

# Las Virgenes-Malibu Council of Governments Multi-Jurisdictional Hazard Mitigation Plan 2023



## Las Virgenes-Malibu Council of Governments

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# PART I: OVERVIEW AND MITIGATION STRATEGY ACTION PLAN

## SECTION 1. INTRODUCTION

### ACKNOWLEDGEMENTS

The Multi-Jurisdictional Hazard Mitigation Plan was an extensive effort that involved the efforts of multiple individuals representing all five cities within the Las Virgenes-Malibu Council of Governments. Participants in the process included:

#### *Las Virgenes-Malibu Council of Governments Governing Board*

Terry Dipple, Executive Director	Las Virgenes-Malibu Council of Governments
Eniko Gold, President	City of Hidden Hills
Alicia Weintraub, Vice President	City of Calabasas
Penny Sylvester	City of Agoura Hills
Paul Grisanti	City of Malibu
Kelly Honig	City of Westlake Village

#### *Planning Group*

Terry Dipple, Executive Director	Las Virgenes-Malibu Council of Governments
Louis Celaya, Deputy City Manager John Treichler, Administrative Analyst	City of Agoura Hills
Michael Dyer, Director of Public Safety and Emergency Preparedness Debbie Larson, Public Safety Coordinator	City of Calabasas
Kerry Kallman, City Manager Michael Woodard, Emergency Services Coordinator	City of Hidden Hills
Susan Duenas, Public Safety Director	City of Malibu
Caleb Mott, Administrative Analyst	City of Westlake Village

## EXECUTIVE SUMMARY

The Las Virgenes-Malibu Council of Governments (LVMCOG) was established by its members under a Joint Powers Agreement to provide a vehicle for members to engage in regional and cooperative planning and coordination of government services and responsibilities. The LVMCOG also provides a regional organization for the review of federal, state and regional projects and studies which involve the use of federal, state and regional funds.

The LVMCOG is located in the northwest area of Los Angeles County and is comprised of five cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, and Westlake Village. The total five city population as of the 2022 was 61,721, a 9.4% decrease from 2017).

Location	2022 Estimated Population	% of Los Angeles County
Agoura Hills	19,464	0.20%
Calabasas	22,491	0.23%
Hidden Hills	1,702	0.02%
Malibu	10,370	0.11%
Westlake Village	7,694	0.08%
<b>LVMCOG</b>	<b>61,721</b>	<b>0.63%</b>
Los Angeles County	9,721,138	100.00%

Table 1: LVMCOG Estimated Population by City

SOURCE: U.S. Census Bureau



Map 1: Area Map

Source: NOAA

### Multi-Jurisdictional Plan

The cities within the LVMCOG experience similar hazards and have combined their efforts in order to produce a more thorough Hazard Mitigation Plan. Combining efforts, identifying common threats, and establishing regional mitigation strategies was a collaborative task that allowed mutual participation and more effective use of resources. The LVMCOG also provides a point of coordination and collaboration between its member cities as well as other cities and public agencies.

This Multi-Jurisdictional Hazard Mitigation Plan meets the requirements of the Disaster Mitigation Act of 2000. By preparing this plan, the Las Virgenes-Malibu Council of Governments is eligible for federal mitigation funding after disasters and to apply for mitigation grants before disasters strike.



Map 2: LVMCOG Cities

**Los Angeles County Operational Area and Disaster Management Areas**

The Los Angeles County Office of Emergency Management (OEM) was established by Chapter 2.68 of the County Code with responsibility for organizing and directing the preparedness efforts of the Emergency Management Organization of Los Angeles County. OEM responsibilities include: Planning and Coordination, Operations, Training, Technical Operations, and Public Education.

The Los Angeles County Operational Area is divided into 8 groupings (A through H):

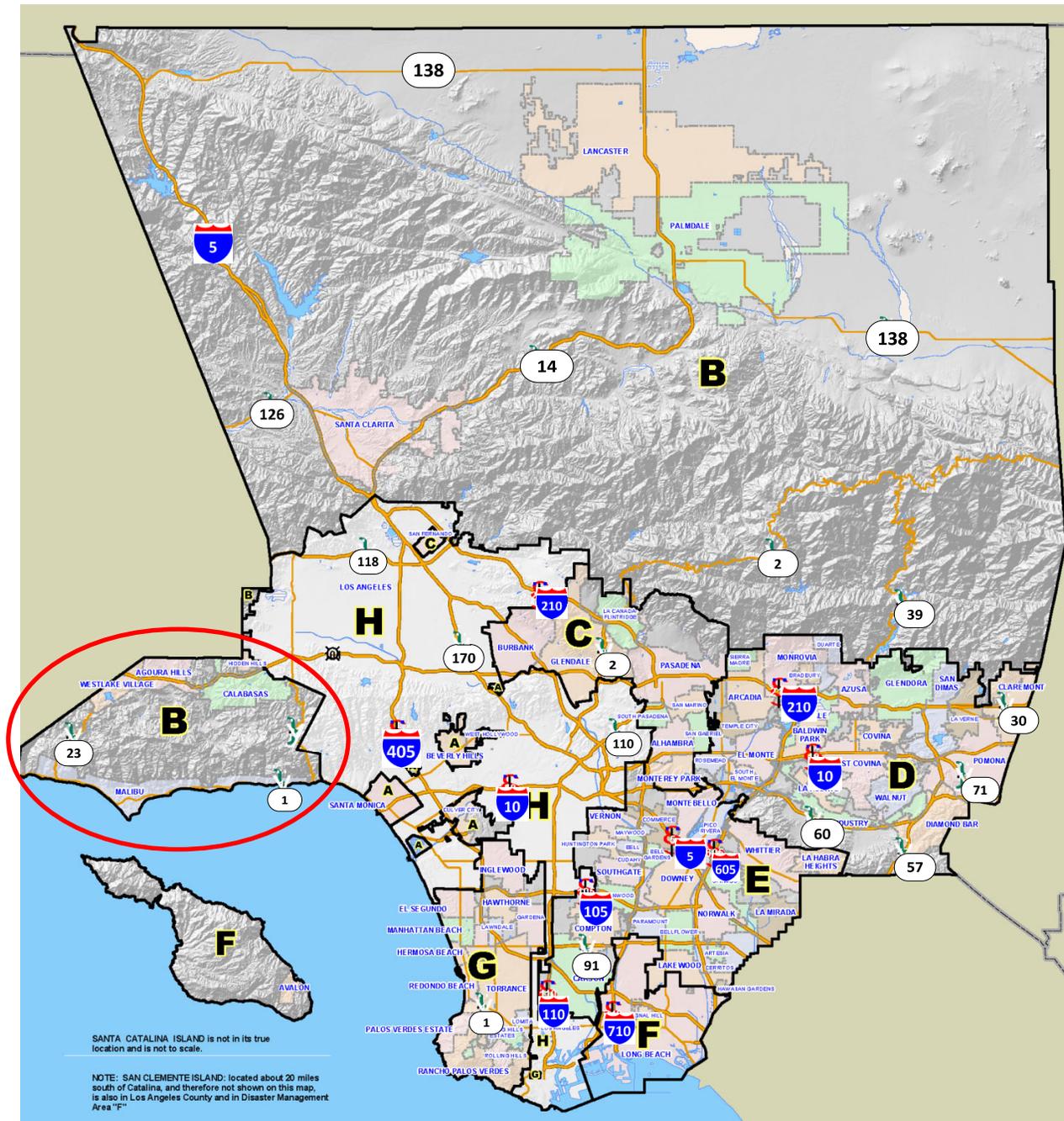
<p><b>Area A</b>                  Beverly Hills                  Culver City                  Santa Monica                  West Hollywood                  City Of Industry Carson</p> <p><b>Area B</b>                  Agoura Hills*                  Calabasas*                  Hidden Hills*                  Lancaster                  Malibu*                  Palmdale                  Santa Clarita                  Westlake Village*</p> <p><b>Area C</b>                  Alhambra                  Burbank                  Glendale                  La Canada Flintridge                  Monterey Park                  Pasadena                  San Fernando                  San Gabriel                  San Marino                  South Pasadena</p>	<p><b>Area D</b>                  Arcadia                  Azusa                  Baldwin Park                  Bradbury                  Claremont                  Covina                  Diamond Bar                  Duarte                  El Monte                  Glendora                  Irwindale                  La Puente                  La Verne                  Monrovia                  Pomona                  Rosemead                  San Dimas                  Sierra Madre                  South El Monte                  Temple City                  Walnut                  West Covina</p>	<p><b>Area E</b>                  Artesia                  Bell                  Bell Gardens                  Bellflower                  Cerritos                  City Of Commerce                  Compton                  Cudahy                  Downey                  Hawaiian Gardens                  Huntington Park                  La Habra Heights                  La Mirada                  Lakewood                  Lynwood                  Maywood                  Montebello                  Norwalk                  Paramount                  Pico Rivera                  Santa Fe Springs                  South Gate                  Vernon                  Whittier</p>	<p><b>Area F</b>                  Avalon                  Long Beach                  Signal Hill</p> <p><b>Area G</b>                  El Segundo                  Gardena                  Hawthorne                  Hermosa Beach                  Inglewood                  Lawndale                  Lomita                  Manhattan Beach                  Palos Verdes Estates                  Rancho Palos Verdes                  Redondo Beach                  Rolling Hills                  Rolling Hills Estates                  Torrance</p> <p><b>Area H</b>                  Los Angeles</p>
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\*LVMCOG Members highlighted in in blue

The Joint Powers Agreement provides for inter-agency cooperation in major natural or man-made disasters. This group meets monthly basis and is responsible for:

- Creating and updating emergency, terrorism, recovery volunteer, debris management and hazard mitigation plans
- Training for emergency and disaster preparedness for cities, residents and businesses
- Technology for communications
- Homeland Security Grants Program (management)

The five cities within the LVMCOG are an integral part of Los Angeles County Disaster Management Area B, which is comprised of the five LVMCOG cities plus Lancaster, Palmdale, and Santa Clarita. As members of Area B, the LVMCOG cities are able to incorporate County hazard mitigation and emergency response activities and programs into their local strategies. Examples include the Los Angeles County Fire Department’s wildfire prevention efforts, **Community Emergency Response Team (CERT)** programs, and the **Alert LA County** emergency notification system.



Map 3: Los Angeles County Disaster Management Areas and LVMCOG Cities (circled)

## ***Hazard Mitigation Plan Organization***

This Hazard Mitigation Plan contains background information on the purpose and methodology used to develop the mitigation plan, a profile of the Las Virgenes-Malibu Region, sections on the identified hazards that threaten the Region as well as the associated risks, a five-year mitigation strategy action plan matrix, and supporting information contained in the Appendices. Additional section details are provided in the following sections.

## ***Mitigation Strategy Five-Year Action Plan***

The Las Virgenes-Malibu Council of Governments Multi-Jurisdictional Hazard Mitigation Action Plan includes resources and information to assist residents, public and private sector organizations, and others interested in participating in planning for hazards. The Mitigation Strategy Action Plan provides a list of activities designed to assist the LVMCOG to reduce risk and prevent losses from future hazard events. The strategies address multi-hazard issues, as well as hazard specific activities for earthquakes, wildfires, power outages, climate change/drought, flooding, landslides/mudslides, pandemics windstorms, and terrorism/mass casualty incidents.

## ***Plan Participants***

The development of the Las Virgenes-Malibu Council of Governments Multi-Jurisdictional Hazard Mitigation Plan has been a collaborative city and community effort. The planning process was facilitated by a variety of Region-wide departments along with a consulting agency, MLC & Associates. The Las Virgenes-Malibu Council of Governments Governing Board and Planning Group provided vital guidance in developing and updating the plan. Since five cities are represented, at least one representative from each city was a member of the Planning Group.

The public was invited to participate in the development and update of the plan. In addition, ongoing disaster preparedness and mitigation information is routinely provided through public notices, city websites, newsletters, cable television, and the local newspapers.

The Planning Group was chosen to provide needed feedback, guidance and approval. In addition, the Planning Group provided key information, supporting documentation, and updated the hazard ratings for the identified local area hazards. The hazard rating identified hazards according to probability, magnitude/severity, warning time and duration. The survey is provided in Annex C: Disaster Preparedness Risk Survey.

Part II of the plan contains hazard specific information. Each of the sections provides information on the background and history of the hazard, as well as the associated economic and social impacts.

## ***Plan Mission***

The Mission of the Las Virgenes-Malibu Council of Governments Multi-Jurisdictional Hazard Mitigation Plan is to promote sound public policy and programs designed to protect the public, critical facilities, infrastructure, private and public property, and the environment from natural and human generated hazards. This will be achieved by developing, implementing, and maintaining this plan to guide the Region towards creating and maintaining a safer more sustainable community.

## Plan Goals

The Plan Goals describe the overall direction that the LVMCOG's' agencies, organizations, and citizens can take to minimize the impacts of hazards. The Plan Goals help to guide the direction of future activities aimed at reducing risk and preventing loss from hazards. The Plan Goals are the foundation for the broad direction of the Mission Statement and the specific recommendations that are outlined in the strategies. These goals are divided into 4 major categories:

### **To Protect Life, Property, Environment**

- Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property to be more resistant to hazards with attention to addressing the needs of the socially vulnerable community based on:
  - Socioeconomic Status
  - Household Composition and Disability
  - Minority Status & Language
  - Housing & Transportation
- Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.
- Encourage preventative measures for existing and new development in areas vulnerable to hazards.

### **Public Awareness**

- Develop and implement education and outreach programs to increase public awareness of the risks associated with hazards.
- Develop and implement education and outreach programs to increase public awareness of the mitigation measures associated with hazards.
- Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

### **Partnerships and Implementation**

- Strengthen communication and coordinate participation among and within public agencies, citizens, non-profit organizations, business, and industry to gain a vested interest in implementation.
- Encourage leadership within public and private sector organizations to prioritize and implement local, county, and Regional hazard mitigation activities.
- Assist in the development of the Safety Element of the General Plan

### **Emergency Management**

- Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.
- Update current ordinances, make recommendations for Region guidelines, codes, and permitting process and establish new ordinances that support mitigation.
- Strengthen emergency operations by increasing collaboration and coordination among departments, public agencies, non-profit organizations, business, and industry.
- Coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

## ***Strategy Organization***

The data collection, research and the public participation process resulted in the development of the hazard mitigation strategies listed. The strategies outline activities in which each of the various cities and citizens can be engaged to reduce risk. They reflect future action to be taken in order to reduce the loss of property and life. [Section 4 Hazard Mitigation Goals and Strategies](#) provides brief descriptions of the projects and strategies developed.

## ***Plan Implementation, Monitoring, and Evaluation***

[Section 5 Plan Maintenance and Monitoring](#) details the formal process that describes how the Las Virgenes-Malibu Council of Governments Multi-Jurisdictional Hazard Mitigation Plan is maintained. The plan maintenance process included a schedule for monitoring and evaluating the plan and producing a plan revision every five years. In addition, this section also describes how the LVMCOG integrated public participation in the plan maintenance and update process.

Finally, the Plan Implementation, Monitoring, and Evaluation section includes an explanation of how the Las Virgenes-Malibu Council of Governments incorporated the mitigation strategies outlined into existing planning mechanisms such as each city's individual General Plans, Capital Improvement Plans, Building & Safety Codes and other programs, and/or plans within the cities.

## ***Plan Adoption***

In 2005, each member city of the Las Virgenes-Malibu Council of Governments adopted the original Multi-Jurisdictional Hazard Mitigation Plan. Subsequently, from 2010 to 2018 and this 2023 HMP were updated, reviewed, and adopted. These governing bodies have the authority to promote sound public policy regarding hazards.

The Executive Director of the Las Virgenes-Malibu COG was responsible for submitting the updated plan to the State Hazard Mitigation Officer at the Governor's Office of Emergency Services (Cal OES). Cal OES then submitted the updated plan to the Federal Emergency Management Agency (FEMA) for review. This review addressed the federal criteria outlined in *Title 44 CFR Emergency Management and Assistance: Part 201 – Mitigation Planning*. Upon acceptance by FEMA, Las Virgenes-Malibu Council of Governments will maintain its eligibility for Hazard Mitigation Grant Program funds.

## ***Coordinating Body***

The Planning Group was responsible for coordinating implementation of plan strategies and undertaking the formal review process. The Planning Group was also responsible for the tactical and operational tasks required to implement the Hazard Mitigation Plan.

**Coordination with Existing Programs**

Each city within the Las Virgenes-Malibu Council of Governments address statewide planning goals and legislative requirements through their General Plans, Capital Improvement Plans, and Building & Safety Codes. This Multi-Jurisdictional Hazard Mitigation Plan provides a series of recommendations that are closely related to the goals and objectives of these existing planning programs. Each city may implement the recommended mitigation strategies through existing programs and procedures.

**Considering the Needs of the Socially Vulnerable**

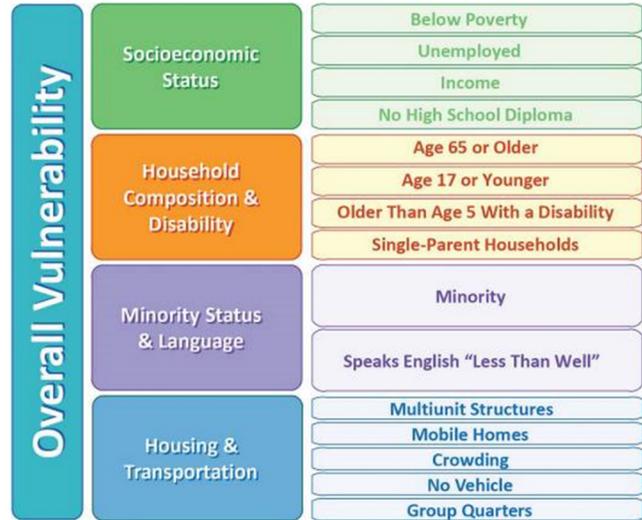
Social vulnerability is the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood. As a consequence, enhancing the risk component of the National Risk Index, a Social Vulnerability score and rating represent the relative level of a community’s social vulnerability compared to all other communities at the same level.

A community’s Social Vulnerability score measures its national rank or percentile. A higher Social Vulnerability score results in a higher Risk Index score. The overall risk score for Los Angeles County is “High”.

The cities within the Las Virgenes-Malibu COG considered the needs of the socially vulnerable when developing this Multi-Jurisdictional Hazard Mitigation Plan.

Major concerns included:

- Who are the socially vulnerable in each city? What are the demographics?
- What needs of the socially vulnerable can be met through hazard mitigation?
- What programs and/or financial assistance is needed and available?
- How can the cities more effectively communicate to socially vulnerable residents and others in the area



Source: National Library of Medicine  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7179070/>

Figure 1: Social Vulnerability Categories

### *Economic Analysis of Mitigation Projects*

Determining the economic feasibility of mitigating hazards can provide decision makers with an understanding of the potential benefits and costs of an activity, as well as provide a basis upon which to compare alternative projects. The Federal Emergency Management Agency's approach to identify costs and benefits associated with hazard mitigation strategies or projects falls into two general categories: benefit-cost analysis and cost-effectiveness analysis.

Conducting a benefit-cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now in order to avoid disaster-related damages later. A cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. For the purposes of this HMP, an estimate of the benefit/cost ratio was used to evaluate the relative feasibility of the mitigation projects and strategies outlined in Section 4 Hazard Mitigation Goals and Strategies.

### *Formal Review Process*

As part of this update, the LVMCOG HMP was evaluated to determine the effectiveness of existing mitigation programs and projects as well as consider changes in land development or other changes that may have affected mitigation priorities. The Executive Director of the Las Virgenes-Malibu COG was responsible for contacting Hazard Mitigation LVMCOG Governing Board members and organizing progress reviews. Committee members were then responsible for monitoring and evaluating the progress of the mitigation strategies in the plan.

### *Continued Public Involvement*

The Las Virgenes-Malibu Council of Governments is dedicated to involving the public directly in the continual review and updating of the Multi-Jurisdictional Hazard Mitigation Plan. Copies of the plan were made available via each city's web site. The existence and location of these copies were publicized on the city websites, social media, and through information bulletins.

**PLAN DESCRIPTION**

***Multi-Jurisdictional Hazard Mitigation Plan***

The Las Virgenes-Malibu Council of Governments (LVMCOG) is comprised of the cities of Agoura Hills, Calabasas, Hidden Hills, Malibu and Westlake Village. The LVMCOG was voluntarily established by its members under a Joint Powers Agreement to provide a vehicle for members to engage in regional and cooperative planning and coordination of government services and responsibilities. The LVMCOG also provides a local area organization for the coordination of regional projects and studies funded by federal, state, and local governments. While disasters cannot be fully prevented, their effects can be reduced through a well-organized public education and awareness effort, preparedness, mitigation, and coordinated response. In 2005, the LVMCOG chose to develop the original Multi-Jurisdictional Hazard Mitigation Plan (HMP) in order to coordinate efforts and resources. This update to the HMP is part of the ongoing renewal process.

***Why Develop a Mitigation Plan?***

The Robert T. Stafford Disaster Relief and Emergency Assistance Act provides the basis for federal assistance to state and local governments impacted by a disaster and outlines the requirements for mitigation planning. Hazard Mitigation is considered the first step in preparing for emergencies (rather than placing a reliance on recovery after an event). The Federal Emergency Management Agency (FEMA) requires state and local governments to update their hazard mitigation plans every 5 years. The consequences of not having an approved Local Hazard Mitigation Plan can be significant. Without it, cities are ineligible for FEMA mitigation programs including the Hazard Mitigation Grant Program and Flood Mitigation Assistance Program. More importantly, an ongoing mitigation effort is required in order for cities to obtain public assistance funding for repetitive losses (e.g., damaged facilities) following a disaster.

The Disaster Mitigation Act of 2000 (DMA 2000), Section 322 (a-d) requires that local governments maintain mitigation plans that describe the process for identifying hazards, risks and vulnerabilities, identifies and prioritizes mitigation actions, encourages the development of local mitigation, and provides technical support for those efforts as a condition of receiving federal disaster mitigation funds. This Hazard Mitigation Plan serves to meet these requirements.

Furthermore, on Oct. 5, 2018 the Disaster Recovery Reform Act of 2018 was passed into law as part of the Federal Aviation Administration Reauthorization Act of 2018. These reforms acknowledge the shared responsibility for disaster response and recovery, aim to reduce the complexity of FEMA, and build the nation’s capacity for the next catastrophic event. The law contains 56 distinct provisions that require FEMA policy or regulation changes for full implementation, as they amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

<b>Provision Number</b>	<b>Description</b>
1204-1209	Authorizes FEMA to provide hazard mitigation grant funding in areas that receive Fire Management Assistance Grants as a result of wildfire.
1210(a)-1219	Authorizes the President to waive certain duplication of benefits if waiver is in the public interest and will not result in waste, fraud, or abuse.
1220-1229	Requires FEMA to study the inter-agency expedited environmental and historical review process and provide a report to Congress.
1230-1239	Requires FEMA to provide technical assistance “to a common interest community that provides essential services of a governmental nature” on how they may be eligible for Public Assistance in certain circumstances.

