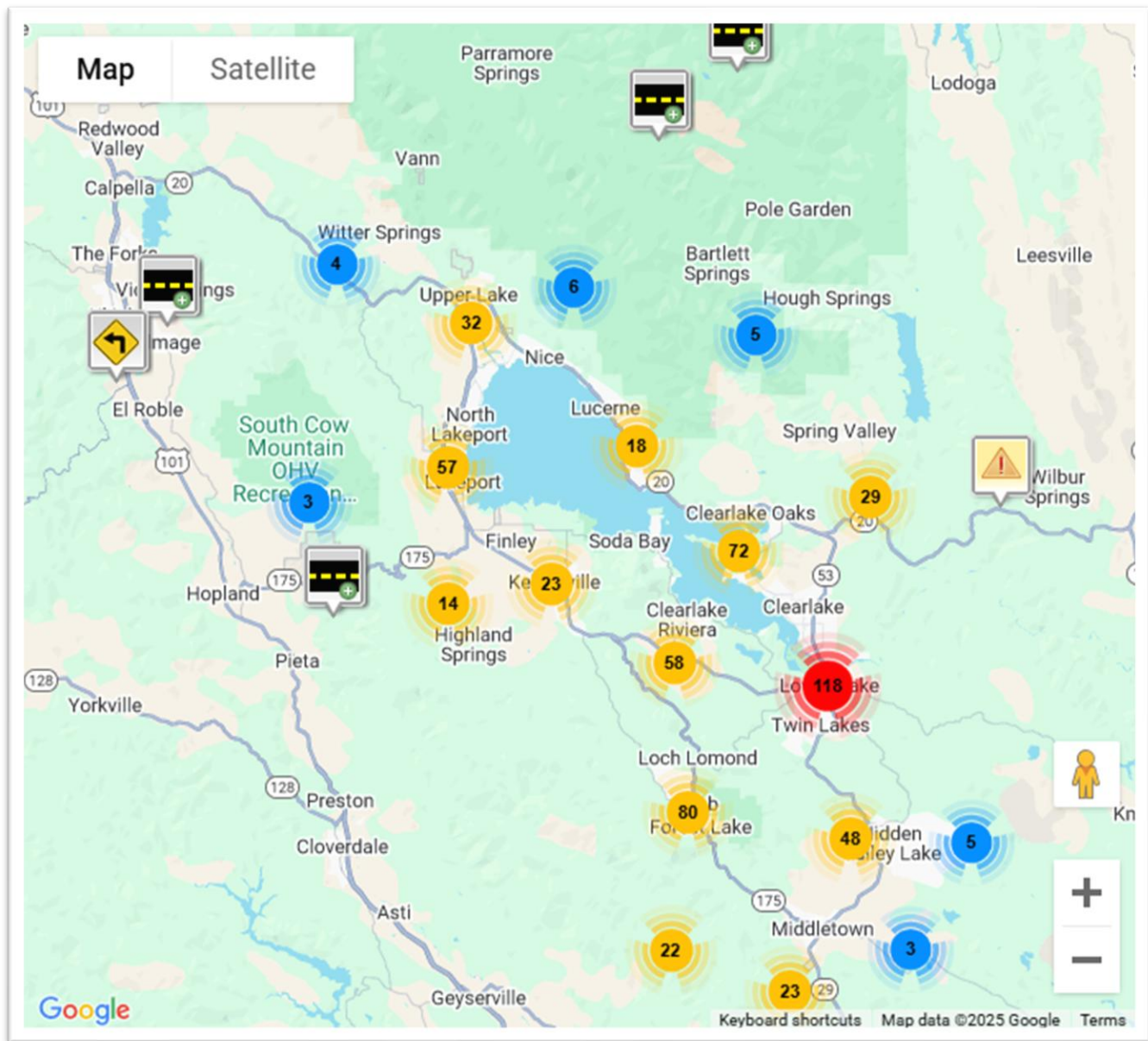


Figure 34: Survey Mapping Results

## Section 4 - Evacuation Routes and Concerns Comments

Table 16: Survey Map Comments

Type	Comment
Traffic Bottleneck	one lane each way
	one lane each way
	Too many people evacuating on one road.
	Highways 29 and 20 close by.
	Traffic bottleneck during the Boyles Fire. 18th Ave and the new extension on Phillips didn't help as they were in the evacuation zone.
	Egress from the Hidden Valley Lake subdivision has been difficult during evacuations in the past
	Impassable due to wildfire, accidents
	Impassable due to wildfire, accidents
	Impassable due to wildfire, accidents
	curvy
	Limited highways and routes
	One exit all vehicles on one road
	A lot of traffic at one intersection
	HVLA
	Signals might be out
	Signals might be out
	T intersection onto 29
	Locked gate not opened soon enough
	Traffic backup on 29
	From residents evacuating Hidden Valley
	From residents evacuating Hidden Valley
	Roundabout
	Too many people try to go the same way.
	Avenues egress
	Avenues egress
	"Gooseneck" area dense populated residential with minimal egress. During 2017 Sulphur Fire traffic bottlenecked delaying evacuations
	"Gooseneck" area dense populated residential with minimal egress. During 2017 Sulphur Fire traffic bottlenecked delaying evacuations
	Old hwy 53 intersection
	Lakeshore/53 intersection
	Olympic/53
	Lakeshore drive narrow access to north
	40th/lakeshore. Limited egress from avenues
	18th/53 limited access from avenues
	Busy intersections can be a bottleneck
	Lots of people leaving two gates up here

Type	Comment
	Junction of Loch Lomond Rd & 175 would back up traffic in emergency evacuation!
	Traffic
	Two gates possibly evacuating this direction
	Traffic control
	Small roads
	Bottleneck, completely stops evacuations
	The entire "Avenues" community is trying to get out, here or 40th. Impossible. Dam rd Extension helped a lot. But not enough
	This road, Sulpher Bank rd, has been under construction since the road broke off. During the October fire in the Gooseneck, it was very hard for people to evacuate; the road was also narrow and not lit at night. Only some portions are paved
	I live near the police station. If there is a major fire that station 70 can't handle and the roads are shut down, there is no alternate way out of Clearlake besides Sulpher Bank, Lower Lakeshore/Arrowhead/North Dr (which meets with Sulpher Bank Rd). This is our major highway/road of evacuation.
	The avenues in Clearlake. One exit was blocked by fire, traffic was nightmare, need another emergency exit out of the avenues, with police guiding traffic.
	Depending on where the fire starts ex. Boules fire started on the south side of the neighborhood thus closing off all lower escape routes in the area more entrances and exit roads for evacuation and roads need to be paved to insure safer evacuation as well also people will be fleeing with travel trailers including myself
	Due to bad road infrastructure, this area is a traffic hazard even when no emergency exists roads need to be repaved and proper visibility on traffic lines
	Traffic was completely at a stand still trying to get out during Boyles fire, for very long time. I contemplated staying home, for fear of burning up in my car.
	Boyles Fire - only evacuation route from my house
	Boyles fire
	Boyles fire
	If a large fire was near 29 by SG rd/HVL there is no other way out
	Same reason if 29 was overrun there is no other way out
	Too many people for roads out of danger
	One road in and out
	During recent evacuation of Riviera neighborhoods, traffic backed up Fairway- nearly impossible to make a left turn onto Soda Bay Rd.
	Only one way out!!
	very congested with so many from hvl
	May be difficult to enter highway
	If fire trucks coming in no way to get out
	Major evacuation route for 7800 residents.
	Major evacuation route for 7800 residents
	3 hr evacuation time last evac. Perhaps water evac?
	Too many trying to leave at same time
	getting on Hwy 29 at b