Provision Number	Description
1240-1246	Requires FEMA to provide a regular report to Congress on the times and estimated amounts in which self-insurance amounts were insufficient to address flood damages.

This Multi-Jurisdictional Hazard Mitigation Plan assists the LVMCOG in reducing risk from hazards by identifying resources, information, and strategies for risk reduction, while helping to guide and coordinate mitigation activities throughout the Las Virgenes-Malibu Region. Mitigation strategies for reducing the potential losses identified in the risk assessment are outlined and are based on existing authorities, policies, programs, resources, and the ability to expand on and improve these existing tools. In summary, the information and mitigation strategies within the Hazard Mitigation Plan:

- Establish a basis for coordination and collaboration between departments and the public in the Las Virgenes-Malibu Council of Governments Region
- Identify and prioritize future mitigation projects
- Assist in meeting the requirements of federal assistance programs

### Whom Does the Mitigation Plan Affect?

This Multi-Jurisdictional Hazard Mitigation Plan affects the entire Region and provides a framework for pre-emptive planning for hazards. The resources and background information in the plan are applicable area-wide, and the goals and recommendations lay the groundwork for mitigation plans and partnerships for neighboring communities.

### How is the Plan Used?

Each section of the Hazard Mitigation Plan provides information and resources to assist in understanding the region and the hazard-related issues facing citizens, businesses, and the environment. The sections of the HMP combine to create a document that guides the mission to reduce risk and prevent loss from future hazard events.

### Plan Update Process

The update of this plan was a collaborative effort. The process was facilitated across multiple departments along with a consulting agency, MLC & Associates. The Planning Group was composed of representatives from each city within the Las Virgenes-Malibu Council of Governments in order to facilitate the plan update process, provide feedback, and review the plan.

Various departments within the cities assisted in updating the plan. Information resources included but were not limited to: General Plans, Master Plans, SEMS Plans, reports and studies, hazard maps, and public process documentation. Participating departments included:

- Building & Safety
- City Manager
- Community Development
- Emergency Preparedness
- Planning
- Public Works
- Recreation & Parks
- LA County Fire Department
- LA County Sheriff’s Department

The workflow below depicts the basic process of updating the plan. The HMP update process timeline started with a project kick-off meeting on June 1, 2023 and ended on November 30, 2023.

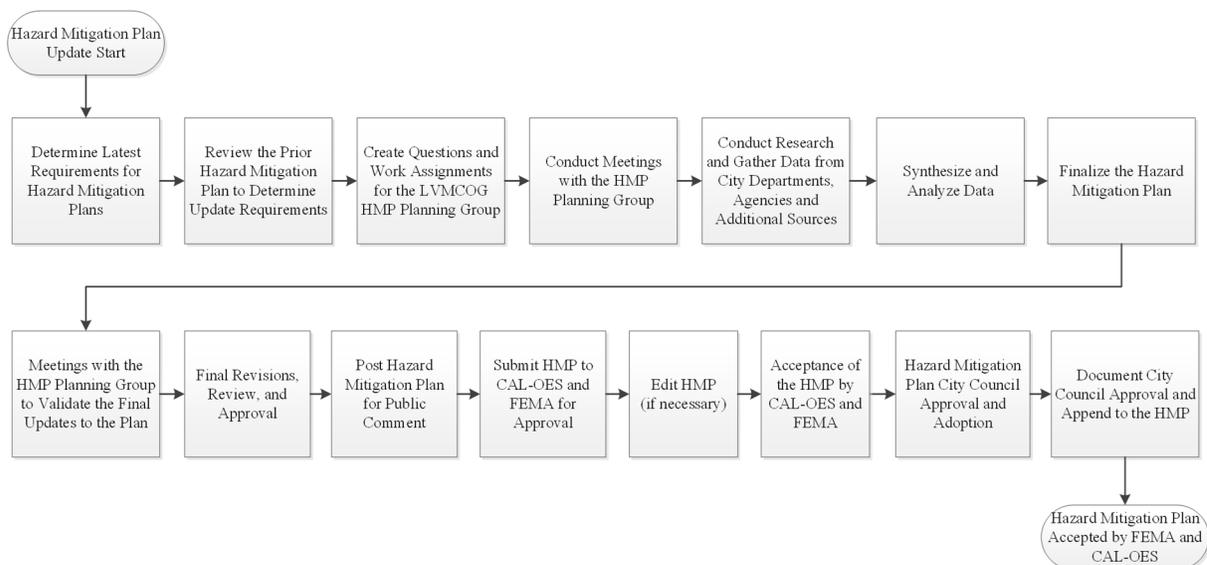


Figure 2: HMP Update Process Workflow

### *Internal Input*

The Planning Group was composed of representatives from cities within the Las Virgenes-Malibu Council of Governments and was established in order to facilitate the update to the plan, provide feedback, guidance, and approval.

The Planning Group, city staff and various other stakeholders were involved in updating the plan. This process involved meetings, discussion and individual reviews and input. The planning process included:

- Planning sessions with LVMCOG representatives
- Interviews with city Emergency Management and Disaster Preparedness personnel
- Reviews of historical disaster events in the local area
- A review of activities related to hazard mitigation from existing programs and city's General Plans, Capital Improvement Projects, and Development Projects

### *External Input*

Existing mitigation plans, programs and activities from neighboring communities and from around the country were reviewed as well as current FEMA hazard mitigation planning standards and the State of California Hazard Mitigation Plan Guidance document. In addition, geographic area and hazard specific data were generated to develop scenario-based hazard maps. These resources were valuable in updating the LVMCOG Hazard Mitigation Plan (see [Annex A Resources](#) for source information).

Information from the sources noted above was evaluated and (when applicable) incorporated into the plan. In addition, the information gathered served as a basis for the strategy sessions that were conducted to document ongoing and future mitigation activities.

## REQUIREMENTS FOR MITIGATION PLANS

### *Federal and State Requirements*

The following Federal requirements must be met for approval of a Hazard Mitigation Plan:

- Open public involvement, with public meetings that introduce the process and project requirements
- The public must be afforded opportunities for involvement in: identifying and assessing risk, drafting a plan, and public involvement in approval stages of the plan
- Community cooperation, with opportunity for other local government agencies, the business community, educational institutions, and non-profits to participate in the process
- Incorporation of local documents, including General Plans, Zoning Ordinances, Building Codes, and other pertinent city and regional documents

The following components must be part of the planning process:

- Complete documentation of the planning process
- A detailed risk assessment on hazard exposures in the community
- A comprehensive mitigation strategy, which describes the goals & objectives, including proposed strategies, programs & actions to avoid long-term vulnerabilities
- A plan maintenance process, which describes the method and schedule of monitoring, evaluating and updating the plan and integration of the All Hazard Mitigation Plan into other planning mechanisms
- Plan Review by Cal OES and FEMA
- Formal adoption by each City Council

### *Public and Community Process*

Public participation is a key component of strategic planning processes. Citizen participation offers stakeholders in the community the opportunity for inclusion of their interests and concerns into the process. The Federal Emergency Management Agency requires public input during the development of local hazard mitigation plans.

During the HMP development and update process, the public was invited to participate. Information was provided on city websites, newsletters, cable television stations, and the local newspapers. Examples are provided in **Annex E Planning and Public Involvement**. Furthermore, the public and community are continually encouraged to participate in the disaster preparation, mitigation planning, and HMP update process via ongoing public awareness campaigns, workshops, CERT programs, surveys, and other community forums (see Section 4 Hazard Mitigation Goals and Strategies and **Section 5 Plan Maintenance and Monitoring** for additional details).

## HAZARD MITIGATION PLAN ORGANIZATION

The Hazard Mitigation Plan is organized as follows:

### PART I: OVERVIEW AND MITIGATION STRATEGY ACTION PLAN

#### Section 1: Introduction

The Introduction provides an overview of the Hazard Mitigation Plan Mission, Goals, and Strategies. In addition, this section outlines the process used to develop the goals and strategies that cut across the nine hazards addressed in the Hazard Mitigation Plan. Finally, this section describes the background and purpose of developing the Hazard Mitigation Plan and the planning process.

#### Section 2: Community Profile

The Community Profile section presents the history, geography, demographics, and socio-economics of Las Virgenes-Malibu Region. It serves as a tool to provide a historical perspective of hazards in the area, potential impacts, and identifies at risk populations.

#### Section 3: Risk Assessment

The Risk Assessment section provides information on hazard identification, vulnerability, and risk associated with hazards in Las Virgenes-Malibu Region.

#### Section 4: Multi-Hazard Goals and Strategies

The Multi-Hazard Goals and Strategies section describes the mitigation strategies developed for the HMP. The strategies address multi-hazard issues, as well as hazard-specific activities that can be implemented to reduce risk and prevent loss from future events.

#### Section 5: Plan Maintenance and Monitoring

The Plan Maintenance section provides information on plan implementation, monitoring and evaluation.

### PART II: HAZARD SPECIFIC INFORMATION

Part II provides hazard specific Information on the nine hazards addressed in the HMP. Continuing hazards occur on an ongoing and/or seasonal basis and may be predicted through historic evidence and scientific methods. Each of the hazard-specific sections includes information on the history, hazard causes and characteristics, hazard assessment, mitigation goals and strategies. Continuing hazards addressed in the plan include:

Section 6: Earthquake

Section 7: Wildfire

Section 8: Climate Change

Section 9: Energy Disruption

Section 10: Landslide, Debris Flow, and Mudslide

Section 11: Windstorm

Section 12: Flood, Tsunami, and Severe Winter Storm

Section 13: Pandemic

Section 14: Terrorism and Mass Violence

### **PART III: ANNEXES**

The Annexes includes references to the information used to gather data and conduct analytical research to assemble the Las Virgenes-Malibu COG Hazard Mitigation Plan. The Resources section also includes a description of the tools used to develop the plan as well as documentation of the meetings, discussions and events that were involved in the planning process.

#### **Annex A: Resources**

This section provides a list of resources for Regional, County, State, and Federal agencies and organizations that may be referenced directly and indirectly within the Las Virgenes-Malibu COG Hazard Mitigation Plan.

#### **Annex B: Meeting Agendas and Attendees**

This section provides key meeting agendas related to mitigation planning and the 2018 Multi-Jurisdictional Hazard Mitigation Plan update.

#### **Annex C: Community Disaster Preparedness and Risk Survey**

This section includes the survey by which community members rated their preparedness for disasters and risk ratings of the identified hazards.

#### **Annex D: Planning Group Hazard Rating Survey**

This survey was provided to the Planning Group to rate the Las Virgenes-Malibu COG Region hazards.

#### **Annex E: Planning and Public Involvement**

This section provides a description of public involvement activities including meetings and other public outreach efforts related to the Hazards Mitigation Plan update.

#### **Annex F: Flood Insurance Rate Maps**

This section provides Flood Insurance Rate Maps (FIRM) for selected areas within the LVMCOG area. These maps depict areas subject to flooding and are used for planning purposes.

#### **Annex G: Malibu Flood Mitigation Plan**

This section includes the Hazard Mitigation Plan prepared for the City of Malibu in May of 2001 (and still in use) by David Evens and Associates.

#### **Annex H: Plan Approval Documentation**

This section provides a copy of Plan Approval documents related to the Las Virgenes- Malibu COG Hazard Mitigation Plan.

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## SECTION 2. COMMUNITY PROFILE

### INTRODUCTION

Hazards impact the region’s citizens, property, environment, and economy. In addition to the potential loss of life and property, residents and businesses are subject to the financial and emotional costs of recovering from disasters.

Identifying population groups and the risks posed by hazards provides the basis for implementing strategies to reduce potential impacts; thereby protecting the lives and property of citizens and communities. The result is the development and implementation of strategies, coordination of resources, and increased public awareness that will reduce risk and prevent loss from future hazard events.

This section of the Hazard Mitigation Plan provides an overview of the Las Virgenes-Malibu Council of Governments (LVMCOG) region as well as the individual cities that comprise the LVMCOG. City specific profiles contained within this section provide brief summaries of the vulnerable populations, structures, and economic base of each community.

### POPULATION

According to 2022 Census data, the population of the five cities in the Las Virgenes-Malibu Council of Governments region totaled 61,721. Within the region, Calabasas represents the largest population closely followed by Agoura Hills. Over the past 5 years, Los Angeles County has seen a decline (-4.4%) in population. Consequently, within the LVMCOG region, there has been a decrease (-9.4%) in population through the period from 2017 to 2022. The population levels of individual cities within the area also declined since 2017. Due to terrain restrictions, designated parks and reserves, and local planning/zoning requirements, local populations are centered along the Ventura 101 Freeway and Pacific Coast Highway (see Population Density Map on the following page).

Las Virgenes-Malibu Population Data				
Location	2022 Estimated Population	% of Los Angeles County	2017 Population	% Change from 2017 to 2022
Agoura Hills	19,464	0.20%	20,692	-5.9%
Calabasas	22,491	0.23%	24,202	-7.1%
Hidden Hills	1,702	0.02%	1,921	-11.4%
Malibu	10,370	0.11%	12,877	-19.5%
Westlake Village	7,694	0.08%	8,440	-8.8%
<b>LVMCOG</b>	<b>61,721</b>	<b>0.63%</b>	<b>68,132</b>	<b>-9.4%</b>
Los Angeles County	9,721,138	100.00%	10,163,507	-4.4%

Table 2: Las Virgenes-Malibu 2022 Estimated Population Data

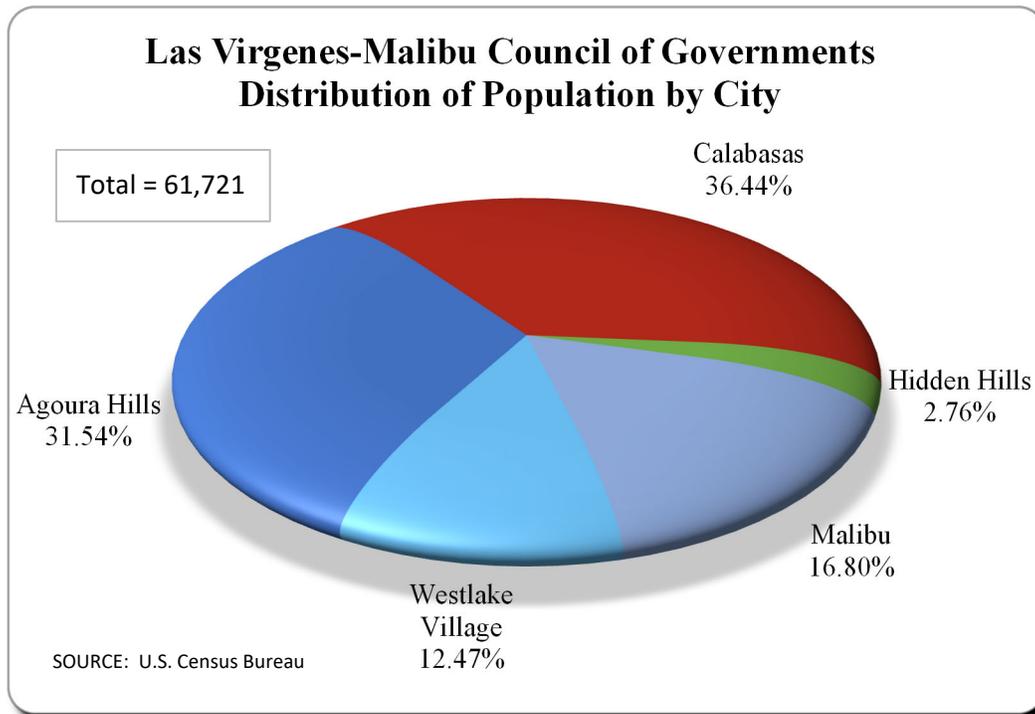
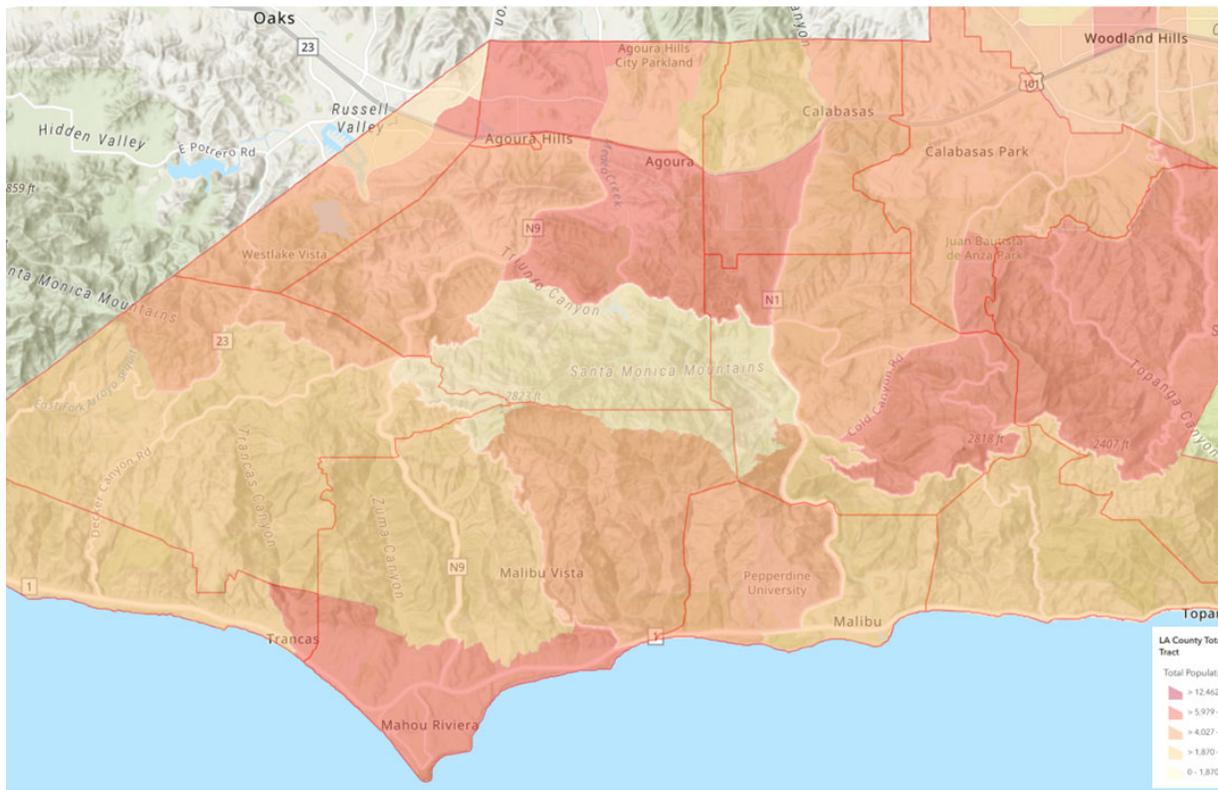


Figure 3: LVMCOG Population Distribution by City



Map 4: Population Density

## GEOGRAPHY AND THE ENVIRONMENT

The Las Virgenes-Malibu region is comprised of approximately 129.62 square miles (Source: Los Angeles Almanac). The area is partially urbanized and includes populated areas and business centers (particularly along major transportation routes). Nevertheless, large portions of the area are undeveloped wild land. In addition, the region is home to the Santa Monica National Recreation Area (154,095 acres) and Malibu Creek State Park which is comprised of: Liberty Canyon (730 acres), Udell Gorge (300 acres), and Kaslow Preserve (1,920 acres).

The geography includes mountainous terrain as well as small rivers and seasonal waterways (depending on rainfall). The climate is Mediterranean characterized by warm to hot, dry summers and mild to cool, wet winters. Summer temperatures in the cities of Agoura Hills, Calabasas, Hidden Hills and Westlake Village can reach into the high 90's. Malibu lies along the Pacific coast and is bordered to its north by the Santa Monica Mountains. As a result, average temperatures in Malibu are approximately 10 degrees cooler in the summer than the other cities within the LVMCOG (see **CLIMATE** section for additional details).



Map 5: Las Virgenes-Malibu Council of Governments Region Map

The region's transportation system consists of a grid of local streets, arterials, and other lesser thoroughfares. Regional access to Agoura Hills, Calabasas, Hidden Hills, and Westlake Village area is provided primarily through the Ventura Freeway (US Highway 101). Access to Malibu is primarily via Pacific Coast Highway (California State Route 1 aka Highway 1) and through local roads that provide connector routes to the inland cities of the LVMCOG. Connector routes include Las Virgenes Road/Malibu Canyon Road, Topanga Canyon Boulevard (SR 27), Decker Canyon Road (SR 23), Mulholland Highway, Latigo Canyon Road, and Kanan Dume Road. These roads traverse the mountains and designated wilderness areas such as Malibu Creek State Park, Topanga State Park, and the Santa Monica Mountains National Recreation Area.

## CLIMATE

### Temperature

The Las Virgenes-Malibu region is characterized by warm to hot dry summers and mild to cool wet winters typical of a Mediterranean climate.

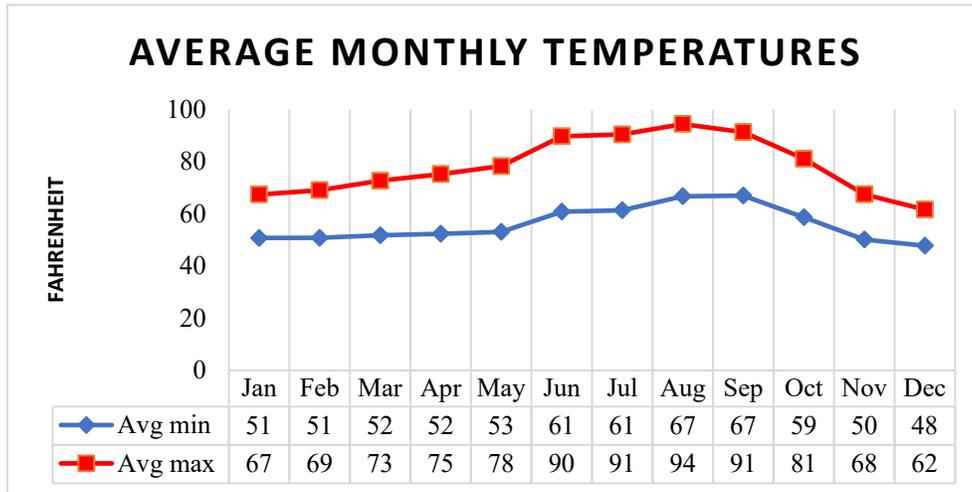


Figure 4: Average Temperature by Month (2022)

The average high in the summer is typically in the low to mid 90’s. Average lows in the winter months range from the high 40’s to low 50 degrees Fahrenheit.

August tends to be the hottest month and December tends to be the coldest month. However, it should be noted that temperatures can vary over a wide range.

For example, Santa Ana winds typically occur in late fall and early winter. The Santa Ana winds are characterized by strong dry offshore winds originating from the Great Basin and Upper Mojave Desert.

Wind temperatures can range from extremely hot to cold. Damage can occur directly from the high wind speeds generated or from the secondary effects of very low humidity – which increases the threat of wildfires.

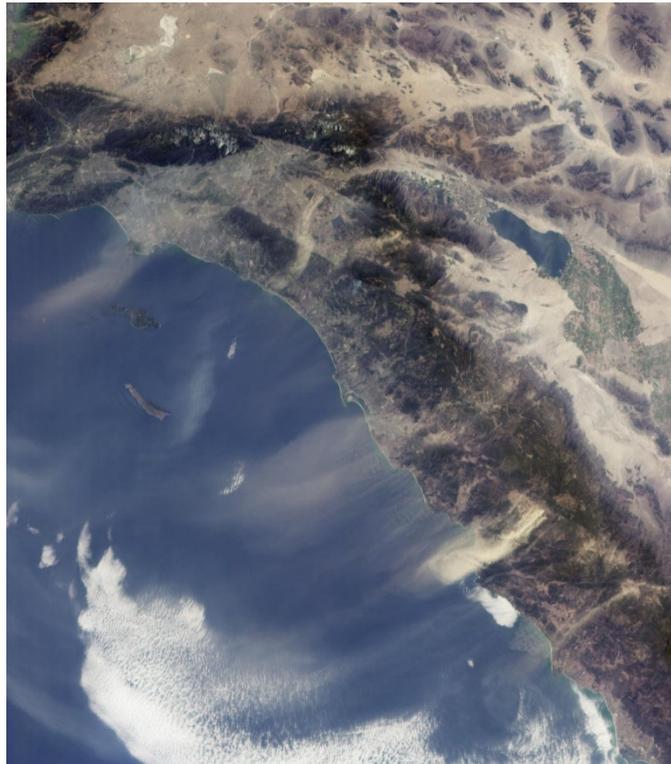


Figure 5: Santa Ana Winds (Feb 2002)

SOURCE: NASA/JPL-Caltech)

### Rainfall

Rainfall in the LVMCOG region averaged nearly 6 inches in 2022. However, the term “average rainfall” is misleading because over the recorded history of rainfall in the region, rainfall amounts have ranged from no rain at all in some years to well over normal averages in very wet years. Furthermore, actual rainfall in Southern California tends to fall in large amounts during sporadic and often heavy storms rather than in consistent amounts throughout the year.

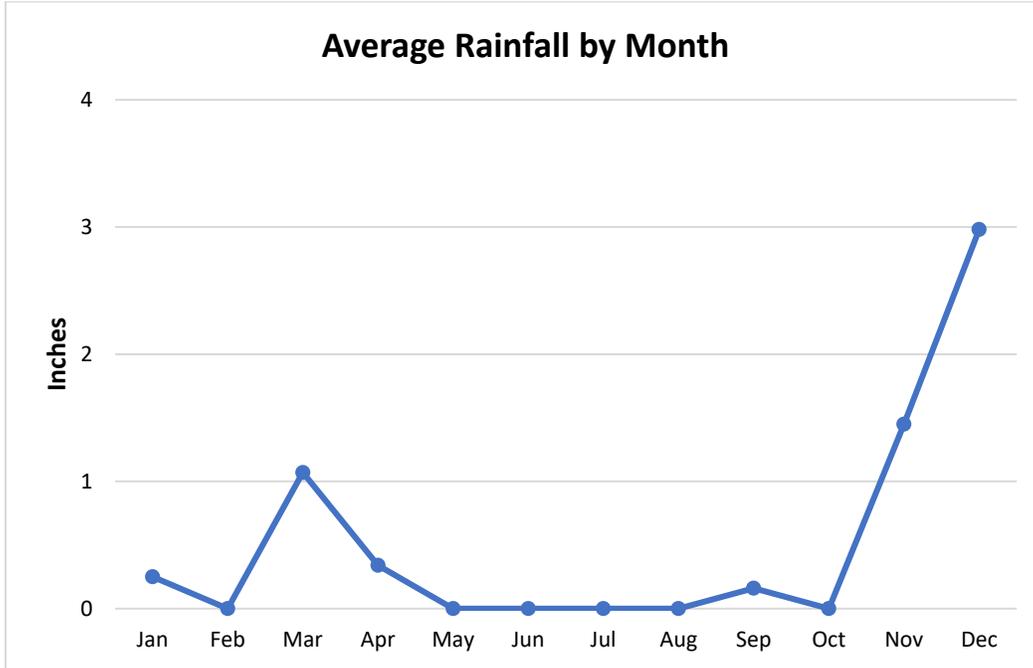


Figure 6: Average Rainfall by Month (2022)

### El Niño and La Niña

Periodically, Southern California and the LVMCOG region are subject to the effects of El Niño or La Niña conditions:

- El Niño is characterized by unusually warm ocean temperatures in the Equatorial Pacific resulting in increased rainfall in the southern tier of the U.S. El Niño conditions can result in flooding, mudslides, and traffic disruptions in the LVMCOG region.
- La Niña is characterized by unusually cold ocean temperatures in the Equatorial Pacific resulting in decreased rainfall in the southern tier of the U.S. La Niña conditions can result in drought and increased danger from wildfires.

## LAW ENFORCEMENT AND FIRE RESOURCES

The Las Virgenes-Malibu COG region is part of Los Angeles County. The five cities contract for essential services such as law enforcement with the Los Angeles County Sheriff and fire resources through the Consolidated Fire Protection District of Los Angeles County.

### *Los Angeles County Sheriff's Department*

The cities within the Las Virgenes-Malibu COG individually contract their law enforcement services with the Los Angeles County Sheriff's Department. The Malibu/Lost Hills Station provides immediate access and is located at 27050 Agoura Road, Agoura Hills, CA 91301. This station serves the western portion of Los Angeles County, which is a blend of semi-urban, residential, and rural areas, encompassing both mountain and beach topographies.

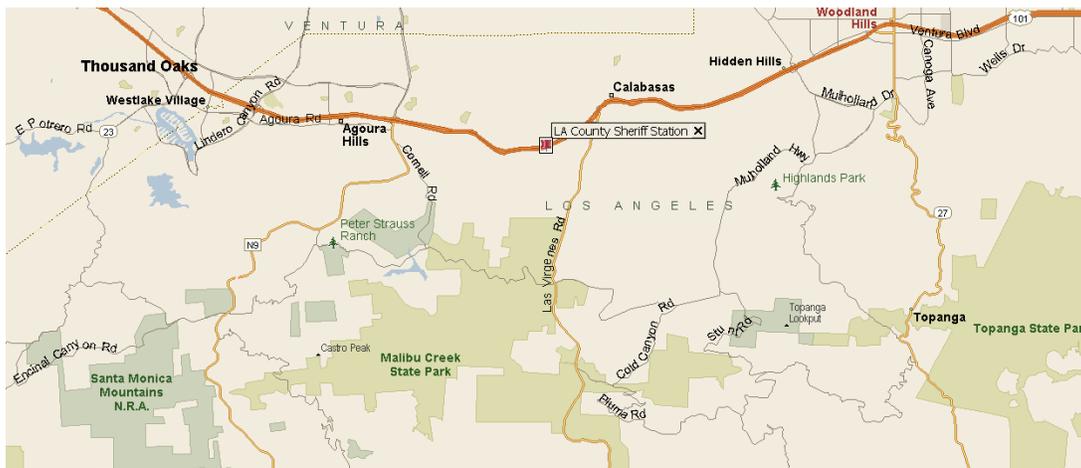
The cities served by the Malibu/Lost Hills Station include Agoura Hills, Calabasas, Hidden Hills, Malibu, and Westlake Village as well as the unincorporated communities<sup>1</sup> of Chatsworth Lake Manor, Malibu Lake, Topanga, and West Hills. The station's jurisdiction is sectioned into 27 areas.

LASD personnel that serve the Malibu region are stationed at the Malibu Substation located at 23555 Civic Center Way, Malibu, CA 90265.



Figure 7: Malibu/Lost Hills Sheriff Web Page

While the substation is equipped with an EOC, in most emergency situations, emergency operations will operate out of the Lost Hills Station.



Map 6: LASD Malibu/Lost Hills Station Location

<sup>1</sup> Information obtained from the Los Angeles County Sheriff's Department

The Malibu/Lost Hills Station has comprehensive Fire, Flood and Earthquake Operation Plans. The plans identify evacuation shelters, secondary evacuation shelters, command post sites, multi-purpose staging areas, and alternate traffics routes. In addition, the Malibu/Lost Hills Station has implemented a process for prioritizing critical facilities assessments. This process ranks locations in the following order:

1. “A” priorities must be checked immediately
2. “B” priorities must be checked immediately if children are present, otherwise as time permits
3. “C” priorities must be checked as time permits

Critical facilities identified by the Malibu/Lost Hills Station are noted in **Section 3**.

***Los Angeles County Fire Department***

Agoura Hills, Calabasas, Hidden Hills, Malibu and Westlake Village are served by the Los Angeles County Fire Department. The Las Virgenes-Malibu COG is located in Division VII – Central Region of the Los Angeles County Fire Department’s Regional Plan Divisions. Battalions 1 and 5 of the Los Angeles County Fire Department are assigned to directly serve the Las Virgenes-Malibu region. Battalion 5 is the main division since its stations are located within the region itself. The Local LA County Fire Department Division Headquarters are located at 3970 Carbon Canyon Rd., Malibu 90265.

<b>BATTALION 5</b>	
<b>Fire Station #65</b>	4206 N Cornell Rd, Agoura, 91301
<b>Fire Station #67</b>	25801 Piuma Rd, Calabasas, 91302
<b>Fire Station #68</b>	24130 Calabasas Rd, Calabasas, 91302
<b>Fire Station #69</b>	401 S Topanga Cyn Blvd, Topanga, 90290
<b>Fire Station #70 - Headquarters</b>	3970 Carbon Cyn Rd, Malibu, 90265
<b>Fire Station #71</b>	28722 W Pacific Coast Hwy, Malibu, 90265
<b>Fire Station #72</b>	1832 Decker Canyon Rd, Malibu, 90265
<b>Fire Station #88</b>	23720 W Malibu Rd, Malibu, 90265
<b>Fire Station #89</b>	29575 Canwood St., Agoura Hills, 91301
<b>Fire Station #99</b>	32550 Pacific Coast Hwy, Malibu, 90265
<b>Fire Station #125</b>	5215 Las Virgenes Rd, Calabasas, 91302
<b>Fire Station #144</b>	31981 Foxfield Dr, Westlake Village, 91361

Table 3: LVMCOG Los Angeles County Fire Stations

## Fire Station #89

The Los Angeles County Fire Department’s first fire station in Agoura Hills, Fire Station 89, opened in June of 2006. This fire station was a joint venture between the County of Los Angeles and the City of Agoura Hills and is an example of interagency efforts working for better emergency management.

Fire Station 89 is located on a 3-acre lot at 29575 Canwood Street, a quarter mile west of Kanan Road. The state of the art 12,000 sq. ft. building houses one engine company, a paramedic squad, Battalion Chief’s office, training facilities and dormitory quarters for 10 fire and emergency personnel. The cost of this new fire station was approximately \$4 million and was paid for through developer fees. The new fire station improves coverage and response times for not only Agoura Hills, but also the entire Las Virgenes-Malibu Region.

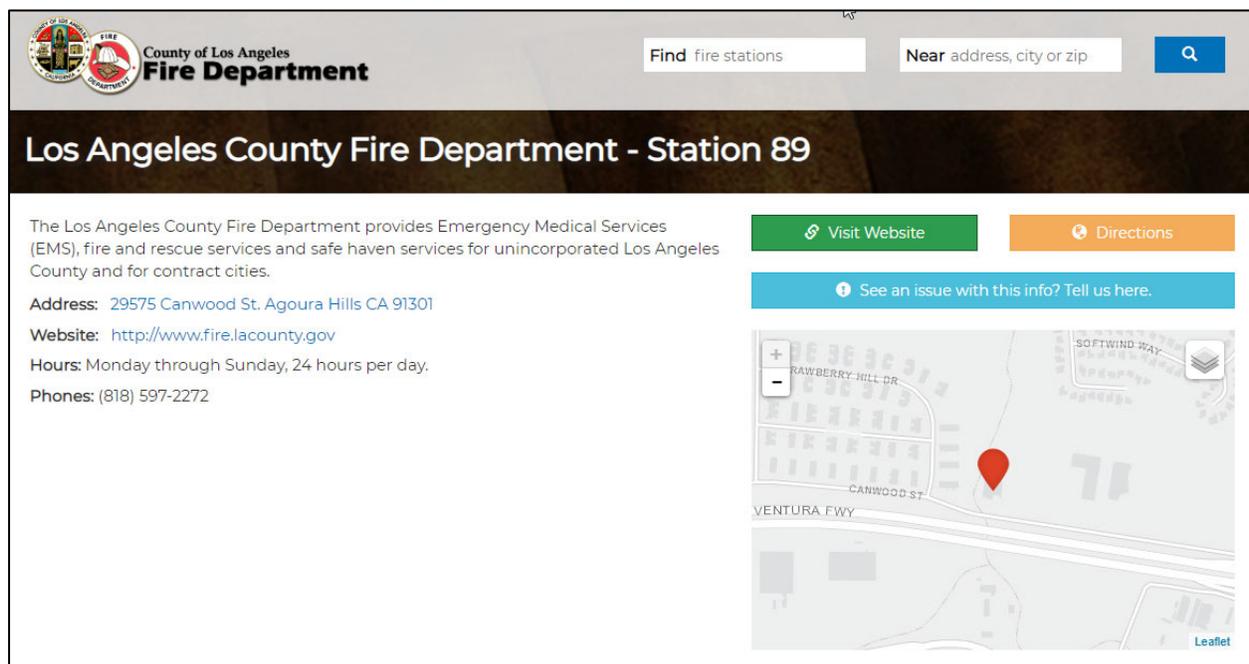


Figure 8: Los Angeles County Fire Station #89 Web Page

## MULTI-REGIONAL COLLABORATION

### *Calabasas Community Center*

The cities in the Las Virgenes-Malibu COG often combine resources and work together to create more productive communities. One such example was the joint venture of the cities of Calabasas and Agoura Hills to build the Calabasas Community Center. This is a state-of-the-art recreational facility that offers a variety of recreational, social, cultural, and educational programs and activities to meet the needs of the surrounding communities. This endeavor is a prime example of how communities can come together in order to offer residents a more livable community. Furthermore, in the event of an emergency, facilities such as the Calabasas Community Center are valuable resources that can be used to support the local population.

**Note:** As of October 2023, this facility is temporarily closed for remodeling and is expected to re-open early 2024. The facility will re-open with all new fitness programs, enrichment classes, facility rentals, special events, and additional facility improvements / renovations.



Figure 9: Calabasas Community Center Web Page

## ***Community Emergency Response Training***

The cities in the Las Virgenes-Malibu COG make available Community Emergency Response Training (CERT) programs to their residents as well as residents of neighboring communities. This CERT effort facilitates the concept of joint cooperation to create safer communities.

### **Alert LA County**

The cities in the Las Virgenes-Malibu COG participate in the Los Angeles County Office of Emergency Management (OEM) Alert LA County program. Alert LA County is a free mass notification system for Los Angeles County residents and businesses. The Sheriff's Department uses Alert LA County to contact local residents and businesses if there is an emergency or disaster in a community. The system sends shelter-in-place instructions, evacuation, and other emergency messages. It has accessibility features for people with disabilities and others with access and functional needs as well as preferred language for notifications.



Figure 10: Alert LA County Program

### ***OARRS***

The cities in the Las Virgenes-Malibu COG participate in the Los Angeles County Office of Emergency Management (OEM) Operational Area Response and Recovery System (OARRS) which is designed to provide:

- Remote system access in the Operational Area;
- Interface with the State of California's Response Information Management System;
- Interface with the County's Enterprise Geographic Information System;
- Facilitation of emergency response activities, multi-jurisdictional and multidisciplinary response and recovery coordination, and information flow;
- Support for multi-disciplinary and multi-jurisdiction plans and exercises;
- System of communication and information management that links County departments, cities, schools, and special districts;
- Custom reporting; and
- Secure emergency information and data sharing.

### **DETAILS BY CITY**

The remainder of this section provides detailed descriptions of each of the five cities within the Las Virgenes-Malibu Council of Governments. The information included outlines each city and provides a basic history, location, climate and topographical information, demographics, social makeup, employment figures, major employers, and housing data. An understanding of each of these categories is important for addressing the needs of the local community.

Cities are displayed in alphabetical order.

- Agoura Hills
- Calabasas
- Hidden Hills
- Malibu
- Westlake Village

## AGOURA HILLS

Agoura Hills is located in the foothills of the Santa Monica Mountains on the western edge of Los Angeles County in the Conejo Valley. Agoura Hills encompasses 7.79 square miles and straddles the Ventura Freeway approximately 36 miles west of downtown Los Angeles. In the 1950's the availability of a reliable water supply caused the area to transform from a semi-rural ranching community to greater residential and commercial development.



Today, Agoura Hills is characterized by rolling hills and a blend of semi-rural and suburban development. The total population of Agoura Hills is comprised of approximately 20,362 people (2021 U.S. American Community Survey 5-Year Estimate).

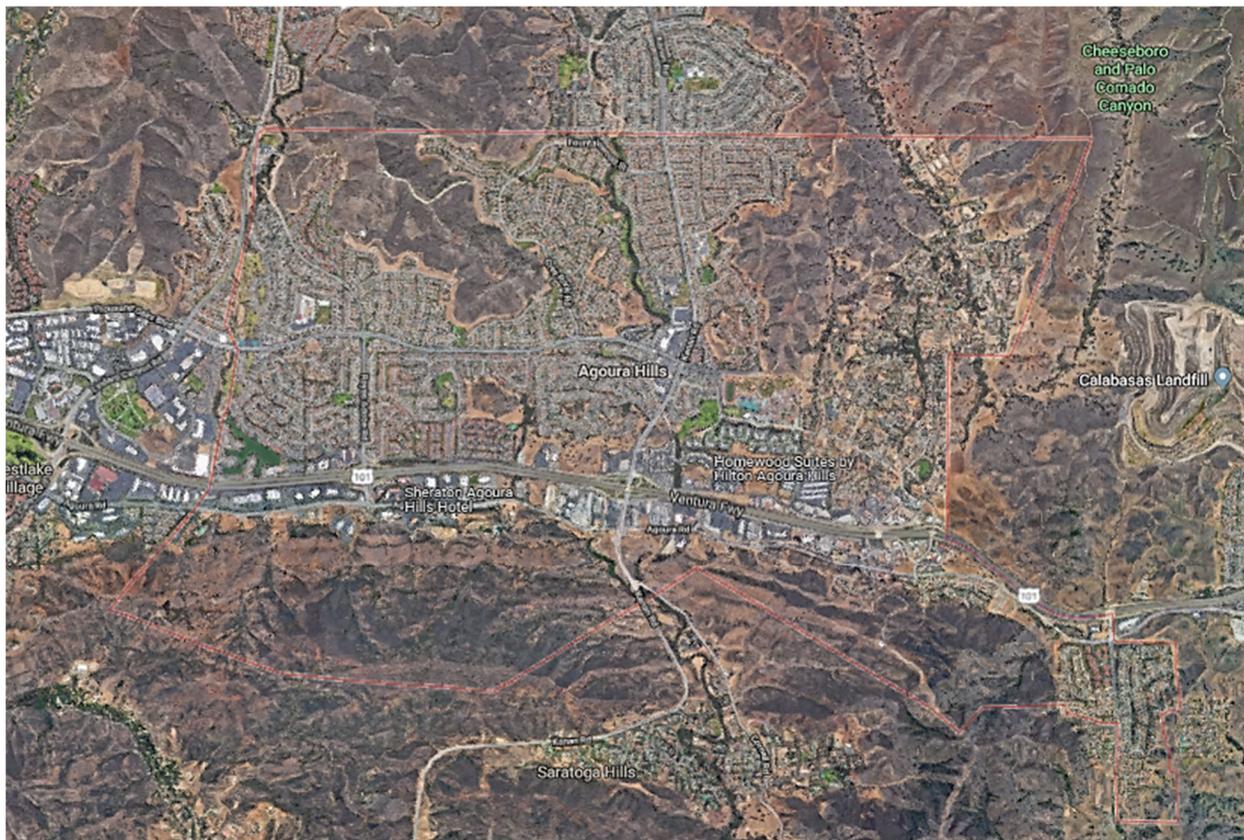
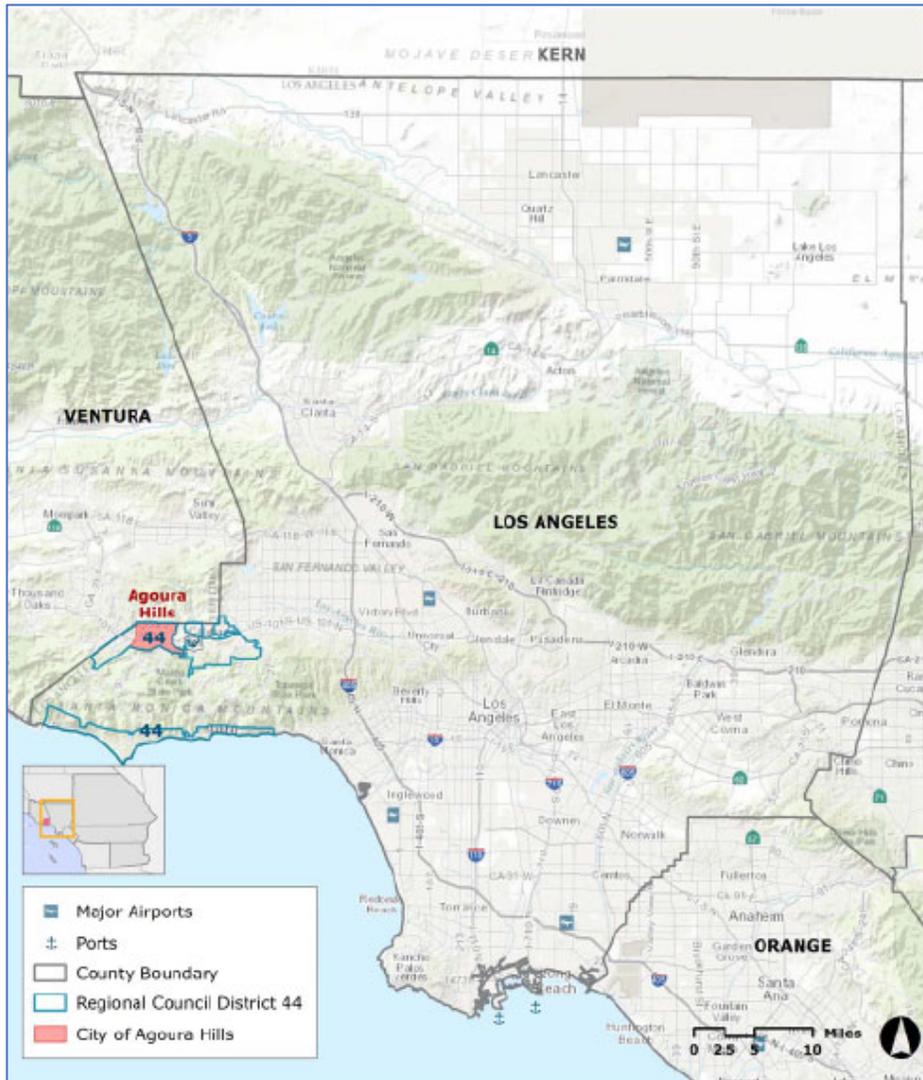


Figure 11: City of Agoura Hills Aerial View

Source: Google Maps

Agoura Hills is located in the eastern Conejo Valley between the Simi Hills to the north and the Santa Monica Mountains to the south. The City ranges in altitude from 936 feet to 2,036 feet above sea level.