Type	Comment
	Bottleneck
	One main intersection that the entire park will have to evacuate through
	Only gas station at a major evacuation intersection for the community
	Major intersection for evacuating several communities in this direction
	Many people live off Konocti Vista Drive and Point Lakeview.
	Lack of traffic control, lack of exits
	Lack of traffic control lack of exits
	Terrible road
	Bottleneck
	Traffic bottles up from the side streets to sbr/281
	Traffic back up trying to get on to hwy 29 at pt. Lakeview
	2 lane road on major highway
	Route gets closed in emergencies
	Many accidents on the curves-compounded with emergency traffic
	Hwy 53 traffic from north and Clearlake moving south
	Lakeland & Hwy 20, Population flow from Keys
	Keys Blvd & Hwy 20, Population flow from Keys
	People panic
	All four developments along Soda Bay Rd have to exit using Soda Bay Rd. Normal politeness of letting waiting cars enter line of traffic DID NOT WORK in actual past evacuation. People afraid for their lives just want to keep going. We can't all of us use only one road to escape!!!!
	Only two outlets and one was blocked last fire
	Kitts corner. Well documented bottleneck during evacuation. Soda Bay Corridor Evac Plan addresses how to fix.
	Point Lakeview x Hwy 29. Also addressed in Soda Bay Evac Plan doc.
	The Westside Park area has one way in and out. A development of 176 additional units is approved for this area. Sporting events regularly happen here. Ingress and egress in not sufficient. Additionally, even if two ways in and out of the housing units are created, BOTH of these local roads would dump onto Parallel Drive. A convalescent care facility of appx. 100 residents also will need to use Parallel Drive to evacuate. As well as businesses.
	All of Charlie Jolin Way and Parallel Drive exiting here...
	One two-lane road exiting local area in either direction
	Hwy 29 and 53 intersection in Lower Lake. Major thoroughfare from Clearlake, Lakeport and Middletown.
	Getting onto highway 20 when congested
	2 lane road
	A developer has the city permission to build 176 high density housing units in an area which has only one way in and one way out. 176 families and cars will need to be evacuated. ONE WAY IN ONE WAY OUT!
	one way out
	One entrance in and out, with the plan to increase housing to 200 dwellings.
	Bottleneck
	Bottleneck

Type	Comment
	Bottleneck
	Traffic jam
	Forest fire
	It gets very backed up here if Keys is evacuated.
	2 lane road -Hwy 20
	Again, 2 lane Hwy which is only road we can take from our home.
	people trying to get out of Buckingham
	Only one way out
	Highway 29 was a bottleneck during 2015 fire.
	Avenue residents do not know the different ways they can travel. It would be nice to have signs on roads that exit to hwy
	Anderson Springs Rd. has only one way in and one way out.
	3 roads merge to one
	everyone getting out on the same road
	One of only three evacuations routes for Avenues residents, and this one was blocked by fire during the Boyles fire
	One of only three evacuations routes for Avenues residents, and access was pretty much closed due to the Boyles fire
	One of only three evacuations routes for Avenues residents, and was the only one during the Boyles fire
	May bottleneck due to a number of residents living in this area
	Clogged
	Everyone using the same route out of Lakeport
	Everyone uses to leave Lake County
	only way north
	Only way south
	2 lane highway
	2 lane highway
	2 lane highway
	one way out of Anderson Springs
	People may not know which direction to evacuate on Hwy 20.
Narrow Roads	Hot Spring+K16:K423s Rd
	Rose Anderson Rd
	Alder Lane
	Narrow, bridge dependant
	If 20 is closed, 175 is a very narrow and winding alternative
	My 5th wheel and truck combined are about 55' long so would be tight except traffic to Lake County would be minimal.
	Same as Hwy 29, depends on where fire is.
	I refuse to drive this road in my Subaru car so my 5th wheel is out of the question.
	1 lane

Type	Comment
	Narrow rds
	one way in one way out single lane rd
	Private roads
	Two lane road
	Hwy 20 north from Clearlake Oaks
	East Hwy 20 or south bound Hwy 53
	very narrow road
	narrow road in some areas
	Soda Bay Road. Two lane hwy for the entire area. Multiple needed improvements identified in Soda Bay Corridor Evac Plan
	Soda Bay - curvy and narrow with minimal to no guardrails
	Narrow, winding roads in and out of the Cobb area
	Steep road. Couldnt walk out
	1 lane each way
	Only way out of Spring valley flammable trees both sides
	Narrow
	Very narrow
	Narrow
	Rose Anderson Rd
	Alder Lane
	Hot Springs Rd
	Foard Rd, extremely narrow
	Rose Anderson Road very narrow
	14977 bottle rock road
	Private road one lane dead end
	two cars can pass one another
	Dirt road pot hole
	Narrow road. Overgrown
	Narrow and poorly maintained
	Degraded roadbed in many places on Big Canyon. Can't accommodate two way traffic in several places
	Anderson Springs had only 1 exit and narrow roads.
	This could be a problem in traffic if mandatory emergency vehicles were trying to get through
	Only 2 lane road with many trees and brush lining both sides on steep hill for evacuation of many rural homes
	Dirt road few houses
	narrow dirt road with deep potholes
	Narrow
	Bad roads
	40th too narrow for effective evacuation, creates bottleneck.
	Narrow windy road

Type	Comment
	Narrow windy road
	some places have no shoulder should a car break down causing a bottleneck.
	Road is extremely to narrow for fleeing evacuees and incoming emergency vehicles
	Difficult for cars to pass in both directions
	Difficult for cars to pass in both directions
	Difficult for cars to pass in both directions
	Hwy 29 one lane
	Lakeshore Blvd could be overwhelmed and is only 1 lane
	Narrow roads
	one lane only
	Small narrow private roads and narrow county road as well
	Two way traffic
	Narrow road and terrible potholes on sulfer bank
	2 lane with no bail out room
	Point Lakeview narrows by where I live.
	Horseshoe bend and the black forrest is narrow
	Pt Lakwview is narrow
	Narrow winding road



## Annex 2: Potential Evacuation Route Map Inserts

The following map images show a closer view of the regions and communities within Clearlake.