General Coordinates	
Latitude	34°8'42''North
Longitude	118°46'40''West



Source: 2016 SCAG City Boundary Data  
 Map 7: City of Agoura Hills Location Map

### *Brief History*

The area around what is today the City of Agoura Hills was a popular resting place along the Camino Real, the original road connecting the Spanish missions from San Diego to San Francisco. Ranching was the area’s dominant industry from the arrival of the Spanish in the late 18<sup>th</sup> century until the early 20<sup>th</sup> century.

In the 1920’s Paramount Studios purchased a portion of the Rancho Las Virgenes, just south of what is now the City of Agoura Hills and established a film studio. In the late 1920’s a group of residents asked to have a permanent post office established in the area, and the name “Agoura” was given.



Figure 12: Reyes Adobe

Growth and development was slow due in part to a lack of a significant water source. In the late 1950’s, the Las Virgenes Municipal Water District was established, and reliable water sources made the Agoura area more attractive for families and businesses. Concurrently with the availability of water, further growth occurred when the local highway became part of the Ventura Freeway.

During the late 1960’s and the 1970’s, expansion continued as large housing tracts and shopping areas, as well as schools, developed. In 1982, residents voted in favor of cityhood, and on December 8, 1982 Agoura Hills became the 83<sup>rd</sup> city in Los Angeles County.

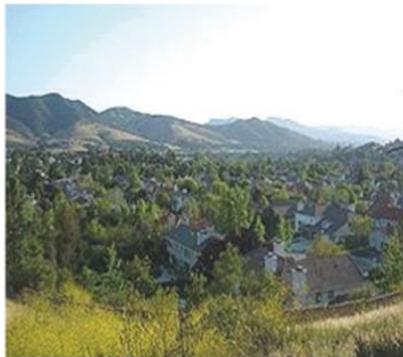


Figure 13: City of Agoura Hills Local Area Views

***Climate /Topography***

The climate in Agoura Hills is characterized by mild winters with average temperatures in 2022 ranging from the high 40’s to the high 60’s, and warm summers with average temperatures ranging from the low 60’s to the mid 90’s. Rainfall in 2022 was approximately 6 inches, with the greatest portion of precipitation occurring in the winter months.

Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Temperature (°F)	59.6	60.3	62.6	64.4	66.7	76.4	77.1	81.6	79.8	70.7	59.4	55
Min Average Temperature (°F)	52.6	52.3	52.8	52.9	53.5	61.3	62	67.7	67.6	59.4	51.9	49.1
Max Average Temperature (°F)	66.5	68.2	72.5	75.8	79.8	91.5	92.1	95.5	92	82	67	61
Average Rainfall (inches)	0.25	0	1.07	0.34	0	0	0	0	0.16	0	1.45	2.98

Source: Weather.gov (NOAA)

**Table 4: City of Agoura Hills Average Monthly Temperatures and Rainfall (2022)**

## Economic Activity

Economic activity is one indicator of the potential losses that may be incurred in the event of a disaster. The following tables list the principal employers, property tax payers, and taxable sales in Agoura Hills.

### Agoura Hills Principal Employers

Company	Industry	Employees	Percent of Total City Employment
Las Virgenes Unified School District*	Government	524	4.72%
National Veterinary Associates, Inc	Veterinary	347	3.13%
Westlake Financial Services	Banking	320	2.88%
Private National Mortgage Acceptance	Banking	309	2.78%
Teradyne Inc	Manufacturing	210	1.89%
Motor Vehicle Software Corp	Technology	170	1.53%
Joni and Friends	Non-Profit	163	1.47%
Curinos LLC	Information	150	1.35%
Cydcor LLC	Administrative	141	1.27%
Wood Ranch	Restaurant	133	1.20%
<b>Top 10 Total</b>		<b>2,467</b>	<b>22.23%</b>
<b>Total City of Agoura Hills Employment</b>		<b>11,100</b>	<b>100.00%</b>

Source: Comprehensive Annual Financial Report for the City of Agoura Hills, Fiscal Year Ended June 2022

\*Employee count is based on Agoura Hills school sites only

Table 5: City of Agoura Hills Principal Employers

### Agoura Hills Principal Property Tax Payers

Company	Taxable Assessed Value	Percent of Total City Assessed Value
Tishman Speyer Archstone Smith	\$133,134,314	2.31%
Lexington Agoura Hills LLC	59,038,283	1.02%
Kids from the Valley V LLC	55,636,335	0.96%
Khanna Enterprises LP	47,308,329	0.82%
FW CA Twin Oaks Shopping Center	34,106,081	0.59%
ARHC MAGHCA01 LLC	33,509,582	0.58%
Whizin Market Square LLC	32,581,045	0.56%
Hankey Investment Company LP	29,972,457	0.52%
Best Agoura Design Center LLC	26,056,527	0.45%
Apple Seven Hospitality	25,609,729	0.44%
<b>Top 10 Total</b>	<b>\$476,952,682</b>	<b>8.26%</b>
<b>Total Property Tax Assessed Value</b>	<b>\$5,774,285,394</b>	<b>100%</b>

Source: Comprehensive Annual Financial Report for the City of Agoura Hills, Fiscal Year Ended June 2022

Table 6: City of Agoura Hills Principal Property Tax Payers

**Agoura Hills Taxable Sales (2021)**

Category	Taxable Sales (in thousands)	Percent of Total
Autos and Transportation	\$364	8.80%
Building and Construction	252	6.09%
Business and Industry	586	14.16%
Food and Drugs	277	6.69%
Fuel and Service Stations	842	20.35%
General Consumer Goods*	1,034	24.99%
Restaurants and Hotels	783	18.92%
<b>Total</b>	<b>\$4,138</b>	<b>100.00%</b>

Source: Comprehensive Annual Financial Report for the City of Agoura Hills, Fiscal Year Ended June 2022

\*General Consumer Goods includes other taxable sales

Table 7: City of Agoura Hills Taxable Sales

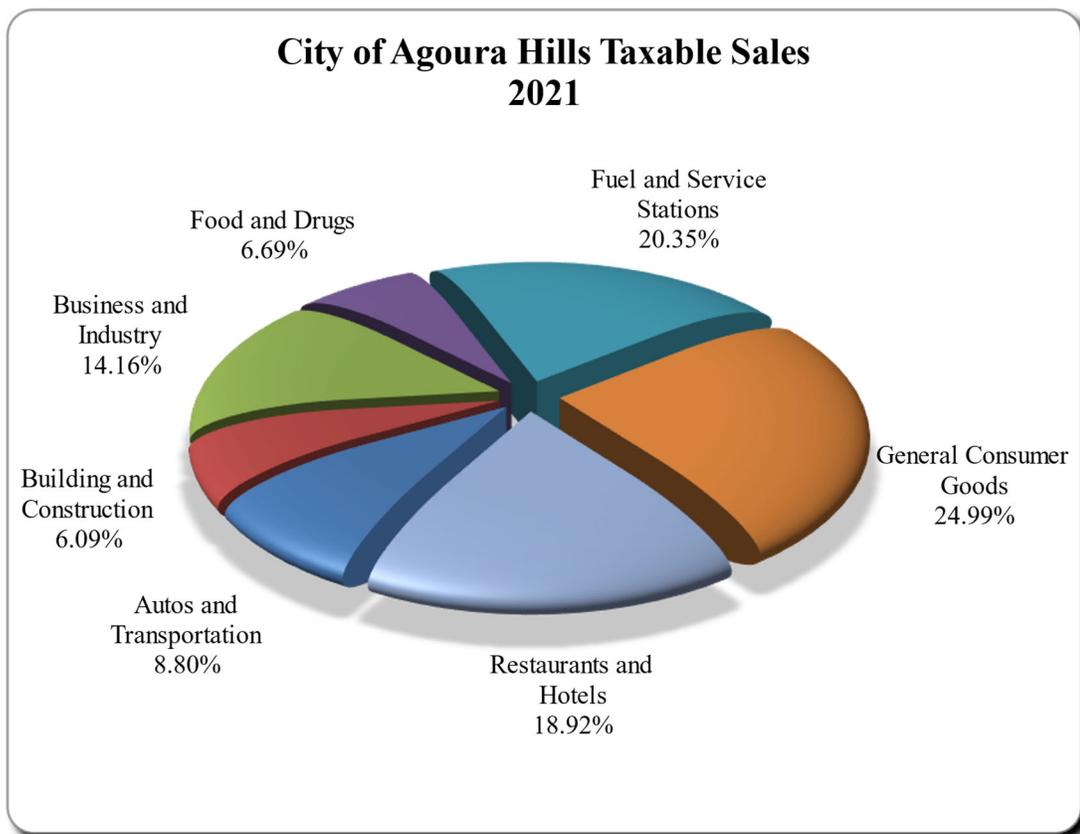


Figure 14: City of Agoura Hills Taxable Sales Percentage by Category

### Agoura Hills Economy

The table below provides a breakdown of revenue channels for the City of Agoura Hills in 2017. These categories include Accommodation and Food Services, Health Care and Social Assistance, Transportation and Warehousing, and Retail Sales. The total revenues accrued by the city amounted to approximately \$621.02 Million, which included Total Retail Sales per capita of \$17,625.

Category	Value (in thousands)	Percent
Total Accommodation and Food Services Sales	\$87,807	14.14%
Total Health Care and Social Assistance Receipts/Revenue	\$163,460	26.32%
Total Transportation and Warehousing Receipts/Revenue	\$8,934	1.44%
Total Retail Sales	\$360,799	58.10%
<b>Total</b>	<b>\$621,000</b>	<b>100.00%</b>

Source U.S. Census Bureau 2017 Economic Census of the U.S.

Table 8: City of Agoura Hills Economy

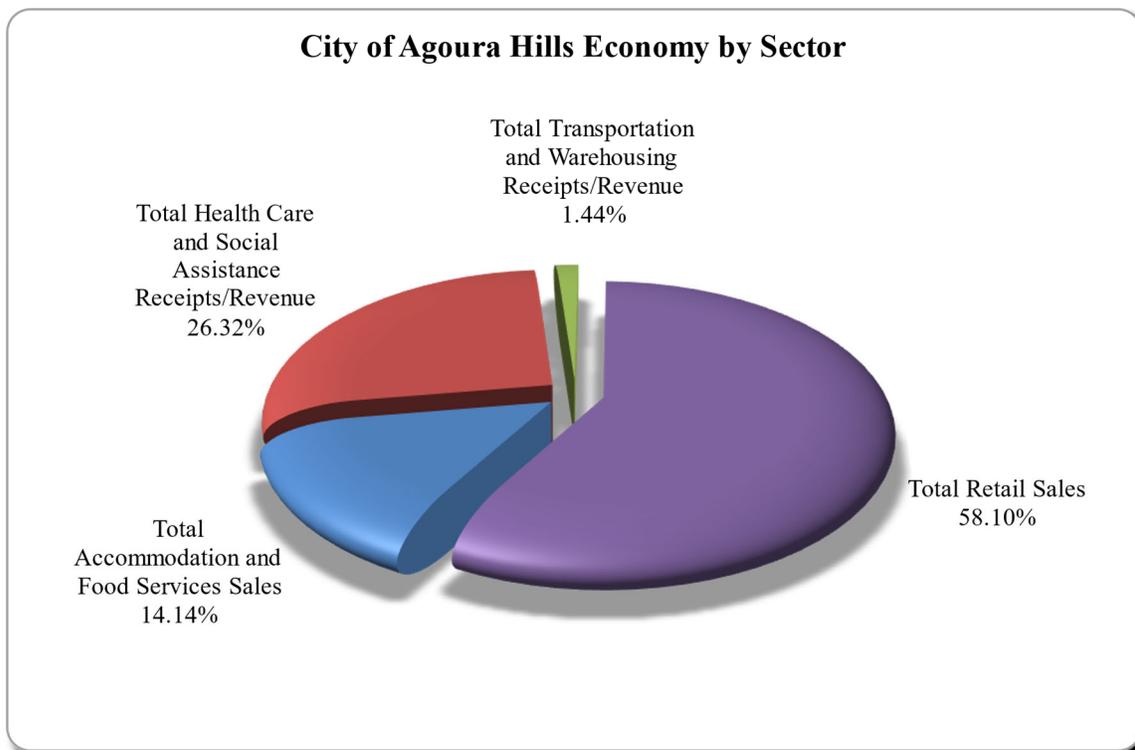


Figure 15: City of Agoura Hills Economy by Sector

## Population and Demographics

The following tables summarize the population and demographic groups at risk from a disaster in Agoura Hills.

### Sex and Age Distribution

Demographic Estimates - 2021		
Sex and Age	Estimate	Percent
<b>Total Population</b>	<b>20,362</b>	<b>100.0%</b>
Male	10,327	51.0%
Female	10,035	49.0%
Under 5 years	618	3.00%
5 to 9 years	1,038	5.10%
10 to 14 years	1,745	8.60%
15 to 19 years	1,516	7.40%
20 to 24 years	1,131	5.60%
25 to 29 years	639	3.10%
30 to 34 years	1,136	5.60%
35 to 39 years	1,128	5.50%
40 to 44 years	1,341	6.60%
45 to 49 years	1,352	6.60%
50 to 54 years	1,743	8.60%
55 to 59 years	2,011	9.90%
60 to 64 years	1,800	8.80%
65 to 69 years	973	4.80%
70 to 74 years	1,057	5.20%
75 to 79 years	431	2.10%
80 to 84 years	200	1.00%
85 years and over	503	2.50%
<b>Median age (years)</b>	<b>44.8</b>	

Source: US Census Bureau American Community Survey 2021 5-Year Estimate

Table 9: City of Agoura Hills Sex and Age Demographics

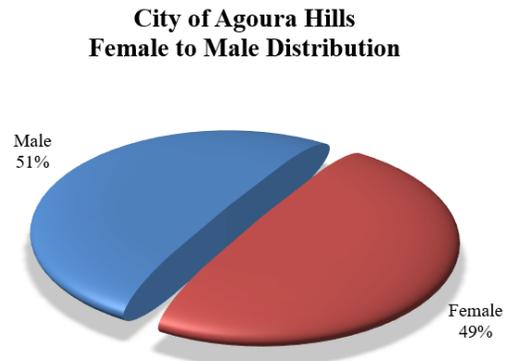


Figure 16: City of Agoura Hills Female to Male Distribution

The average age of residents in Agoura Hills is 44.8 with males (51.0%) slightly outnumbering females (49.0%). Mitigation planning must consider the unique needs of population groups, for example those under 15 years of age and those over 65 years of age.

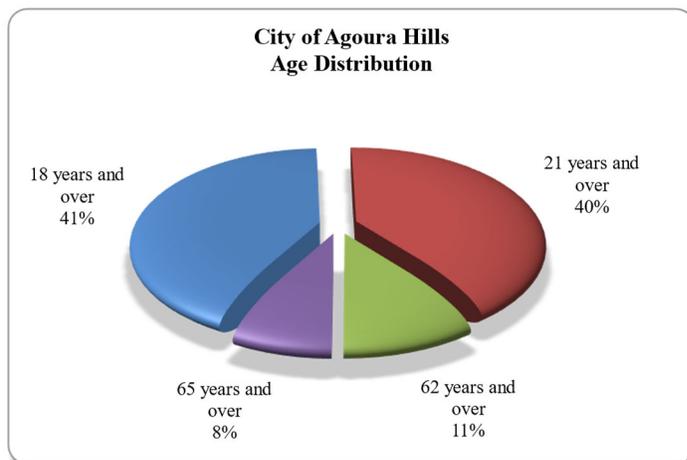


Figure 17: City of Agoura Hills Age Distribution

## Race and Language Composition

### Race

One aspect of mitigation planning is the need to address the cultural and language (communications) needs of local populations. This includes the ability to distribute information and provide notification in the event of a regional emergency. For Agoura Hills, an estimated 18.6% of the population speaks languages other than English (including English and another language or non-English only) with 1.39% speaking English “less than well or not at all”. These language and communication challenges may pose additional difficulties for socially vulnerable groups during a disaster.

Race	2021 Estimated Population	Percent of Total
<b>Total Population</b>	<b>20,362</b>	<b>100.00%</b>
White alone <sup>(a)</sup>	14,742	72.40%
Black or African American alone <sup>(a)</sup>	307	1.50%
American Indian and Alaska Native alone <sup>(a)</sup>	0	0.00%
Asian alone <sup>(a)</sup>	1,362	6.70%
Native Hawaiian and Other Pacific Islander alone <sup>(a)</sup>	32	0.20%
Hispanic or Latino <sup>(b)</sup>	2,944	14.50%
Two or More Races	764	3.80%
Some Other Race alone	211	1.00%

Source: US Census Bureau American Community Survey 2021 5-Year Estimate

(a) Includes persons reporting only one race

(b) Hispanics may be of any race, so also are included in applicable race categories

Table 10: City of Agoura Hills Race Composition

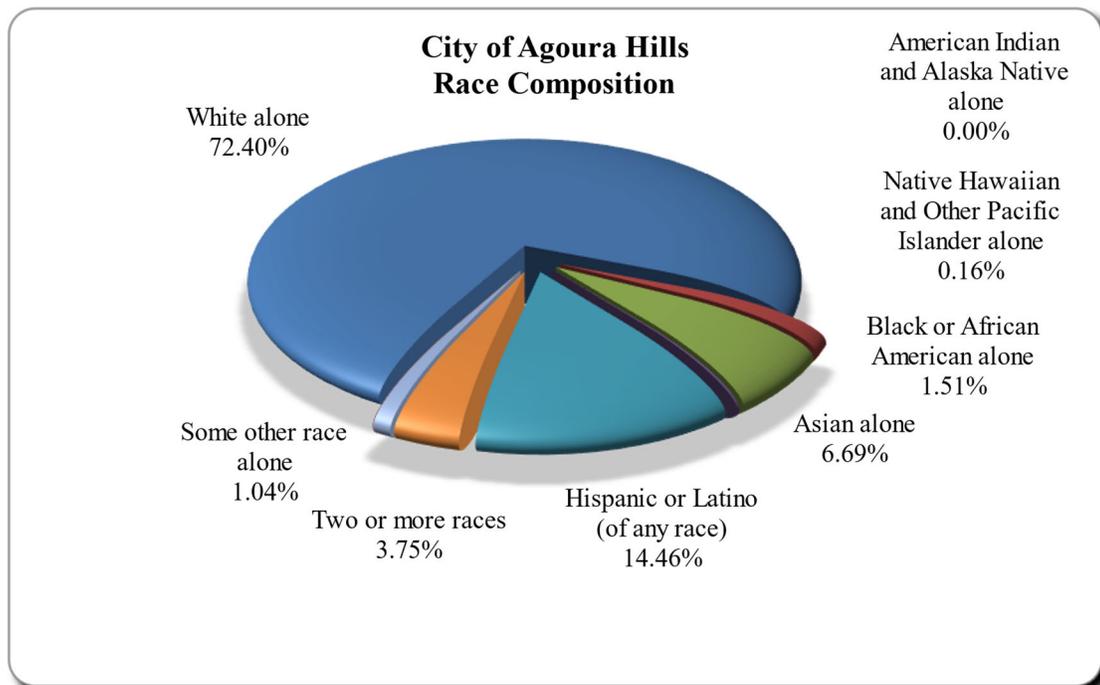


Figure 18: City of Agoura Hills Race Composition

*Language Spoken at Home*

Language	2021 Estimated Population	Percent of Total
Speaks only English	15,949	80.80%
Language other than English spoken at home, percent of persons age 5 years+, 2017-2021	3,795	19.20%
Speak a Language Other than English	2021 Estimated Population	Percent of Total
<b>Spanish</b>	<b>922</b>	<b>4.7%</b>
5 to 17 years old	48	0.2%
18 to 64 years old	704	3.6%
65 years old and over	170	0.9%
<b>Other Indo-European languages</b>	<b>1,379</b>	<b>7.0%</b>
5 to 17 years old	197	1.0%
18 to 64 years old	1,006	5.1%
65 years old and over	176	0.9%
<b>Asian and Pacific Island languages</b>	<b>768</b>	<b>3.9%</b>
5 to 17 years old	94	0.5%
18 to 64 years old	547	2.8%
65 years old and over	127	0.6%
<b>Other languages</b>	<b>726</b>	<b>3.7%</b>
5 to 17 years old	132	0.7%
18 to 64 years old	566	2.9%
65 years old and over	28	0.1%

Source: US Census Bureau American Community Survey 2021 5-Year Estimates

Table 11: City of Agoura Hills Languages Spoken at Home

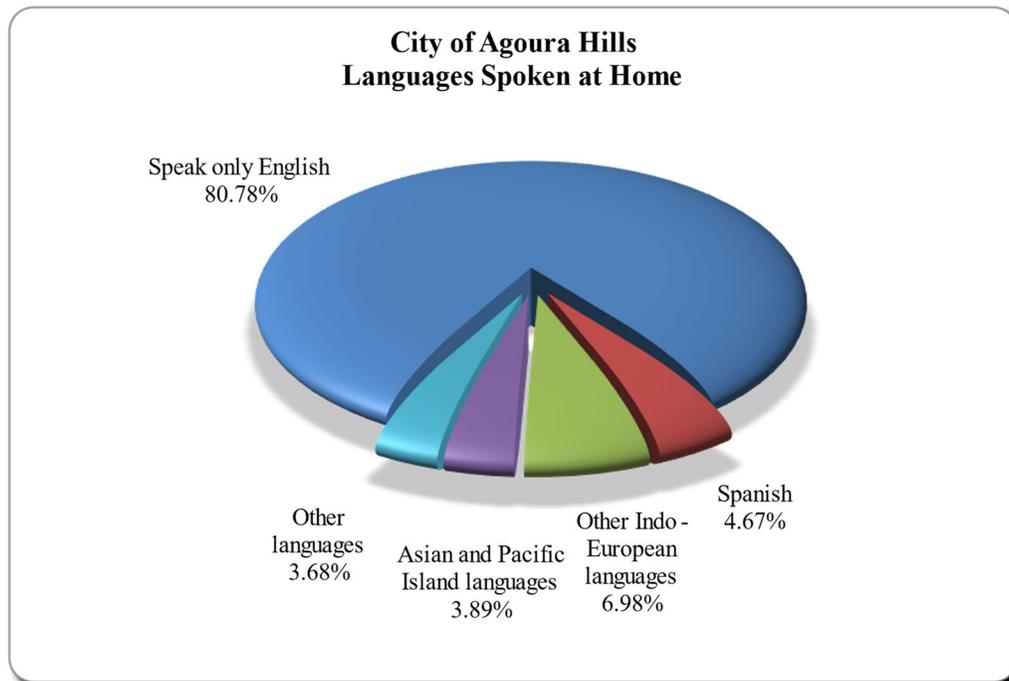


Figure 19: City of Agoura Hills Language Spoken at Home

### Income Distribution

Household income is a factor for mitigation planning since population groups in lower income ranges are less able to cope with the impact of disasters.

Furthermore, the availability of household funds can have a direct impact on the level of individual and family hazard mitigation activities and emergency preparedness.

In Agoura Hills, while the mean household income is \$194,167, there are a limited number of households with incomes less than \$25,000, near the 2023 U.S. poverty level of \$24,860 for a family of three as defined by the 2023 HHS Poverty Guidelines, by the U.S. Department of Health & Human Services.\*

Income and Benefits (in 2021 Inflation-Adjusted Dollars)		
	Estimate	Percent
<b>Total Households</b>	<b>7,314</b>	<b>100.00%</b>
Less than \$10,000	197	2.70%
\$10,000 to \$14,999	37	0.50%
\$15,000 to \$24,999	205	2.80%
\$25,000 to \$34,999	205	2.80%
\$35,000 to \$49,999	453	6.20%
\$50,000 to \$74,999	592	8.10%
\$75,000 to \$99,999	731	10.00%
\$100,000 to \$149,999	1463	20.00%
\$150,000 to \$199,999	797	10.90%
\$200,000 or more	2633	36.00%
<b>Median household income</b>	<b>\$141,099</b>	<b>(X)</b>
<b>Mean household income</b>	<b>\$194,167</b>	<b>(X)</b>

Source: US Census Bureau American Community Survey 2021 5-Year Estimates

Table 12: City of Agoura Hills Income and Benefits (2021 Inflation Adjusted Dollars)

\* Note: The households with minimal incomes may also be attributable to retirees and others that have other sources of funds not reportable as income.

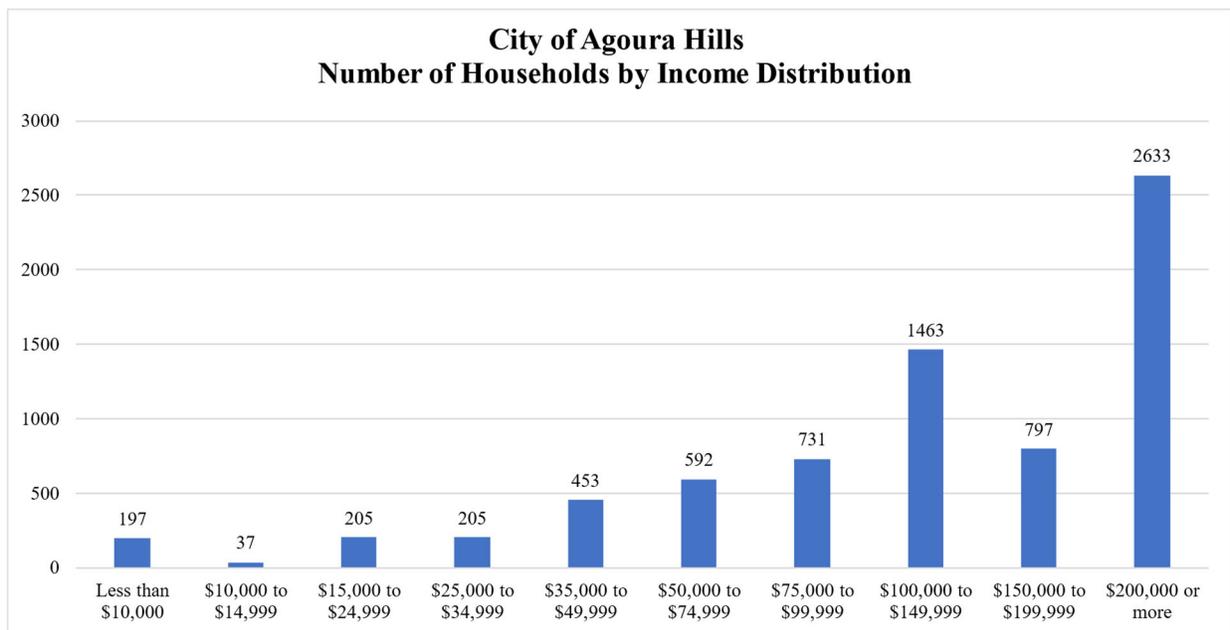


Figure 20: City of Agoura Hills Income Distribution

**Land Use**

Basic land use patterns are well established in the City of Agoura Hills. Residential neighborhoods are fully developed and there are limited opportunities for infill development remaining. Agoura Hills also contains a number of commercial zones. The city’s main shopping areas are listed below:

- Agoura City Mall
- Agoura Hills Commercial Center
- Agoura Hills Town Center
- Agoura Meadows Shopping Center
- Kanan Plaza
- Reyes Adobe Plaza
- Roadside Plaza
- Twin Oaks Shopping Center
- Whizin Market Square+

Regional access to Agoura Hills is provided by U.S. Highway 101, which runs east/west through the center of Agoura Hills dividing the town in half. Local access within the City is provided primarily by Kanan Road and Reyes Adobe Road in the north/south directions; Agoura Road and Thousand Oaks Boulevard in the east/west directions. City owned streets run 64 miles.

**Housing Characteristics**

The following housing statistics provide a summary of the numbers and types of housing units that are at risk if a disaster were to occur in Agoura Hills. Housing data includes: Housing Occupancy, Changes from 2017 to 2021, Number of Structures Built by Year, Home Values, and Home Value Distribution. In Agoura Hills there has been a significant increase in the number of 1 unit-detached, as well as larger units (10 to 19 units) since 2017.

Housing Occupancy	2021 Estimate	Percent
<b>Total Housing Units</b>	<b>7,799</b>	<b>100.0%</b>
Occupied housing units	7,314	93.78%
Vacant housing units	485	6.22%

Source: US Census Bureau American Community Survey 2021 5-Year Estimates  
 Table 13: City of Agoura Hills Housing Occupancy

Units In Structure	2021		2017		Change	
	Estimated Number	Percent of Units	Estimated Number	Percent of Units	Difference 2021-2017	Percent Change
<b>Total Housing Units</b>	<b>7,799</b>	<b>100%</b>	<b>7,674</b>	<b>100%</b>	<b>125</b>	<b>1.63%</b>
1-unit, detached	5,377	68.94%	5,123	66.30%	254	4.96%
1-unit, attached	1,092	14.00%	1,383	17.80%	-291	-21.04%
2 units	50	0.64%	0	0.00%	50	100.0%
3 or 4 units	309	3.96%	241	2.30%	68	28.22%
5 to 9 units	136	1.74%	243	3.70%	-107	-44.03%
10 to 19 units	455	5.83%	253	4.20%	202	79.84%
20 or more units	369	4.73%	431	5.70%	-62	-14.39%
Mobile home	11	0.14%	0	0.00%	11	100.0%
Boat, RV, van, etc.	0	0.00%	0	0.00%	0	-

Source: US Census Bureau American Community Survey 2021 5-Year Estimates  
 Table 14: City of Agoura Hills Units in Structure Change from 2017 to 2021

In terms of risk and disaster mitigation, older structures that have not been retrofitted or otherwise improved may be more susceptible to damage or destruction due to age and the fact that older building codes were less stringent than those required for newer structures. As a result, the inventory of older structures is a consideration when developing mitigation plans.

In Agoura Hills, 93.50% of structures (7,292) were built prior to 2000 and 45.81% (3,573) before 1980.

Year Structure Built	Estimate	Percent
<b>Total housing units</b>	<b>7,799</b>	<b>100.0%</b>
Built 2020 or later	0	0.00%
Built 2010 to 2019	180	2.30%
Built 2000 to 2009	327	4.20%
Built 1990 to 1999	517	6.60%
Built 1980 to 1989	3,202	41.10%
Built 1970 to 1979	2,572	33.00%
Built 1960 to 1969	812	10.40%
Built 1950 to 1959	104	1.30%
Built 1940 to 1949	39	0.50%
Built 1939 or earlier	46	0.60%

Source: US Census Bureau American Community Survey 2021 5-Year Estimates  
 Table 15: Year Structures Built in the City of Agoura Hills

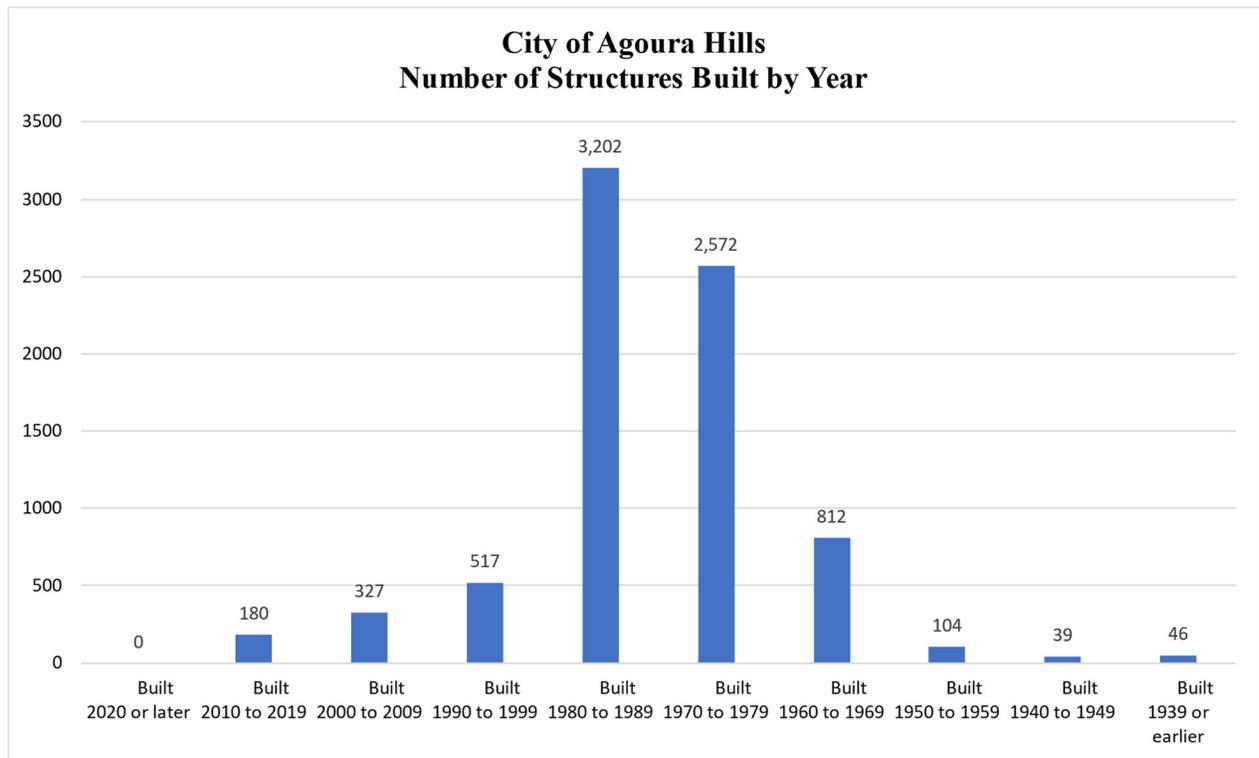


Figure 21: City of Agoura Hills Number of Structures Built by Year

Home values are an important consideration when evaluating the potential dollar loss due to disasters. These values can also be used to assess the cost/benefit of mitigation activities and planning. In Agoura Hills, the majority of Owner Occupied Units are valued over \$500,000. Consequently, the potential dollar losses from a disaster can rapidly escalate – illustrating the need for mitigation planning.

Owner-Occupied Units by Value		
	Estimate	Percent
<b>Owner-Occupied Units</b>	<b>5,861</b>	<b>100.00%</b>
Less than \$50,000	82	1.40%
\$50,000 to \$99,999	41	0.70%
\$100,000 to \$149,999	43	0.70%
\$150,000 to \$199,999	11	0.20%
\$200,000 to \$299,999	90	1.50%
\$300,000 to \$499,999	430	7.30%
\$500,000 to \$999,999	3,336	56.90%
\$1,000,000 or more	1,828	31.20%
<b>Median (dollars)</b>	<b>\$857,700</b>	<b>(X)</b>

Source: US Census Bureau American Community Survey 2021 5-Year Estimates

Table 16: City of Agoura Hills Home Value Distribution

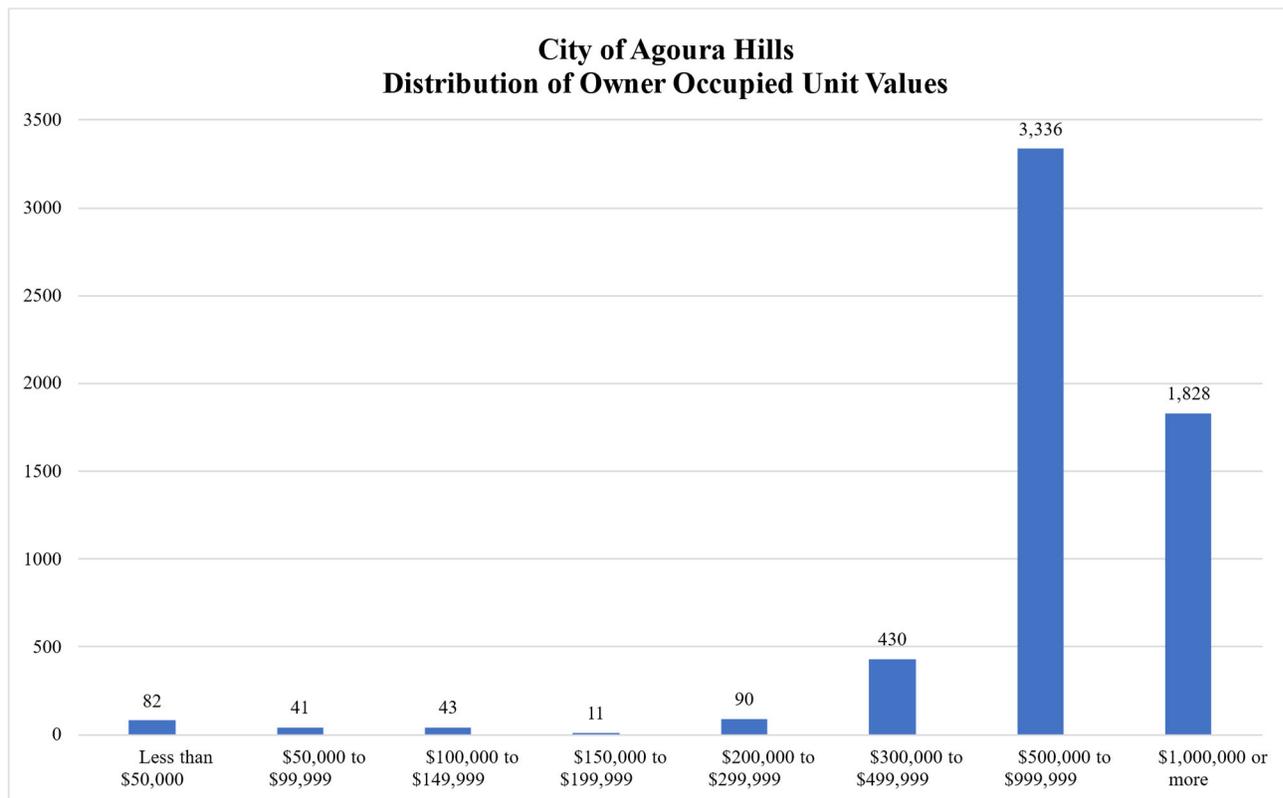


Figure 22: City of Agoura Hills Distribution of Owner Occupied Unit Values

### Homeowners Associations

Homeowners associations in Agoura Hills meet on a regular basis to discuss community issues, including hazard mitigation. Homeowners associations mail out information on a periodic basis and are very involved in the community.

The following is a list of the Home Owner Associations in the City of Agoura Hills:

City of Agoura Hills Home Owner Associations	
Agoura Hills Country Estates	Liberty Canyon Townhomes
Agoura Country Townhomes	Meadow Ridge Townhomes
Annandale I Townhomes	Morrison Ranch
Annandale II Townhomes	Oak Hills
Chateau Creek	Oak Valley
Chateau Park	Oakview Garden
Fountainwood	Oakview Ranch
Griffin Parkside	Old Agoura
Hillrise Open Space	Peacock Ridge
Indian Hills	Rondell Condominiums
Lake Lindero Community	Stonecrest
Lake Lindero Country Club	Town and Country
Lake Lindero Townhomes	Village of Oak Creek
Lakeview Villas	Westlake Villas
Liberty Canyon	

Table 17: City of Agoura Hills Home Owner Associations

## *Emergency Preparedness*

### **Critical Facilities and Capabilities**

The City of Agoura Hills has identified multiple critical facilities including:

- City Hall
- Emergency Operations Center (EOC)
- Recreation & Event Center
- City Yard

Two of these facilities have functional emergency power generators. In addition, City Hall is stocked with emergency food for 32 staff and 25 volunteers for 3 days.

### *Emergency Operations Center*

The Emergency Operations Center (EOC) is a fully-equipped site in the civic center. City staff are trained to operate the EOC in a disaster or other emergency situation. Activation of the EOC can be ordered by the City Manager, the Sheriff's Department, or the Fire Department.

### *Mobile Operations Center*

The City has purchased equipment to enable EOC operations away from the civic center, should the regular EOC not be operational.

### *Monitoring Capabilities*

The City of Agoura Hills maintains cameras installed at major intersections that can be used for road assessments and for monitoring ongoing hazardous situations. Additionally, the City has purchased a drone that can be used for structural hazard assessments.

### *Mass Notification*

The City of Agoura Hills utilizes ALERT AH (CodeRed) mass notification service to notify residents and businesses via voicemail, text, email, and social media within minutes of an emergency.

### *Beacon Box*

The City of Agoura hills has strategically placed fire-resistant Beacon Boxes around the city which display critical information for public safety personnel such as water resources, road networks, egress areas, safe refuge areas, and high burn risk areas. The locations within Agoura Hills and the respective box numbers include:

1. Liberty Canyon
2. Amistosa
3. Old Agoura Park
4. Foothill Dr.
5. Sumac Park
6. Willow Elementary
7. Grey Rock Rd.
8. Reyes Adobe Rd.
9. Reyes Adobe Park
10. City Hall

## Disaster Preparedness Groups

The following groups are active in providing emergency preparedness, mitigation, and response services within Agoura Hills:

### *Emergency Response Team*

The City of Agoura Hills has implemented a Volunteer Emergency Response Team. The City currently has 33 volunteers on its roster and will continue to grow its volunteer base over the next five years. The City solicits volunteers regularly through their city newsletter, the Agoura Hills Leaflet. As part of their preparation to assist the city staff and community in time of emergency, new members attend the CERT training program.

### *City of Agoura Hills Law Enforcement Committee*

While the City does not have a Public Safety Committee, the City's Law Enforcement Committee acts in this similar capacity meeting with staff and representatives from Law Enforcement and Los Angeles County Fire representative to discuss safety issues as they present themselves. The Law Enforcement Committee consists of two members of the City Council, who work with the City Manager and a staff liaison. The Law Enforcement Committee meets primarily as needed, but at least annually.

### **General Plan**

The City Council of Agoura Hills approved a new General Plan on March 24, 2010, which details a strategy for the City's development until the year 2035. Included in this plan are provisions for flood hazards, geological and seismic hazards, wildland and urban fire hazards and emergency preparedness in general.

As part of the general plan, the City of Agoura Hills implemented the following principles that adhere to particular facets of disaster preparedness:

1. Protect Agoura Hills' residents, workers, and visitors from flood hazards.
2. Protect all personal and property in Agoura Hills from non-seismic geological hazards.
3. Protect all persons and property in Agoura Hills from urban and wildland fires.
4. Protect all persons and property in Agoura Hills from criminal activities.
5. Ensure that life and property in Agoura Hills are not endangered by the use, storage, or transport of hazardous materials.

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## CALABASAS

Calabasas is located in the southwestern portion of the San Fernando Valley in Los Angeles County. Calabasas is situated along the heavily traveled Ventura Freeway (Highway 101) approximately 25 miles from downtown Los Angeles. A portion of the Calabasas northern boundary is shared with Ventura County.



The City of Calabasas encompasses approximately 13.3 square miles or 8,512 acres of land. The population of Calabasas is estimated at 23,410 people (2021 U.S. American Community Survey 5-Year Estimate).