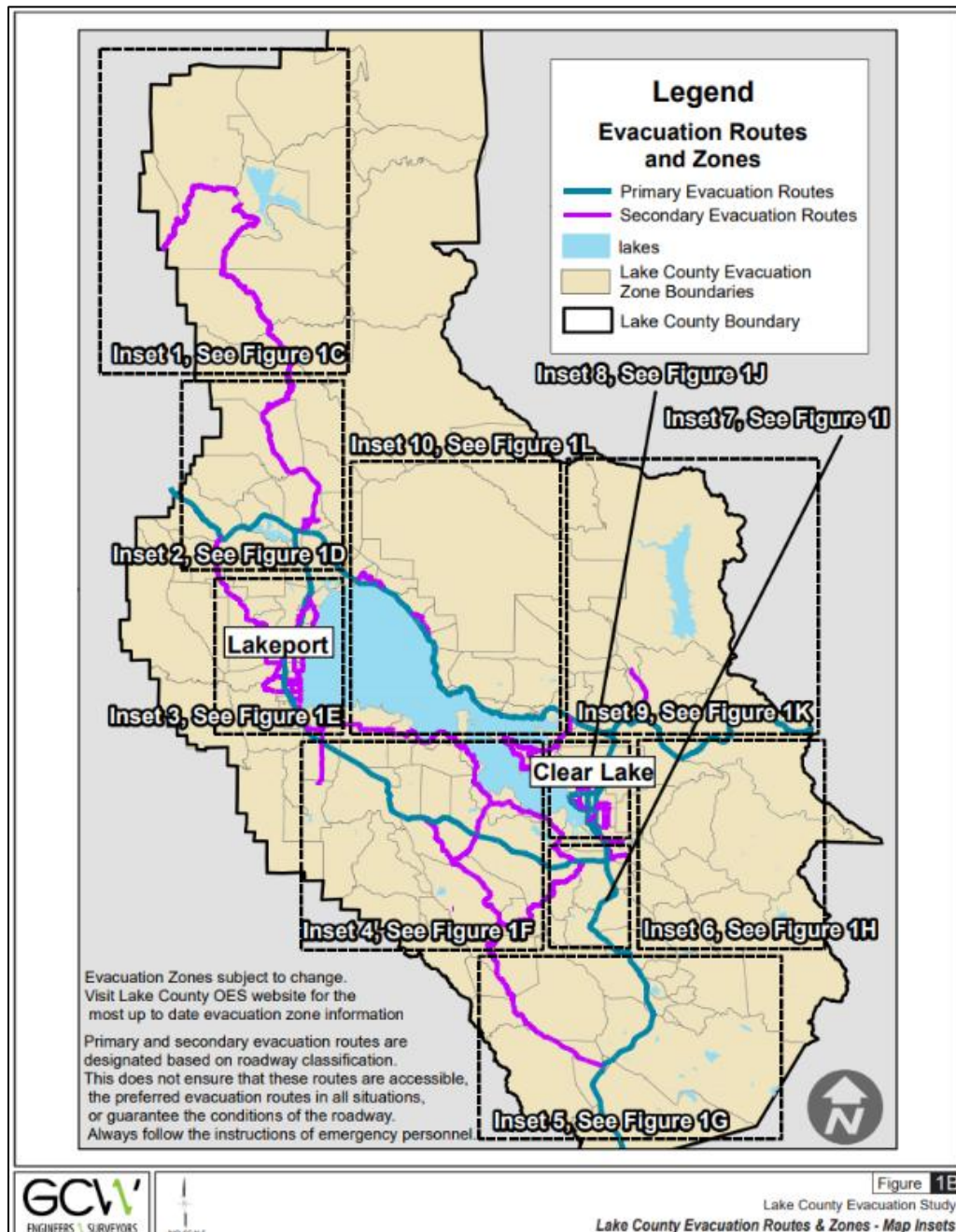


Figure 35: Lake County Evacuation Routes and Zones Map Inserts

Figure 1C - Lake Pillsbury

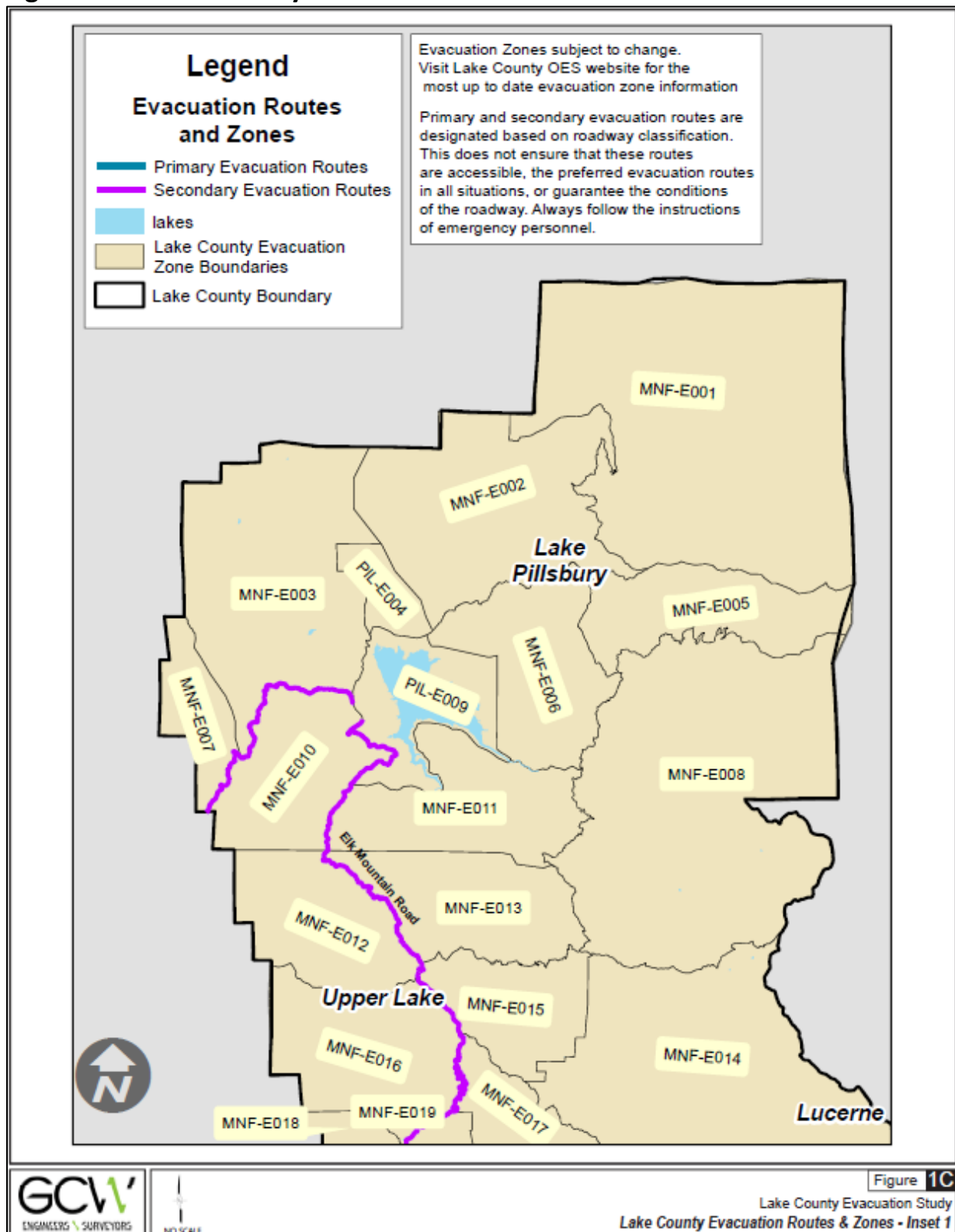