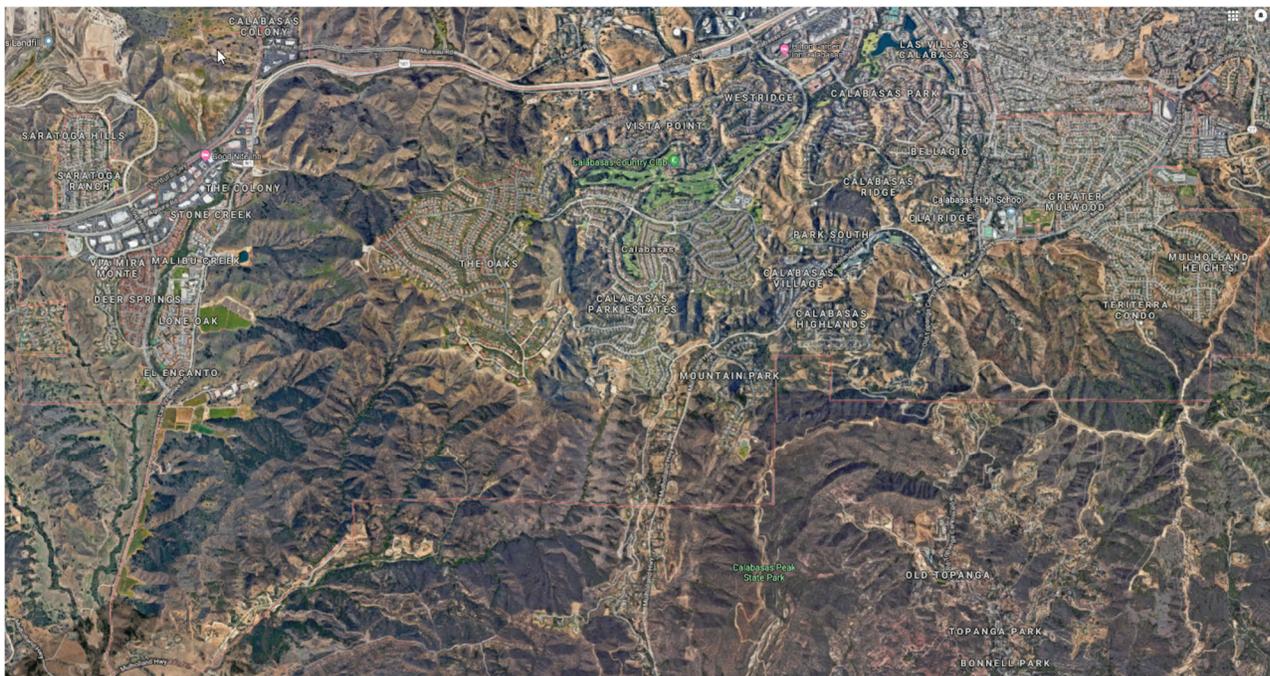


Figure 23: City of Calabasas Aerial View

Source: Google Maps

General Coordinates	
Latitude	34°9'28"North
Longitude	118°38'15"West



Map 8: City of Calabasas Location Map

Source: 2016 SCAG City Boundary Data

**Brief History**

In the early 19<sup>th</sup> century Spanish settlers established farms and ranches in the rural area that is now the city of Calabasas. In the late 19<sup>th</sup> century large ranches gave way to smaller family farms. Residential and commercial development of the area was restricted by water availability until 1958 when the Las Virgenes Municipal Water District established a substantial and reliable water source. Prior to incorporation, Calabasas was an unincorporated community governed by the County of Los Angeles. The City of Calabasas was incorporated in 1991.

**Climate/Topography**

The climate in the City of Calabasas can be characterized as mild in the winters, and warm and dry in the summers. The average temperature in 2022 ranged from the high 50’s to the low 100’s in the summer and from the low 40’s to the mid 70’s in the winter. Precipitation in 2022 was approximately 6 inches, with the greatest portion of precipitation occurring during the winter.

Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Temperature (°F)	57.6	59	62.6	65	67.4	77.1	78.3	81.6	80	70.5	56.7	53.3
Minimum Temperature (°F)	42.5	43.6	46.6	49.8	51.4	58.8	60	62.9	63.8	55	41.2	41.1
Maximum Temperature (°F)	72.7	74.6	78.5	80.2	83.4	95.4	96.6	100.3	96.3	86.1	72.1	65.5
Average Rainfall (inches)	0.25	0	1.07	0.34	0	0	0	0	0.16	0	1.45	2.98

Source: Weather.gov (NOAA)

**Table 18: City of Calabasas Average Monthly Temperatures and Rainfall (2022)**

The terrain can be categorized as rugged or mountainous with a few level areas. Calabasas is located in the foothills of the Santa Monica Mountains, and ranges in elevation from 500 to 2,500 feet above sea level, with an average elevation of 796 feet. The scenic character of Calabasas is a result of its mountainous terrain and most undeveloped areas in Calabasas will likely remain that way due to topographical constraints and zoning limitations.

## Economic Activity

Economic activity is one indicator of the potential losses that may be incurred in the event of a disaster. The following tables list the principal employers, property tax payers, and taxable sales in Calabasas.

### Calabasas Principal Employers

Company	Industry	Employees	Percent of Total City Employment
Las Virgenes School District <sup>2</sup>	Education	917	7.77%
The Cheesecake Factory, Inc <sup>4</sup>	Restaurant	782	6.63%
*Harbor Freight Tools <sup>5</sup>	Retail	723	6.13%
Viewpoint Education Foundation	Education	319	2.70%
Keysight Technologies (formerly IXIA)	Technology	189	1.60%
Xperi (formerly DTS Inc)	Technology	159	1.35%
BrightView Landscape	Business Services	150	1.27%
*Alcatel-Lucent Enterprise <sup>7</sup>	Technology	139	1.18%
AmaWaterways Company	Travel	134	1.14%
Bob Smith BMW & Mini <sup>6</sup>	Auto Retail	123	1.04%
<b>Top 10 Total</b>		<b>3,635</b>	<b>30.81%</b>
<b>Total City of Calabasas Employment<sup>3</sup></b>		<b>11,800</b>	<b>100.00%</b>

Source: 2020- 2021 Comprehensive Annual Financial Report for the City of Calabasas, Fiscal Year Ended June 2022

\*In 2023 Alcatel and Harbor Freight were no longer within the Calabasas City limits. Alcatel was replaced by Res Med and Harbor Fright was replaced by Naked Wardrobe

Table 19: City of Calabasas Principal Employers

### Calabasas Principal Property Tax Payers

Company	Taxable Assessed Value	Percent of Total City Assessed Value
ASN Calabasas I LLC	\$ 175,057,874	1.88%
Aimco Malibu Canyon LLC	112,527,044	1.21%
RREF II Calabasas Park Center LLC	80,616,105	0.86%
Commons At Calabasas LLC	76,718,143	0.82%
Cheesecake Factory INC	65,171,746	0.70%
BVK Courtyard Commons LLC	56,882,492	0.61%
CT Calabasas LLC	53,126,541	0.57%
WCVAF Investment I LLC	43,035,319	0.46%
GVC Holding LP	39,282,796	0.42%
D EGIDIO Brothers III LLC	33,284,515	0.36%
<b>Top 10 Total</b>	<b>\$735,702,575</b>	<b>7.88%</b>
<b>Total Property Tax Assessed Value</b>	<b>\$9,330,847,223</b>	<b>100%</b>

Source: 2020- 2021 Comprehensive Annual Financial Report for the City of Calabasas, Fiscal Year Ended June 2022

Table 20: City of Calabasas Principal Tax Payers

Notes:

2. The Las Virgenes School District number represents all employees within the district, classified, certificated and management

3. Total City Labor Force provided by EDD Labor Force Data

4. Number of employees only in Calabasas: Bakery and Corporate

5. Includes Camarillo satellite office that reports to Calabasas HQ

6. Two locations in Calabasas, BMW and Mini Cooper

7. Previous year number applied

**City of Calabasas Taxable Sales (2022)**

Category	Taxable Sales	Percent of Total
<b>Transportation</b>	\$3,364,668	48.50%
<b>Business to Business</b>	869,184	12.53%
<b>Food Products*</b>	1,209,028	17.43%
<b>General Retail</b>	1,456,995	21.00%
<b>Miscellaneous</b>	5,655	0.08%
<b>Construction</b>	32,543	0.47%
<b>Total</b>	<b>6,938,073</b>	<b>100.00%</b>

Source: 2021- 2022 Comprehensive Annual Financial Report for the City of Calabasas, Fiscal Year Ended June 2022

City Direct Sales Tax Rate: 1%

\*General grocery items are not taxable; the sales tax applies only to prepared food items and nonfood items

Table 21: City of Calabasas Principal Taxable Sales

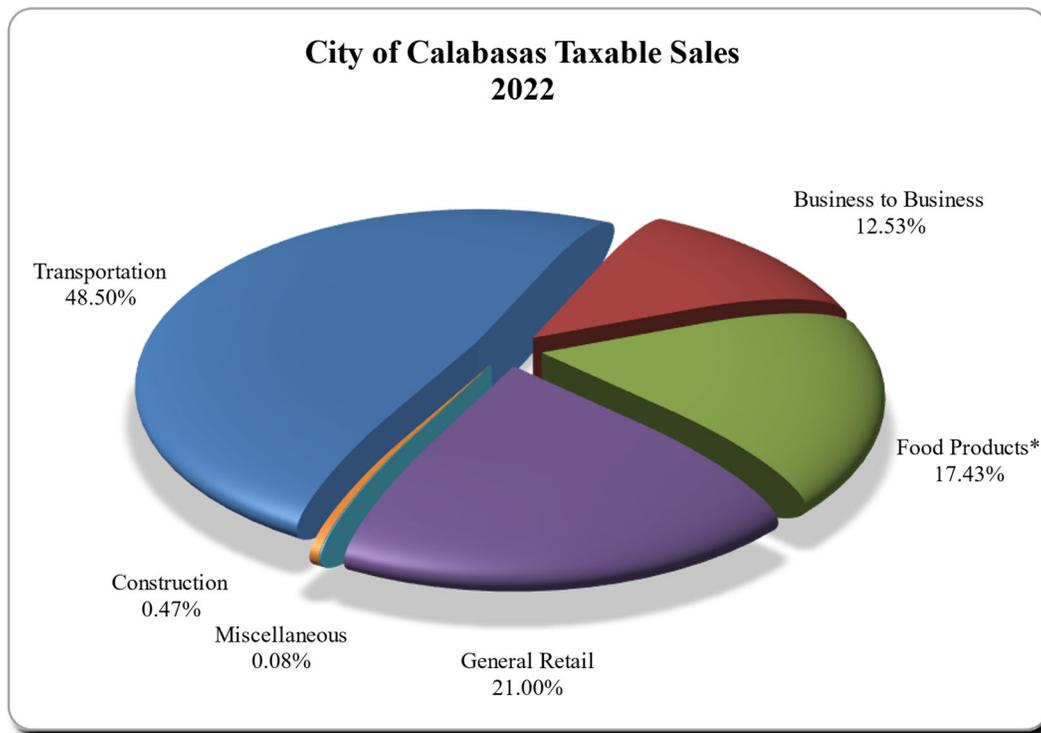


Figure 24: City of Calabasas Taxable Sales Percentage by Category

**City of Calabasas Transient Occupancy Revenue and Tax (2023)**

In 2023, the City of Calabasas recognized approximately \$2.6 Million in Transient Occupancy Tax (TOT) revenues, highlighting the additional losses that may be incurred in the event of a natural disaster. For example, if hotels and other short-term lodging facilities were down for a significant amount of time, this could result in a significant loss of revenue e.g., for each day of disruption, the loss would equate to a decrease in TOT revenue to the city of over \$7,123.

Source: 2022 - 2023 City of Calabasas (Estimate)

### Calabasas Economy

The table below provides a breakdown of revenue channels for the City of Calabasas in 2017. These categories include Accommodation and Food Services, Health Care and Social Assistance, Transportation and Warehousing, and Retail Sales. The total revenues accrued by the city amounted to approximately \$1.01 Billion, which included Total Retail Sales per capita of \$31,951.

Category	Value (in thousands)	Percent
Total Accommodation and Food Services Sales	\$98,790	9.77%
Total Health Care and Social Assistance Receipts/Revenue	\$108,871	10.76%
Total Transportation and Warehousing Receipts/Revenue	\$37,573	3.72%
Total Retail Sales	\$766,114	75.75%
<b>Total</b>	<b>\$1,011,348</b>	<b>100.00%</b>

Source U.S. Census Bureau 2017 Economic Census of the U.S.  
 Table 22: City of Calabasas Economy

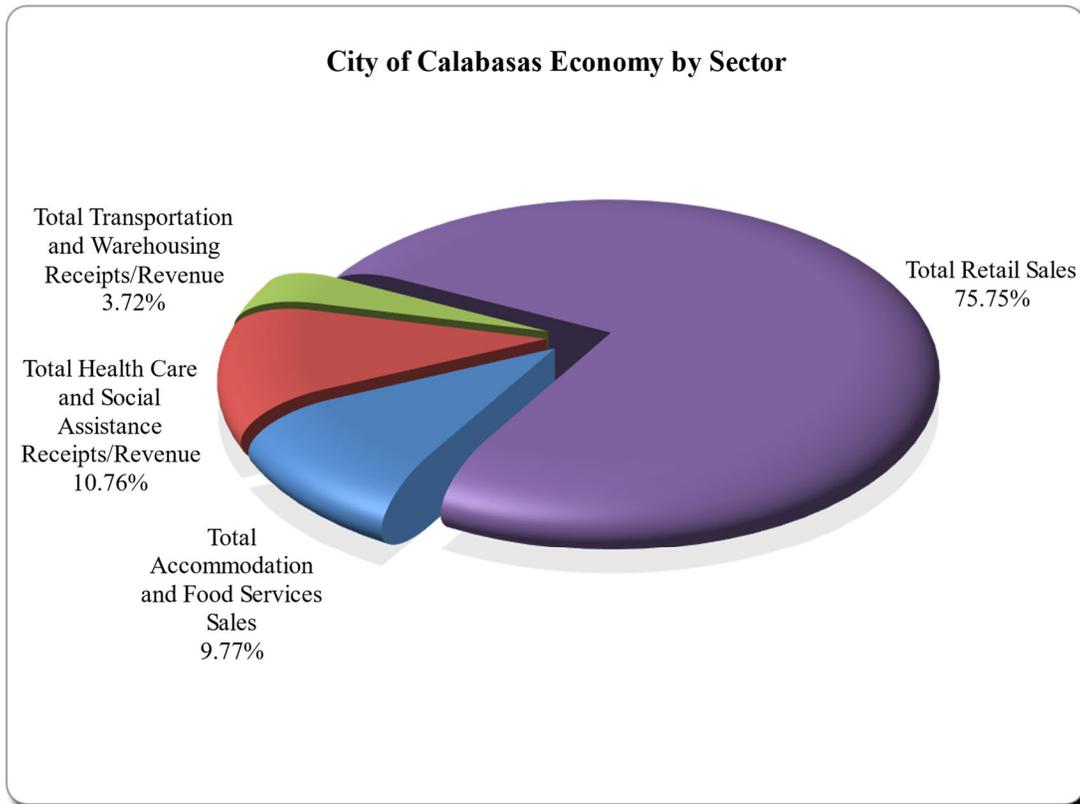


Figure 25: City of Calabasas Economy by Sector

## Population and Demographics

The following tables summarize the population and demographic groups at risk from a disaster in Calabasas.

### Sex and Age Distribution

Demographic Estimates - 2021		
Sex and Age	Estimate	Percent
<b>Total Population</b>	<b>23,410</b>	<b>100%</b>
Male	11,499	49.1%
Female	11,911	50.9%
<b>Age Distribution</b>		
Under 5 years	1130	4.80%
5 to 9 years	1405	6.00%
10 to 14 years	1812	7.70%
15 to 19 years	1369	5.80%
20 to 24 years	1604	6.90%
25 to 29 years	1112	4.80%
30 to 34 years	1095	4.70%
35 to 39 years	1528	6.50%
40 to 44 years	1329	5.70%
45 to 49 years	1458	6.20%
50 to 54 years	2023	8.60%
55 to 59 years	1882	8.00%
60 to 64 years	1790	7.60%
65 to 69 years	1234	5.30%
70 to 74 years	1210	5.20%
75 to 79 years	434	1.90%
80 to 84 years	493	2.10%
85 years and over	502	2.10%
<b>Median age (years)</b>	<b>41.8</b>	

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 23: City of Calabasas Sex and Age Demographics

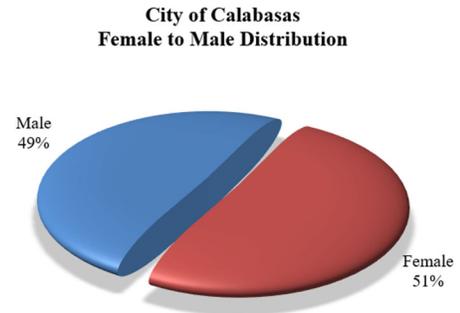


Figure 26: City of Calabasas Female to Male Distribution

In 2021, the estimated median age of residents in Calabasas was 41.8 with females (50.9%) outnumbering males (49.1%). Mitigation planning must consider the unique needs of population groups, for example those under 15 years of age and those over 65 years of age.

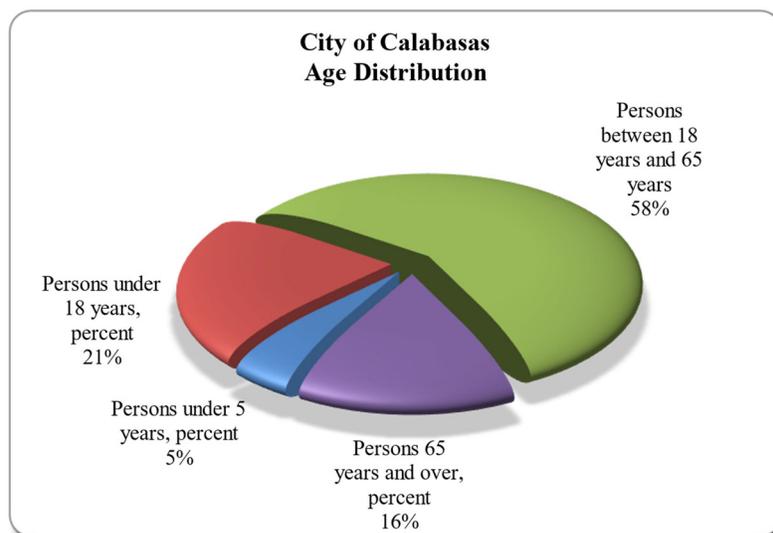


Figure 27: City of Calabasas Age Distribution

### Race and Language Composition

One aspect of mitigation planning is the need to address the cultural and language (communications) needs of local populations. This includes the ability to distribute information and provide notification in the event of a regional emergency. For Calabasas, an estimated 29.8% of the population speaks languages other than English (including English and another language or non-English only) with 2.27% speaking English “less than well or not at all”. These language and communication challenges may pose additional difficulties for socially vulnerable groups during a disaster.

#### Race

Race	2021 Estimated Population	Percent of Total
<b>Total Population</b>	<b>23,410</b>	<b>100%</b>
White alone <sup>(a)</sup>	16,798	71.76%
Black or African American alone <sup>(a)</sup>	558	2.38%
American Indian and Alaska Native alone <sup>(a)</sup>	118	0.50%
Asian alone <sup>(a)</sup>	2,264	9.67%
Native Hawaiian and Other Pacific Islander alone <sup>(a)</sup>	0	0.00%
Hispanic or Latino <sup>(b)</sup>	2,218	9.47%
Two or More Races	1,387	5.92%
Some Other Race <sup>(a)</sup>	67	0.29%

Source: US Census Bureau American Community Survey 2021 5-Year Estimates

(a) Includes persons reporting only one race

(b) Hispanics may be of any race, so also are included in applicable race categories

Table 24: City of Calabasas Race Composition

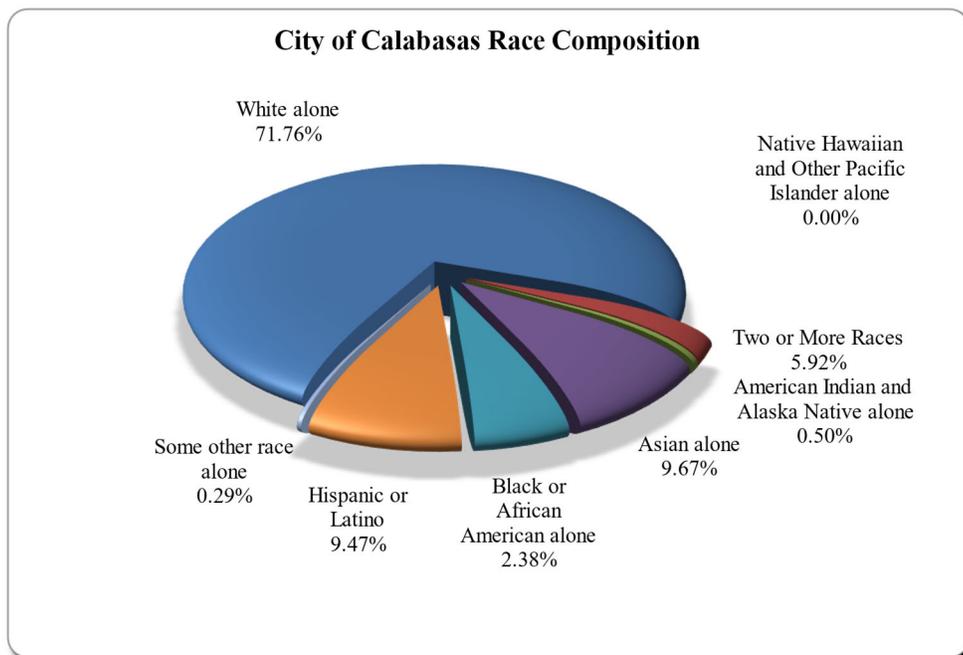


Figure 28: City of Calabasas Race Distribution

*Language Spoken at Home*

Language	2021 Estimated Population	Percent of Total
Speaks only English	15,294	68.60%
Language other than English spoken at home, percent of persons age 5 years+, 2017-2021	6,986	31.40%
Speak a Language Other than English	2021 Estimated Population	Percent of Total
<b>Spanish</b>	<b>1,000</b>	<b>4.50%</b>
5 to 17 years old	91	0.40%
18 to 64 years old	791	3.60%
65 years old and over	118	0.50%
<b>Other Indo-European languages</b>	<b>3,864</b>	<b>17.30%</b>
5 to 17 years old	544	2.40%
18 to 64 years old	2,539	11.40%
65 years old and over	781	3.50%
<b>Asian and Pacific Island languages</b>	<b>1,266</b>	<b>5.70%</b>
5 to 17 years old	177	0.80%
18 to 64 years old	864	3.90%
65 years old and over	225	1.00%
<b>Other languages</b>	<b>856</b>	<b>3.80%</b>
5 to 17 years old	52	0.20%
18 to 64 years old	624	2.80%
65 years old and over	180	0.80%

Source: US Census Bureau American Community Survey 2021 5-Year Estimates

Table 25: City of Calabasas Languages Spoken at Home

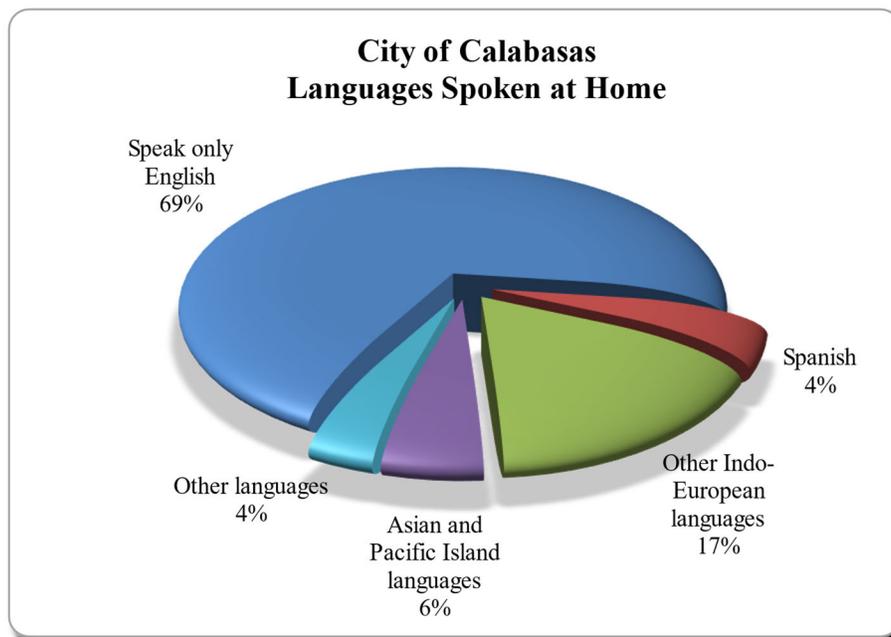


Figure 29: City of Calabasas Language Spoken at Home

### Income Distribution

Household income is a factor for mitigation planning since population groups in lower income ranges are less able to cope with the impact of disasters.

Furthermore, the availability of household funds can have a direct impact on the level of individual and family hazard mitigation activities and emergency preparedness.

In Calabasas, while the mean household income is \$224,208, there are a limited number of households with incomes less than \$25,000, near the 2023 U.S. poverty level of \$24,860 for a family of three as defined by the 2023 HHS Poverty Guidelines, by the U.S. Department of Health & Human Services.\*

Income and Benefits (in 2021 Inflation-Adjusted Dollars)		
	Estimate	Percent
<b>Total Households</b>	<b>8,936</b>	<b>100.0%</b>
Less than \$10,000	590	6.60%
\$10,000 to \$14,999	134	1.50%
\$15,000 to \$24,999	420	4.70%
\$25,000 to \$34,999	304	3.40%
\$35,000 to \$49,999	483	5.40%
\$50,000 to \$74,999	938	10.50%
\$75,000 to \$99,999	652	7.30%
\$100,000 to \$149,999	1,367	15.30%
\$150,000 to \$199,999	965	10.80%
\$200,000 or more	3,083	34.50%
<b>Median household income</b>	<b>\$132,838</b>	<b>(X)</b>
<b>Mean household income</b>	<b>\$224,208</b>	<b>(X)</b>

Source: U.S. Census Bureau 2021 American Community Survey 5-Year Estimates

Table 26: City of Calabasas Income and Benefits (2021 Inflation Adjusted Dollars)

\* Note: The households with minimal incomes may also be attributable to retirees and others that have other sources of funds not reportable as income.

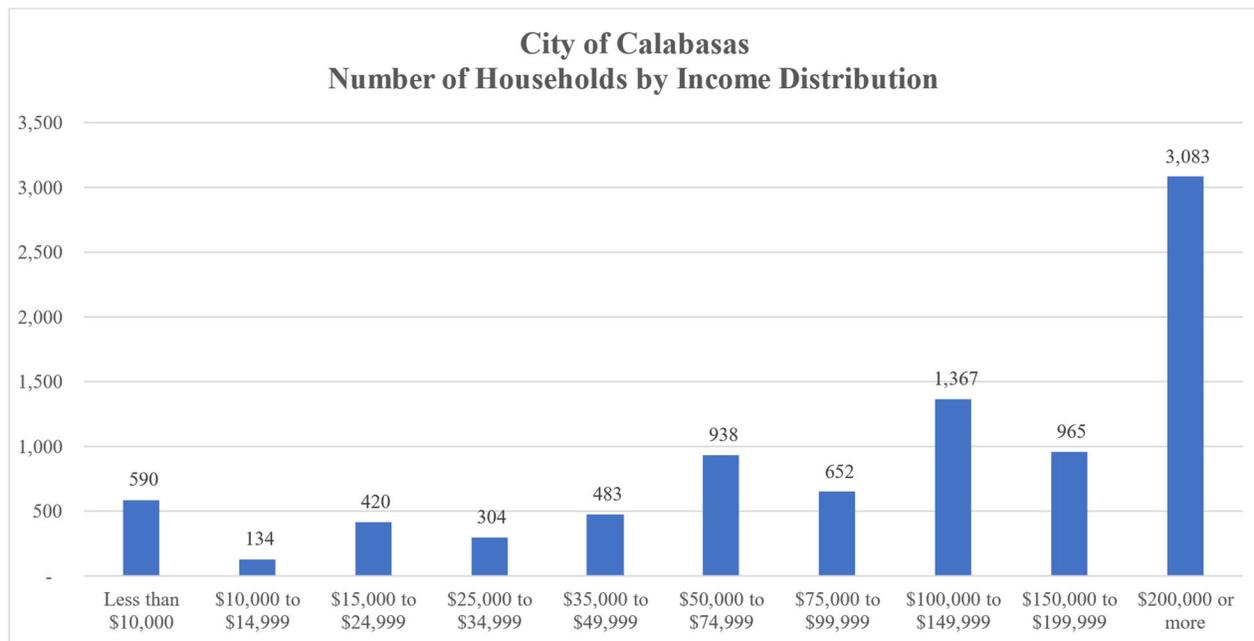


Figure 30: City of Calabasas Income Distribution

## Land Use

Due to environmental constraints and steep hillsides, most undeveloped land within the Calabasas City limits will remain undeveloped and most developable areas are already built out. The non-developed areas of Calabasas are mainly in open space or hillside/mountainous zones.

The City of Calabasas is mainly residential but also hosts several commercial business parks and shopping centers including:

- Calabasas Canyon Center
- Calabasas Tech Center
- Creekside Village
- Courtyard at the Commons
- Gelsons Shopping Center
- Las Virgenes Village Shopping Center
- Old Town Calabasas
- Parkway Calabasas Shopping Center
- The Commons at Calabasas
- The Summit at Calabasas

## Housing Characteristics

The following housing statistics provide a summary of the numbers and types of housing units that are at risk if a disaster were to occur in Calabasas. Housing data includes: Housing Occupancy, Units in Structure Change from 2017 to 2021, Number of Structures Built by Year, Home Values, and Home Value Distribution. In Calabasas, there has been a slight increase in the number of housing units since 2017 – particularly in 5 to 9 units and 10 to 19 units.

Housing Occupancy	2021 Estimate	Percent
<b>Total Housing Units</b>	<b>9,401</b>	<b>100.0%</b>
Occupied housing units	8,936	95.01%
Vacant housing units	465	4.90%

Source: U.S. Census Bureau 2021 American Community Survey 5-Year Estimates

Table 27: City of Calabasas Housing Occupancy

Unit Type	2021 Units	Percent
Single-Family (SF) Detached	6,223	67%
SF Attached	663	7%
<b>Total Single-Family</b>	<b>6,886</b>	<b>75%</b>
2 to 4 Units	500	5%
5 or more units	1,613	17%
<b>Total Multi-Family</b>	<b>2,113</b>	<b>23%</b>
<b>Mobile Homes &amp; Other<sup>1</sup></b>	<b>231</b>	<b>2%</b>
<b>Total</b>	<b>9,230</b>	<b>100%</b>

Source: California Department of Finance, 2020, Population and Housing Estimates

Table 28: City of Calabasas Units in Structure

Notes:

1. The City's one mobile home park contains 210 units, indicating the Census counted 20 additional units in the "other" category which could be reflective of second units or guesthouses if they are occupied as someone's current place of residence.

In terms of risk and disaster mitigation, older structures that have not been retrofitted or otherwise improved may be more susceptible to damage or destruction due to age and the fact that older building codes were less stringent than those required for newer structures. As a result, the inventory of older structures is a consideration when developing mitigation plans. In Calabasas, 90.1% of structures (8,471) were built prior to 2000 and 36.4% (3,423) before 1980.

Year Structure Built	Estimate	Percent
<b>Total housing units</b>	<b>9,401</b>	<b>100.0%</b>
Built 2020 or later	24	0.30%
Built 2010 to 2019	399	4.20%
Built 2000 to 2009	507	5.40%
Built 1990 to 1999	1,377	14.60%
Built 1980 to 1989	3,671	39.00%
Built 1970 to 1979	1,936	20.60%
Built 1960 to 1969	1,197	12.70%
Built 1950 to 1959	229	2.40%
Built 1940 to 1949	6	0.10%
Built 1939 or earlier	55	0.60%

Source: U.S. Census Bureau 2021 American Community Survey

Table 29: Year Structures Built in the City of Calabasas

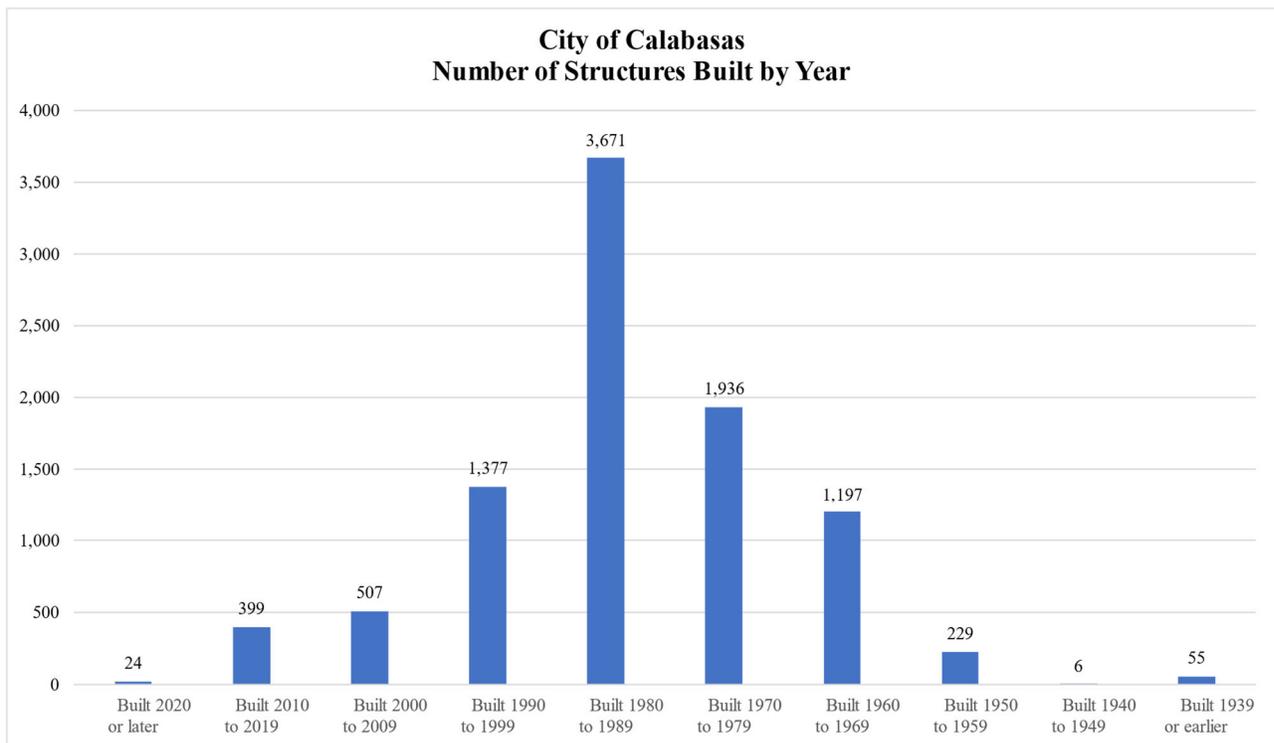


Figure 31: City of Calabasas Number of Structures Built by Year

Home values are an important consideration when evaluating the potential dollar loss due to disasters. These values can also be used to assess the cost/benefit of mitigation activities and planning. In Calabasas, the majority of Owner Occupied Units are valued over \$500,000. Consequently, the potential dollar losses from a disaster can rapidly escalate – illustrating the need for mitigation planning related to owner-occupied units.

Owner-Occupied Units by Value		
	Estimate	Percent
<b>Owner-occupied units</b>	6,010	100%
Less than \$50,000	155	2.60%
\$50,000 to \$99,999	12	0.20%
\$100,000 to \$149,999	9	0.10%
\$150,000 to \$199,999	50	0.80%
\$200,000 to \$299,999	22	0.40%
\$300,000 to \$499,999	455	7.60%
\$500,000 to \$999,999	1,705	28.40%
\$1,000,000 or more	3,602	59.90%
<b>Median (dollars)</b>	<b>\$1,141,600</b>	-

Source: U.S. Census Bureau 2021 American Community Survey  
 Table 30: City of Calabasas Home Value Distribution

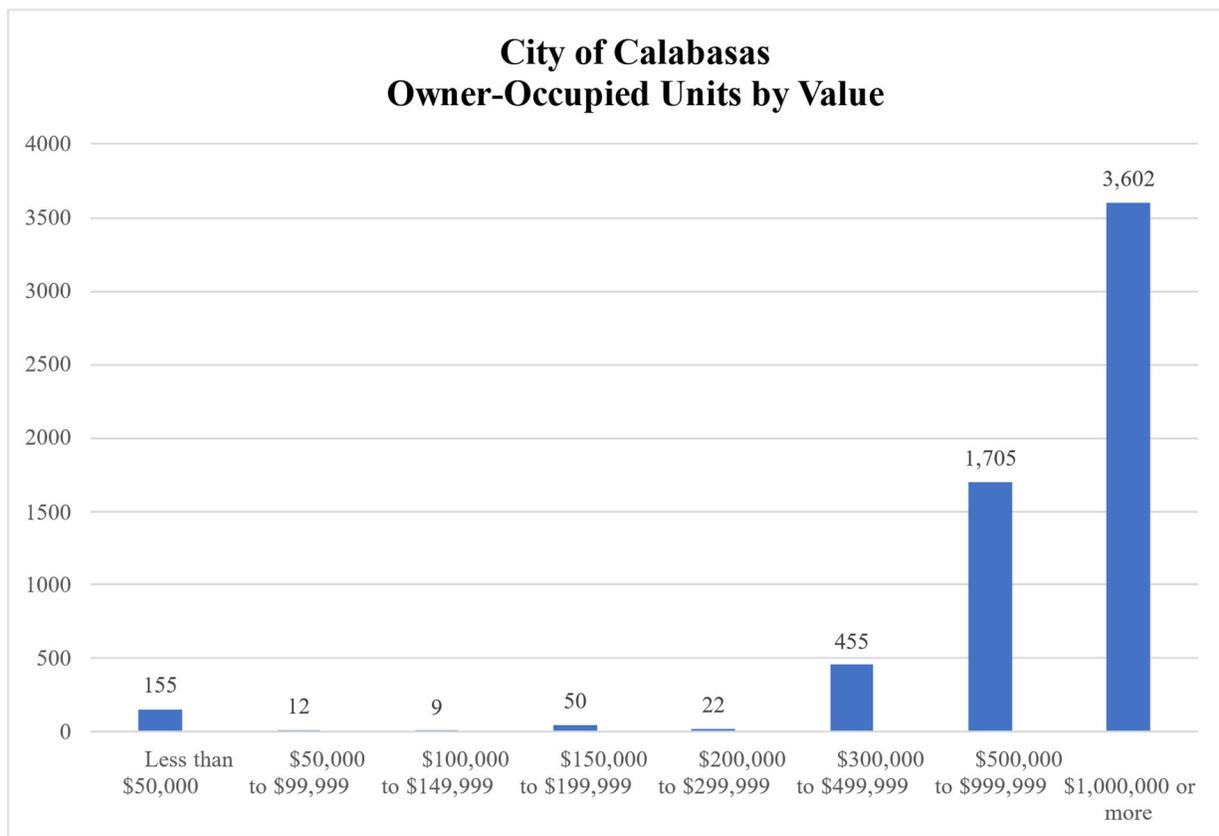


Figure 32: City of Calabasas Distribution of Owner Occupied Unit Values

## ***Emergency Preparedness***

The following groups are active in providing emergency preparedness, mitigation, and response services within Calabasas.

### **Emergency Operations Center**

The City of Calabasas' Emergency Operations Center (EOC) is organized using the federally mandated Incident Command System (ICS). The City of Calabasas has an EOC which coordinates its emergency activities with the Lost Hills Sheriff's Station and L.A. County Fire Department. Additionally, the "Operation Area Response and Recovery System" (OARRS) is an Emergency Management Information System that is under the L.A. County Office of Emergency Management. The City of Calabasas also has an internal cable television network which is used during emergency/disaster situations to relay information to the public on conditions within the City including transit issues, fire hazards, flood, shelter locations, school issues, and Animal Care and Control. The primary EOC is located at the Calabasas City Hall, and the alternate location is at the Calabasas Senior Center.

### **Public Safety Commission**

The City of Calabasas has a variety of commissions that offer residents opportunities to participate in city issues including the Public Safety Commission. When requested by the city council, the commission will advise the city council on matters related to public safety, crime and fire prevention, emergency preparedness and response, service contracts with public safety agencies and related matters. In its advisory role, the commission will make recommendations to the city council regarding budgets for public safety services and perform such other functions as the city council may direct.

### **Emergency Preparedness in Calabasas – a Fire Safe Council (EPIC-FSC)**

The City of Calabasas has a nonprofit organization called EPIC-FSC dedicated to aiding local residents in mitigating risks, surviving emergencies, and recovering from natural disasters, which was established by a collective of Calabasas citizens in response to the devastating Woolsey Fire in 2018. In partnership with CalFire and the Santa Monica Mountains Resource Conservation District, the program offers property assessments, home fortification, and handheld radio training via the website (<https://epic-fsc.com/>), as well as an emergency app for crucial information and communication.

### Finalsite Connect (formerly Blackboard Connect)

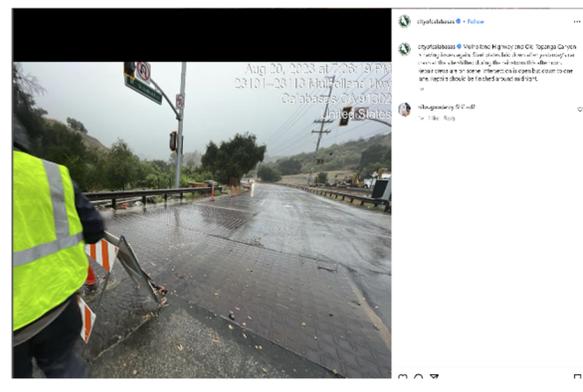
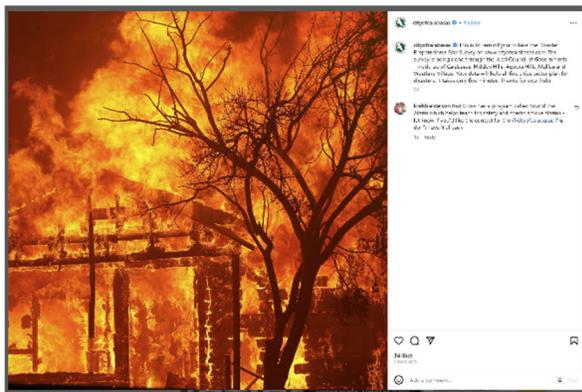
The City of Calabasas maintains a *Finalsite Connect*™ program as its city-to-resident communications service. The *Finalsite Connect*™ administrators can send periodic and personalized voice messages to residents within minutes. The *Finalsite Connect*™ service complements the City’s emergency preparedness procedures and is used to inform residents of pressing and important issues such as emergencies and community surveys.

### AM Radio Station

The City of Calabasas has an emergency radio station (1630 AM) which broadcasts critical information in the event of an emergency through vehicle radio or AM Radio sources (crank radio).

### CERP (Calabasas Emergency Radio Program)

The City of Calabasas has an amateur radio station "CalHam" comprised of community members who are CERP and CERT (Community Emergency Response Team) trained, and FCC licensed that test the system on a weekly basis. During an emergency, neighborhood information/status reports are forwarded to the City's Emergency Operations Center through CERP and EPIC members. In the event of an emergency, the city also utilizes additional communication methods such as Finalsite Connect™, Instagram, Threads, YouTube, Nextdoor, “X” (formerly Twitter), and Facebook.



### City of Calabasas Homeowners Associations

Calabasas has an extensive list of Homeowners Associations that meet to discuss various community issues and are very involved in the community. The following is a list of the Homeowners Associations along with Neighborhoods and Residential Communities in the City of Calabasas.