Figure 36: Lake County Evacuation Routes and Zone Map Inserts

Figure 1D – Upper Lake

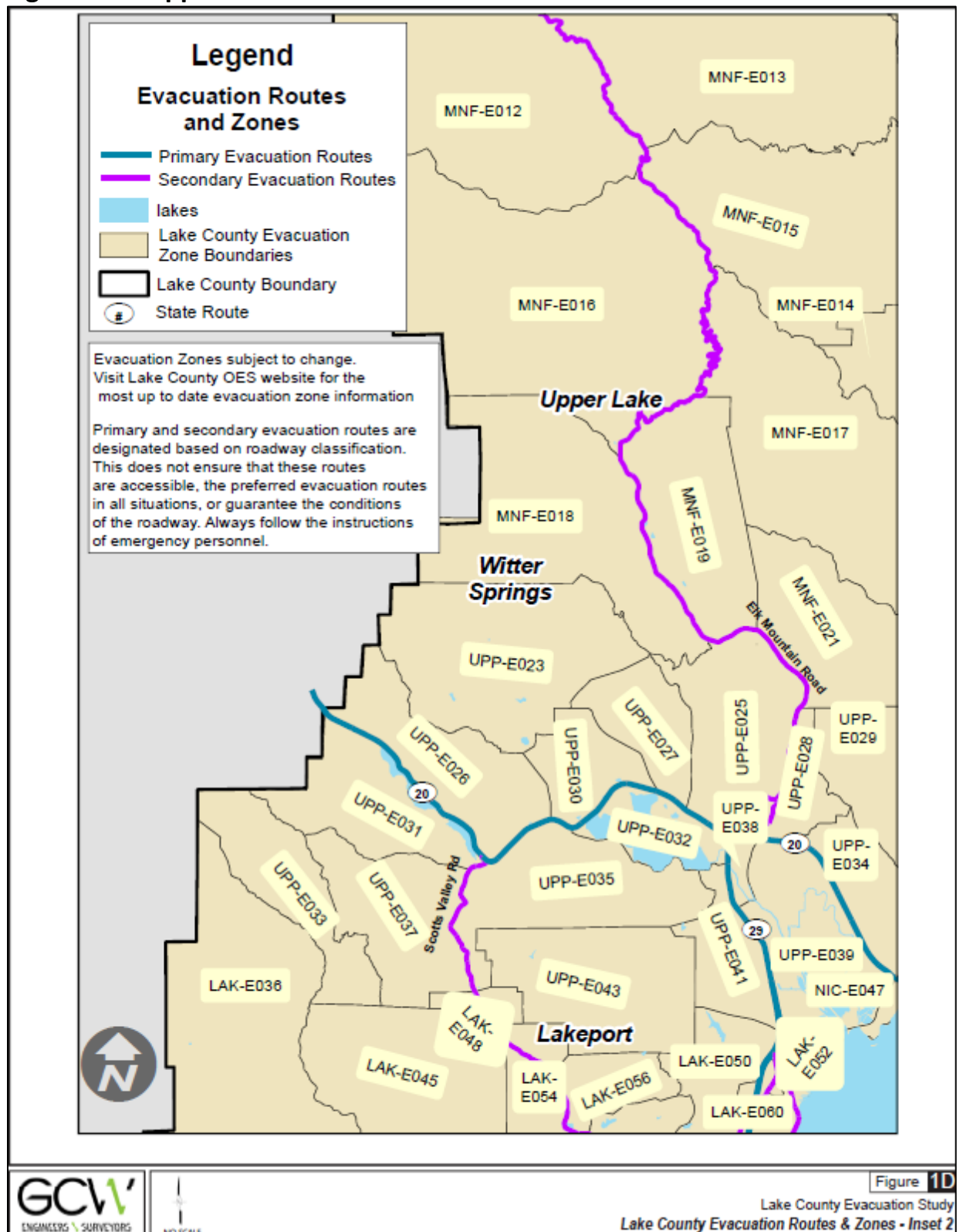


Figure 37: Lake County Evacuation Routes and Zone Map Inserts

Figure 1E – Lakeport

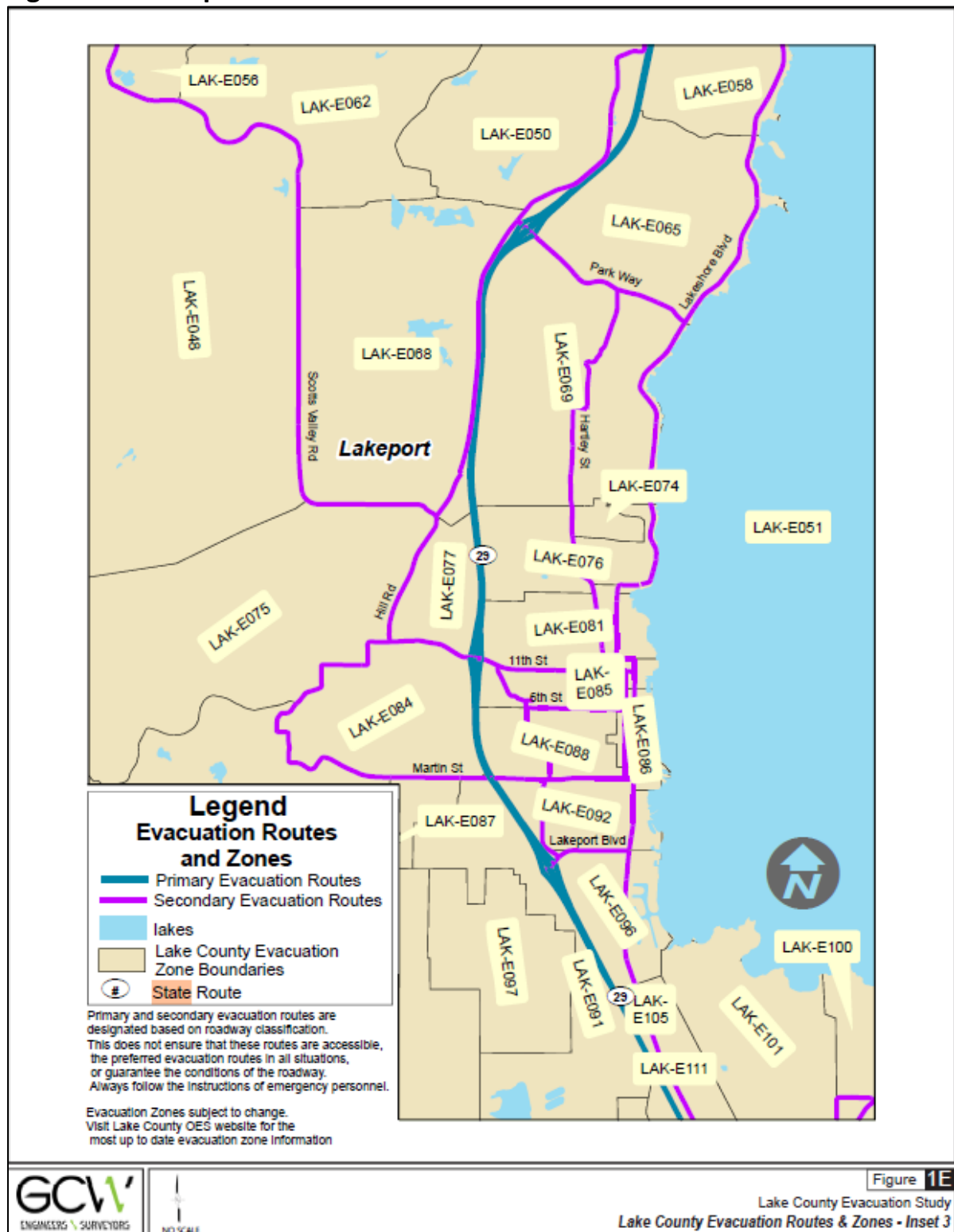


Figure 38: Lake County Evacuation Routes and Zone Map Inserts

Figure 1F – Kelseyville

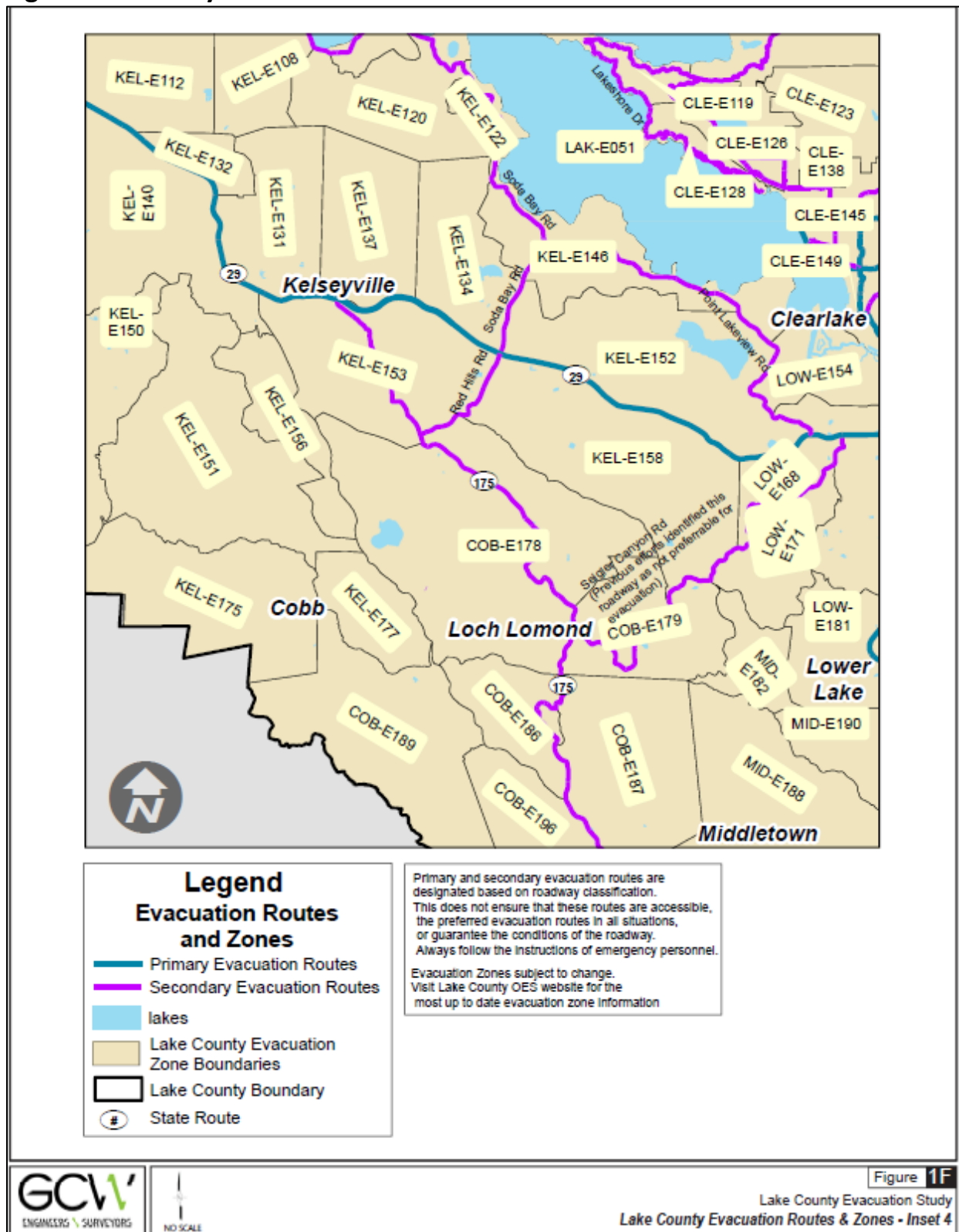
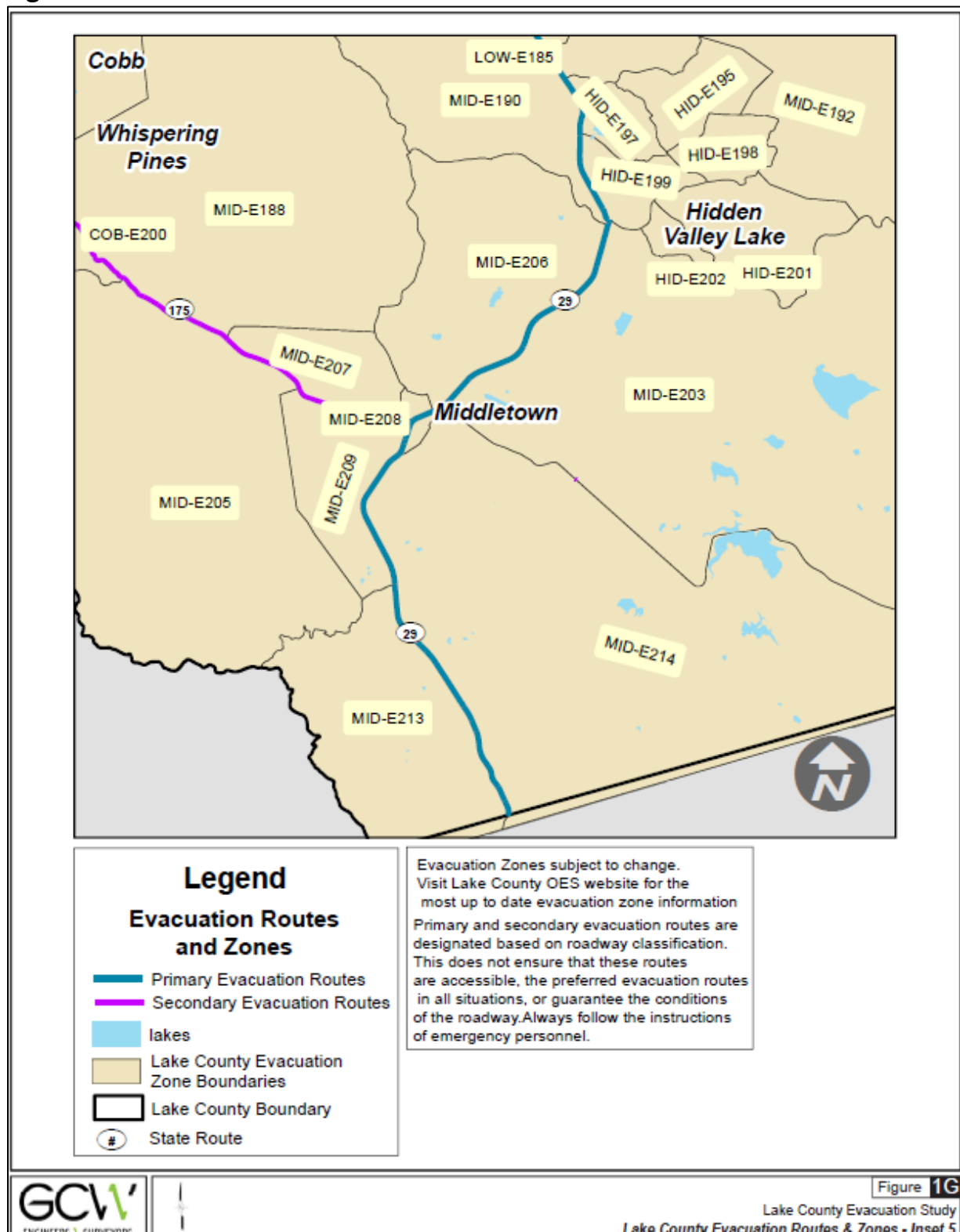


Figure 39: Lake County Evacuation Routes and Zone Map Inserts



**Figure 1G – Middletown**



*Figure 40: Lake County Evacuation Routes and Zone Map Inserts*

Figure 1H – Clearlake Oaks

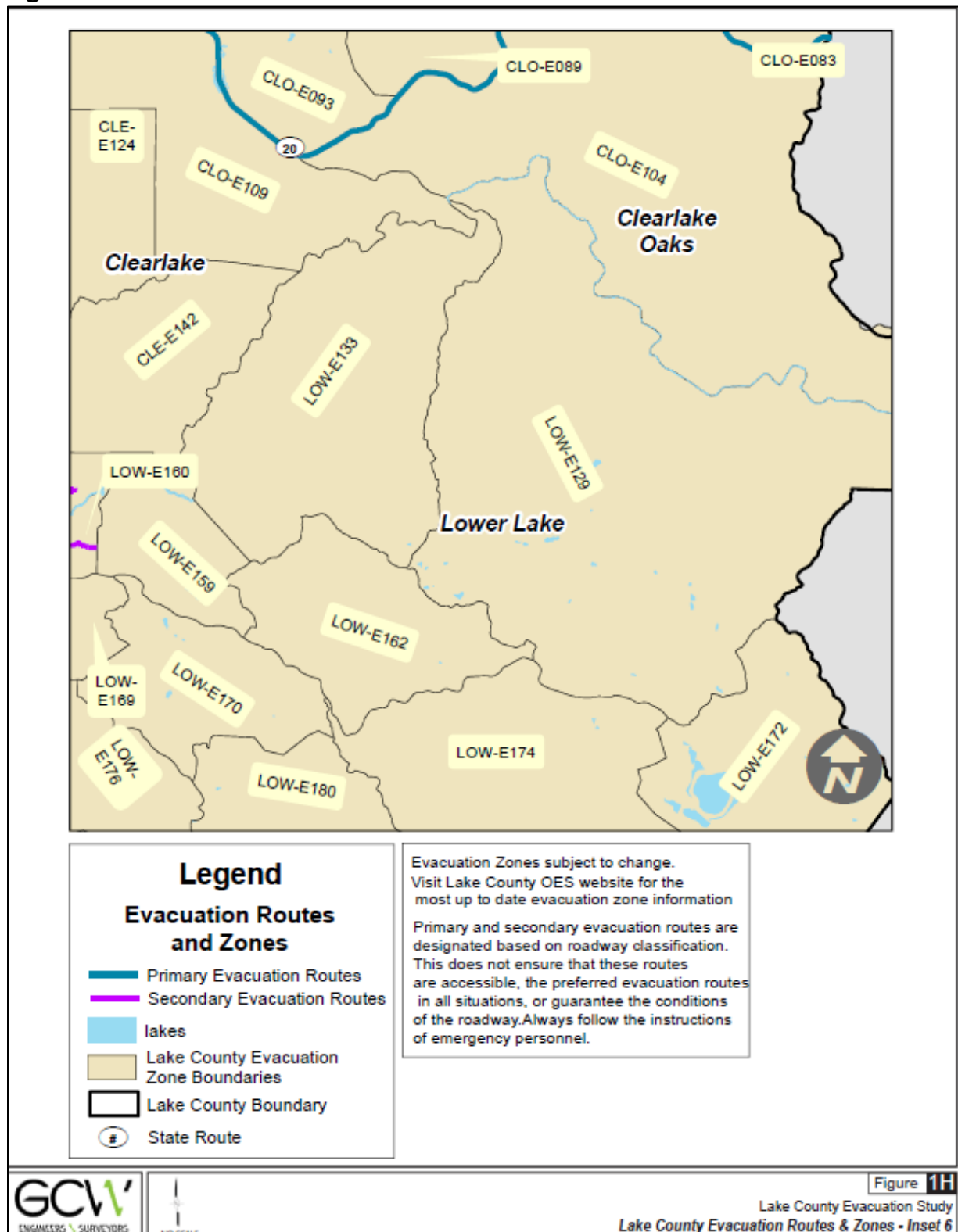


Figure 41: Lake County Evacuation Routes and Zone Map Inserts



Figure 11 – Lower Lake

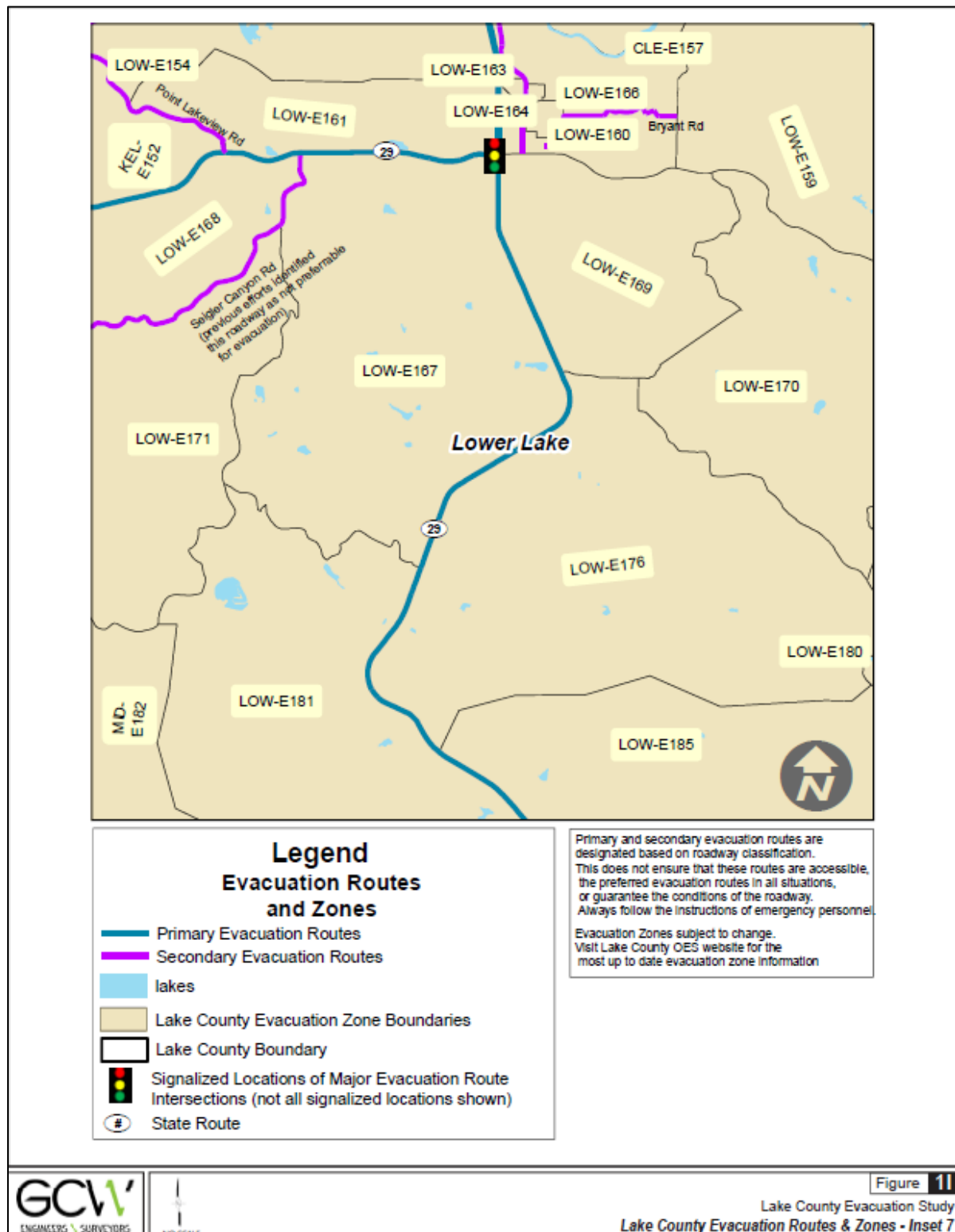


Figure 42: Lake County Evacuation Routes and Zone Map Inserts

Figure 1J – Clearlake

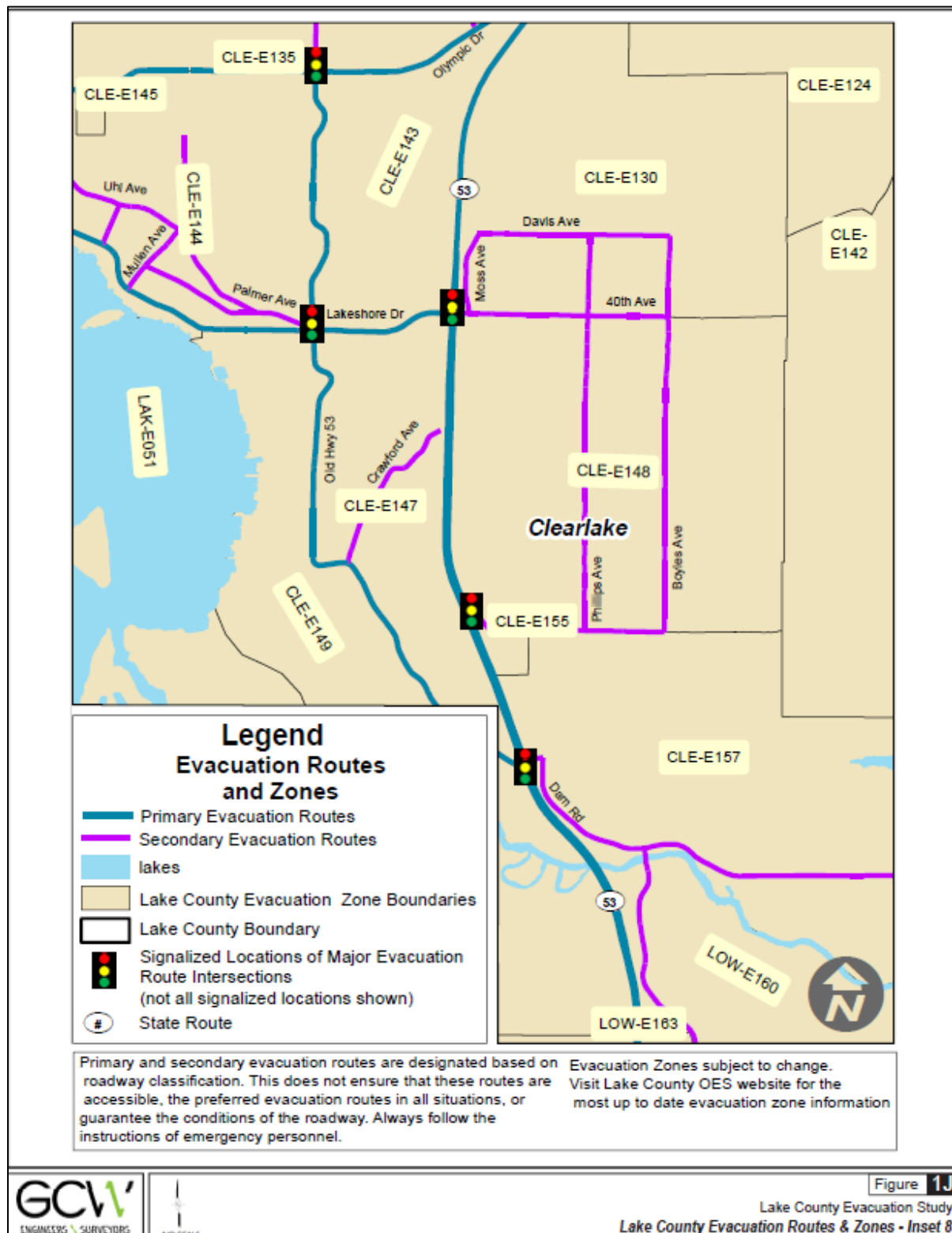


Figure 43: Lake County Evacuation Routes and Zone Map Inserts

Figure 1K – Lucerne

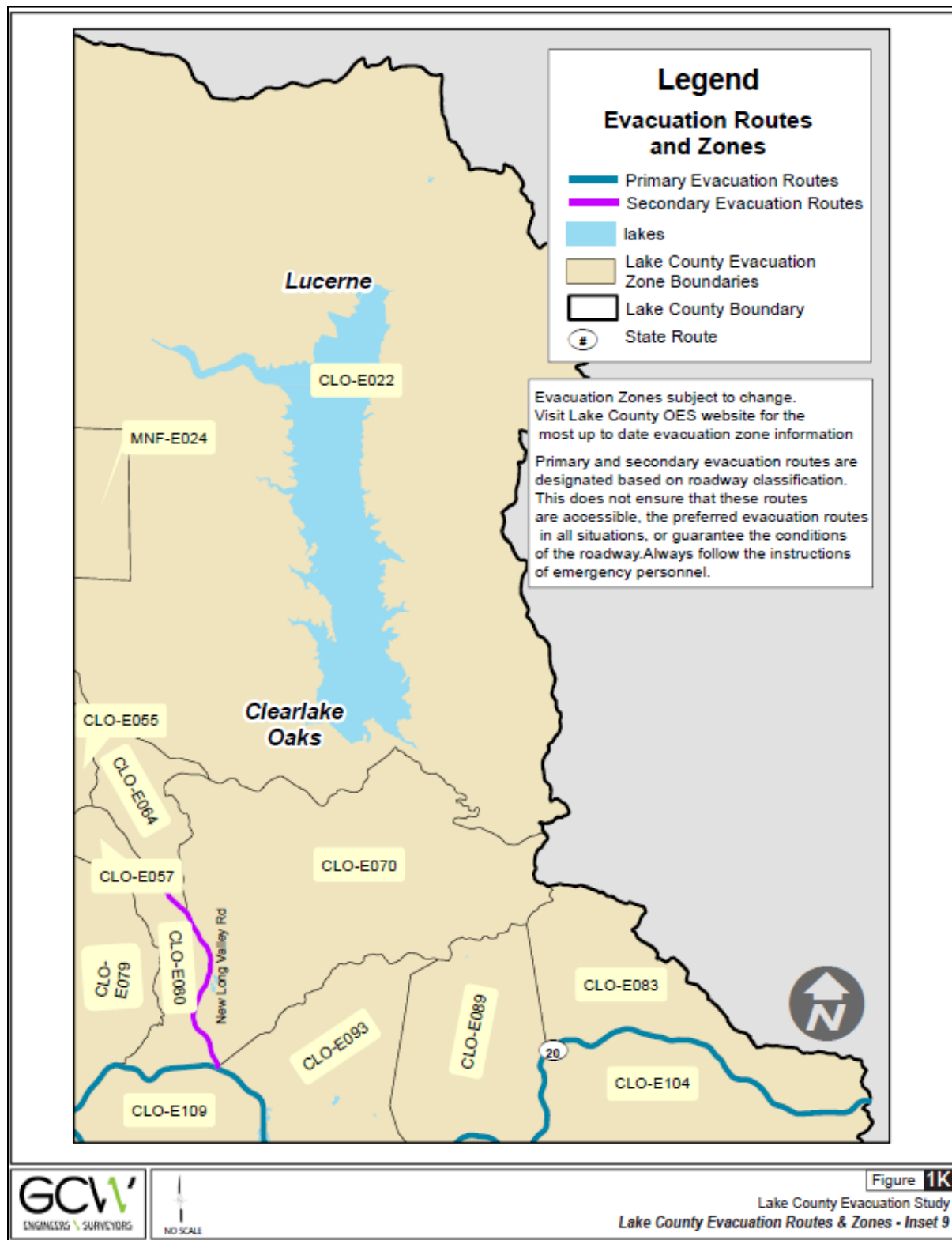


Figure 44: Lake County Evacuation Routes and Zone Map Inserts

Figure 1L – Glenhaven

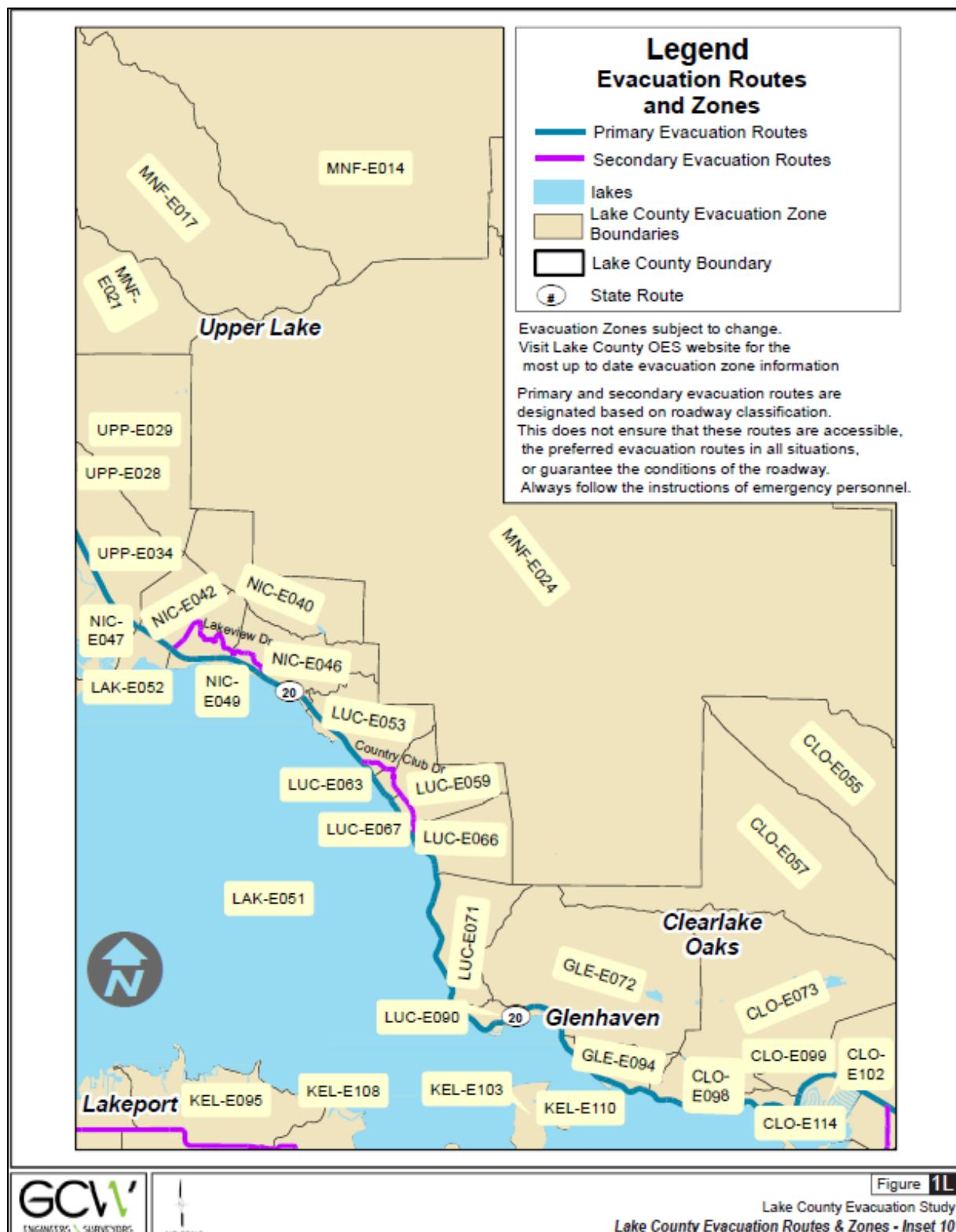


Figure 45: Lake County Evacuation Routes and Zone Map Inserts