<b>City of Calabasas Homeowners Associations / Neighborhoods and Residential Communities</b>	
Alizia Canyon HOA	Malibu Creek Condos HOA
Avanti Maintenance Corp.	Mira Monte HOA
Bellagio HOA	Mont Calabasas
Braewood Calabasas HOA	Mountain Park HOA
Calabasas Colony HOA	Mulholland Heights HOA
Calabasas Country Estates	Mulholland Heights North HOA
Calabasas Highlands	Mulwood Townhomes
Calabasas Hills Community Association	Oak Creek Estates
Calabasas Park HOA (Classic Calabasas)	Oakcreek Property Owners Association
Calabasas Park Estates	Oak Park Calabasas HOA
Calabasas Ridge HOA	Old Topanga, Inc. HOA
Calabasas View HOA	Palatino HOA
Calabasas Village Mobile Estates	Park Moderne
Canyon Creek Apartments	Park Sorrento HOA
Clairidge HOA	Parksouth Calabasas Estates HOA
Cold Creek Thousand Peaks	Paxton
The Colony at Calabasas (Shea Homes)	Saint Andrews Lane Homeowners Group
Community Assoc. of Saratoga Hills	Saratoga Ranch HOA
Country Creek Lane	Serenata HOA
Creekside Calabasas Park HOA	Steeplechase HOA
Dry Canyon Cold Creek	Stonecreek HOA
El Encanto HOA	Tanterra Condominiums
The Estates of the Oaks of Calabasas	The Oaks of Calabasas
Greater Mulwood Homeowners Association	Tiffany Creekside HOA
Horizons at Calabasas	Vista Pointe Owners Association
Las Villas Calabasas HOA	Westridge Calabasas Park HOA
Las Virgenes Hills Homes	Woodland Terrace HOA
Las Virgenes Park HOA	
Las Virgenes Village Townhomes	
Malibu Canyon Apartments	
Malibu Canyon Community Association	
Malibu Canyon Villas	
Malibu Creek Apartments	

Source: City of Calabasas

**Table 31: City of Calabasas Homeowners Associations**

## HIDDEN HILLS

Hidden Hills is a small, affluent, gated community located along the Ventura Freeway (U.S. Highway 101) in the westernmost portion of the San Fernando Valley in Los Angeles County. The land area is 1.65 square miles with a population of 2,182 people (2021 U.S. American Community Survey 5-Year Estimate) and a median home value greater than \$1,000,000. Hidden Hills is a master planned community designed and developed by A.E. Hanson in the 1950's.

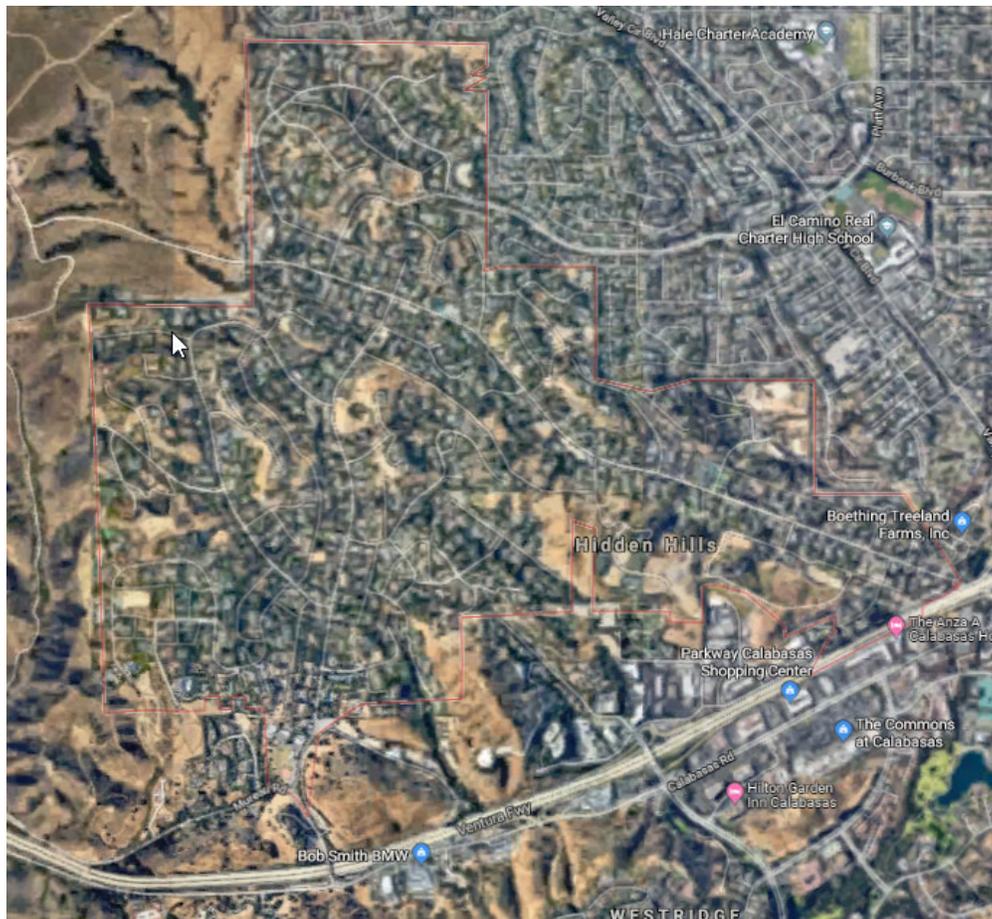


Figure 33: City of Hidden Hills Aerial View

Source: Google Maps



### *Brief History*

The area that is today the city of Hidden Hills was initially farm and ranchland. In 1950 developer A.E. Hanson purchased 1000 acres from local landowners, divided the property and began selling homes and home sites. In 1961 facing the prospect of becoming annexed by the city of Los Angeles and having Burbank Boulevard extended through the community, the residents of Hidden Hills elected to incorporate becoming the 73<sup>rd</sup> city incorporated in Los Angeles County. The community has continued to develop in a controlled fashion following strict development codes governed by the Hidden Hills Community Association.

Four full-time employees and one part-time Emergency Services Coordinator staff the office of City Hall and provide all necessary services and information to residents, visitors and contractors. Residents of Hidden Hills elect a five-member City Council on a non-partisan basis to serve four year overlapping terms. The Mayor is selected by the City Council, from one of its members, for a one-year term and serves as the official representative of the City.



Figure 34: City of Hidden Hills Entrance Gate

***Climate/Topography***

Winters are mild and slightly rainy while summers are warm and dry. The average temperature in 2022 ranged from the low 60’s to the mid 90’s in the summer and from the high 40’s to the high 60’s in the winter. The rainfall in Hidden Hills during 2022 was approximately 6 inches, occurring mainly during the winter months.

Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Temperature (°F)	59.6	60.3	62.6	64.4	66.7	76.4	77.1	81.6	79.8	70.7	59.4	55
Minimum Temperature (°F)	52.6	52.3	52.8	52.9	53.5	61.3	62	67.7	67.6	59.4	51.9	49.1
Maximum Temperature (°F)	66.5	68.2	72.5	75.8	79.8	91.5	92.1	95.5	92	82	67	61
Average Rainfall (inches)	0.25	0	1.07	0.34	0	0	0	0	0.16	0	1.45	2.98

Source: Weather.gov (NOAA)

**Table 32: City of Hidden Hills Average Monthly Temperatures and Rainfall (2022)**

To the northwest, Hidden Hills abuts the foothills of the Simi Hills mountain range and the 3,000 acre Upper Las Virgenes Canyon Open Space Preserve. To the south the community is bordered by U.S. Highway 101.

### *Economic Activity*

The City of Hidden Hills is a completely residential community with the exception of a small restricted commercial zone with one real estate office.

### **Hidden Hills Economy**

<b>Category</b>	<b>Value (in thousands)</b>	<b>Percent</b>
Total Accommodation and Food Services Sales	N/A	N/A
Total Health Care and Social Assistance Receipts/Revenue	N/A	N/A
Total Manufacturer’s Shipments	N/A	N/A
Total Merchant Wholesaler Sales	N/A	N/A
Total Retail Sales	N/A	N/A
<b>Total</b>	<b>N/A</b>	<b>N/A</b>

Source U.S. Census Bureau 2017 Economic Census of the U.S.  
Table 33: City of Hidden Hills Economy

As a result, the impact of a disaster would have limited economic impact in terms of businesses; however, there could be a large impact to the local population and residential structures (see [Population Demographics](#) and [Land Use](#) sections below).

## Population and Demographics

The following tables summarize the population and demographic groups at risk from a disaster in Hidden Hills.

### Sex and Age Distribution

Demographic Estimates - 2021		
Sex and Age	Estimate	Percent
<b>Total Population</b>	<b>2,182</b>	<b>100.0%</b>
Male	964	44%
Female	1,218	56%
<b>Age Distribution</b>		
Under 5 years	55	2.50%
5 to 9 years	300	13.70%
10 to 14 years	170	7.80%
15 to 19 years	170	7.80%
20 to 24 years	50	2.30%
25 to 29 years	32	1.50%
30 to 34 years	39	1.80%
35 to 39 years	61	2.80%
40 to 44 years	181	8.30%
45 to 49 years	211	9.70%
50 to 54 years	183	8.40%
55 to 59 years	186	8.50%
60 to 64 years	218	10.00%
65 to 69 years	137	6.30%
70 to 74 years	96	4.40%
75 to 79 years	34	1.60%
80 to 84 years	28	1.30%
85 years and over	31	1.40%
Median age (years)	46.3	

Source: US Census Bureau American Community Survey 2021 5-Year Estimate

Table 34: City of Hidden Hills Sex and Age Demographics

City of Hidden Hills  
 Female to Male Distribution

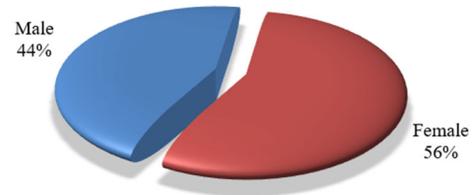


Figure 35: City of Hidden Hills Female to Male Distribution

The median age of residents in Hidden Hills is 46.3 with females (55.8%) outnumbering males (44.2%). Mitigation planning must consider the unique needs of population groups, for example those under 15 years of age and those over 65 years of age.

City of Hidden Hills  
 Age Distribution

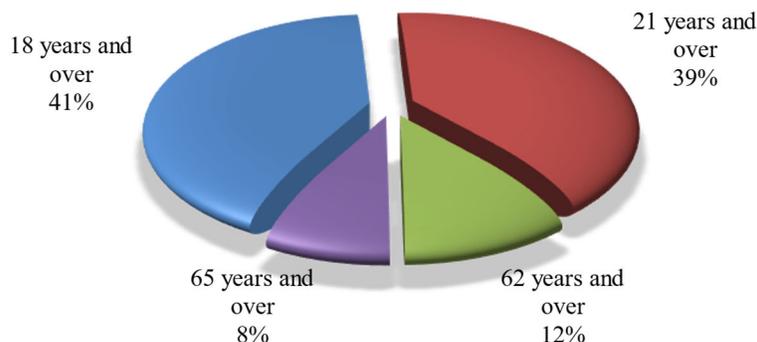


Figure 36: City of Hidden Hills Age Distribution

## Race and Language Composition

### Race

One aspect of mitigation planning is the need to address the cultural and language (communications) needs of local populations. This includes the ability to distribute information and provide notification in the event of a regional emergency. For Hidden Hills, an estimated 10.1% of the population speaks languages other than English (including English and another language or non-English only) with 0.23% speaking English “less than well or not at all”. These language and communication challenges may pose additional difficulties for socially vulnerable groups during a disaster.

Race	2021 Estimated Population	Percent of Total
<b>Total Population</b>	<b>2,182</b>	<b>100.0%</b>
White alone	1932	88.54%
Black or African American alone	21	0.96%
Hispanic or Latino (of any race)	161	7.38%
American Indian and Alaska Native alone	0	0.00%
Asian alone	38	1.74%
Native Hawaiian and Other Pacific Islander alone	0	0.00%
Some other race alone	3	0.14%
Two or more races	27	1.24%

Source: US Census Bureau American Community Survey 2021 5-Year Estimate

Table 35: City of Hidden Hills Race Composition

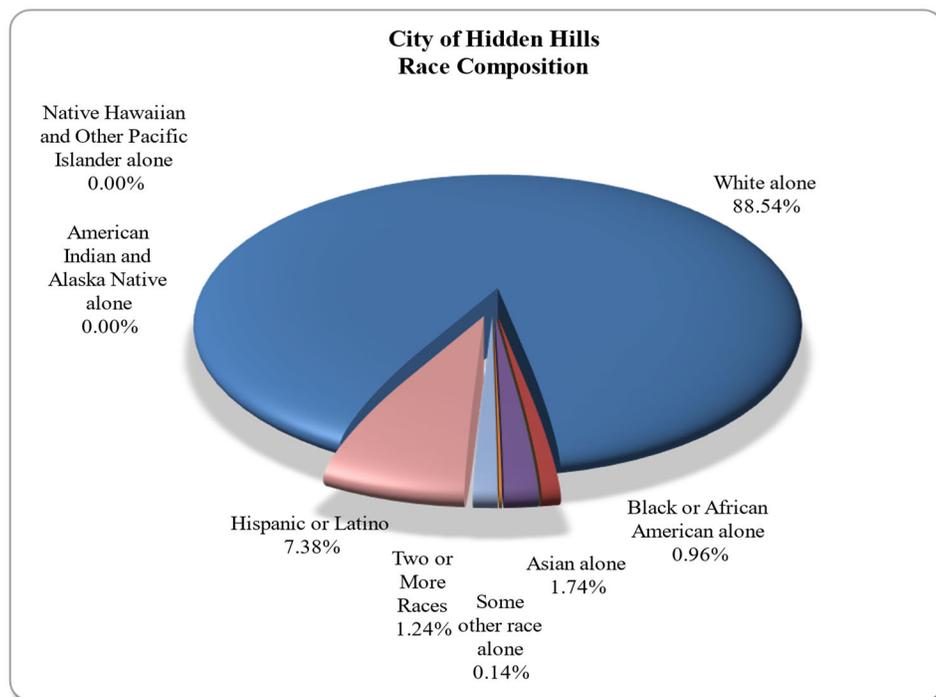


Figure 37: City of Hidden Hills Race Composition

### Languages Spoken at Home

Language	2021 Estimated Population	Percent of Total
Speaks only English	1,907	89.70%
Language other than English spoken at home, percent of persons age 5 years+, 2017-2021	220	10.30%
Speak a Language Other than English	2021 Estimated Population	Percent of Total
<b>Spanish</b>	<b>90</b>	<b>4.20%</b>
5 to 17 years old	0	0.00%
18 to 64 years old	71	3.30%
65 years old and over	19	0.90%
<b>Other Indo-European languages</b>	<b>81</b>	<b>3.80%</b>
5 to 17 years old	20	0.90%
18 to 64 years old	52	2.40%
65 years old and over	9	0.40%
<b>Asian and Pacific Island languages</b>	<b>13</b>	<b>0.60%</b>
5 to 17 years old	4	0.20%
18 to 64 years old	6	0.30%
65 years old and over	3	0.10%
<b>Other languages</b>	<b>36</b>	<b>1.70%</b>
5 to 17 years old	18	0.80%
18 to 64 years old	16	0.80%
65 years old and over	2	0.10%

Source: US Census Bureau American Community Survey 2021 5-Year Estimate

Table 36: City of Hidden Hills Languages Spoken at Home

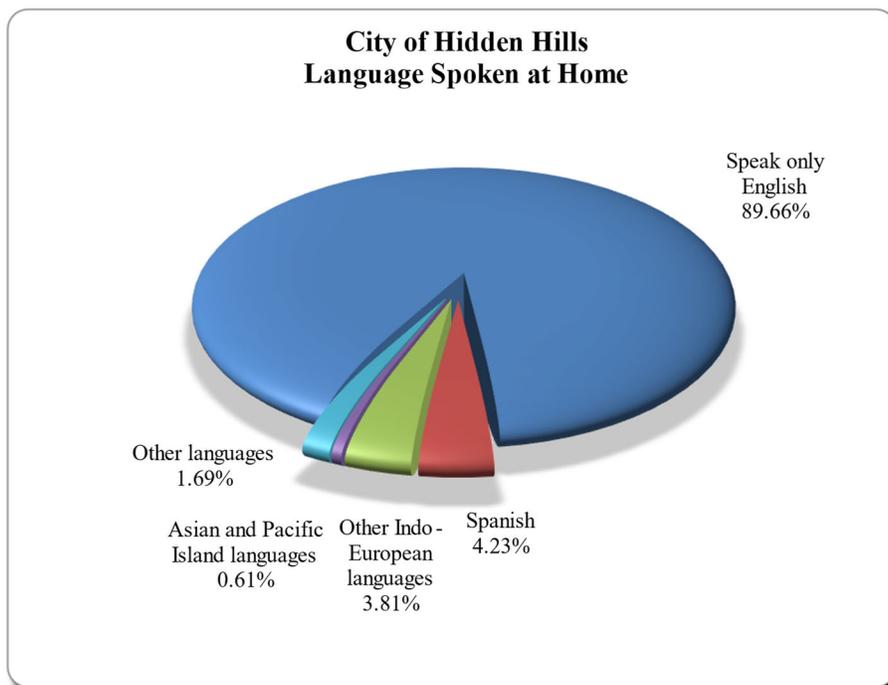


Figure 38: City of Hidden Hills Languages Spoken at Home

### Income Distribution

Household income is a factor for mitigation planning since population groups in lower income ranges are less able to cope with the impact of disasters.

Furthermore, the availability of household funds can have a direct impact on the level of individual and family hazard mitigation activities and emergency preparedness.

In Hidden Hills, while the mean household income is \$399,340 there are a limited number of households with incomes less than \$25,000, near the 2023 U.S. poverty level of \$24,860 for a family of three as defined by the 2023 HHS Poverty Guidelines, by the U.S. Department of Health & Human Services.\*

Income and Benefits (in 2021 Inflation-Adjusted Dollars)		
	Estimate	Percent
<b>Total Households</b>	<b>667</b>	<b>100.00%</b>
Less than \$10,000	19	2.80%
\$10,000 to \$14,999	0	0.00%
\$15,000 to \$24,999	24	3.60%
\$25,000 to \$34,999	11	1.60%
\$35,000 to \$49,999	10	1.50%
\$50,000 to \$74,999	27	4.00%
\$75,000 to \$99,999	14	2.10%
\$100,000 to \$149,999	37	5.50%
\$150,000 to \$199,999	64	9.60%
\$200,000 or more	461	69.10%
<b>Median household income</b>	<b>\$250,000+</b>	<b>(X)</b>
<b>Mean household income</b>	<b>\$399,340</b>	<b>(X)</b>

Source: US Census Bureau American Community Survey 2021 5-Year Estimate

Table 37: City of Hidden Hills Income and Benefits (2021 Inflation Adjusted Dollars)

\* Note: The households with minimal incomes may also be attributable to retirees and others that have other sources of funds not reportable as income.

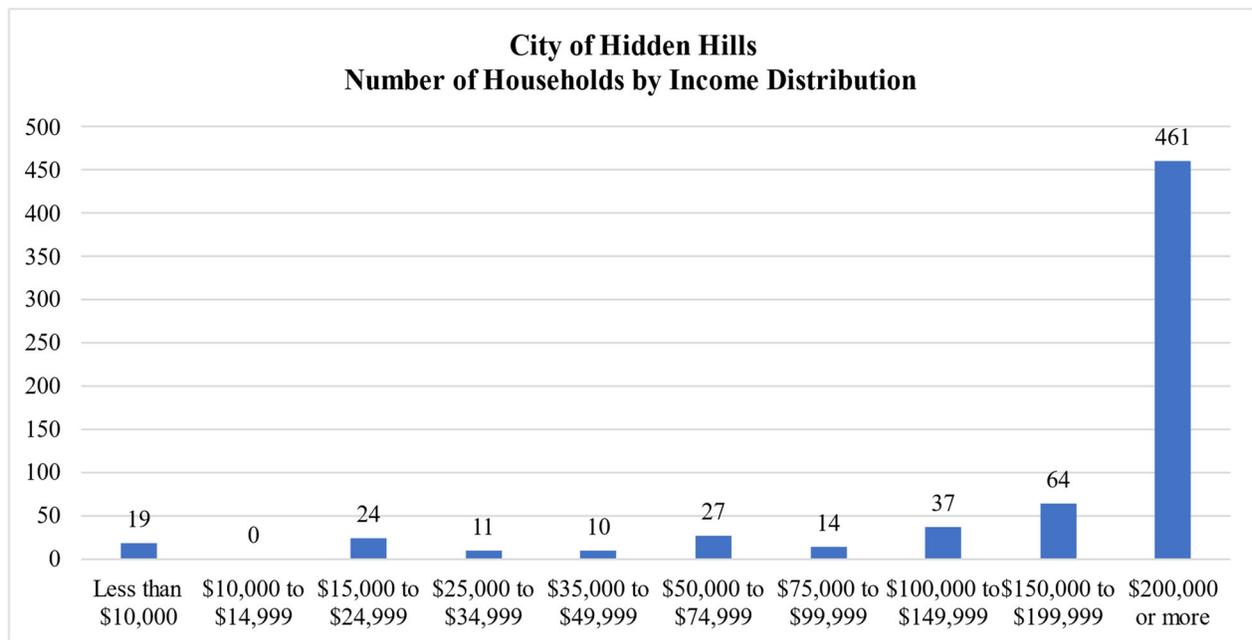


Figure 39: City of Hidden Hills Income Distribution

**Land Use**

Hidden Hills is a fully developed master planned residential community with a land area of 1.65 square miles. There is a small restricted commercial zone with a real estate office. Any further development or home modifications must be approved by the Hidden Hills Community Association Architectural Committee. There are 692 housing units, three guard houses, six miles of roads, 25 miles of bridle trails, three community riding arenas, four tennis courts, a competition-size pool, recreation center, and a 99-seat performing arts/movie theater.



Figure 40: City of Hidden Hills City Offices

**Housing Characteristics**

The following housing statistics provide a summary of the numbers and types of housing units that are at risk if a disaster were to occur in Hidden Hills. Housing data includes: Housing Occupancy, Housing Unit Change from 2017 to 2021, Number of Structures Built by Year, Home Values, and Home Value Distribution. In Hidden Hills, there was an increase in the number of single housing units since 2017.

Housing Occupancy	2021 Estimate	Percent
<b>Total Housing Units</b>	692	100.00%
Occupied housing units	667	96.40%
Vacant housing units	25	3.60%

Source: US Census Bureau American Community Survey 2021 5-Year Estimate

Table 38: City of Hidden Hills Housing Occupancy

Units In Structure	2021		2017		Change	
	Estimated Number	Percent of Units	Estimated Number	Percent of Units	Difference 2021-2017	Percent Change
<b>Total Housing Units</b>	<b>692</b>	<b>100.00%</b>	<b>594</b>	<b>100.00%</b>	<b>98</b>	<b>16.50%</b>
1-unit, detached	689	99.60%	591	99.50%	98	16.58%
1-unit, attached	3	0.40%	3	0.50%	0	-
2 units	0	0.00%	0	0.00%	0	-
3 or 4 units	0	0.00%	0	0.00%	0	-
5 to 9 units	0	0.00%	0	0.00%	0	-
10 to 19 units	0	0.00%	0	0.00%	0	-
20 or more units	0	0.00%	0	0.00%	0	-
Mobile home	0	0.00%	0	0.00%	0	-
Boat, RV, van, etc.	0	0.00%	0	0.00%	0	-

Source: US Census Bureau American Community Survey 2021 5-Year Estimate

Table 39: City of Hidden Hills Units in Structure Change from 2017 to 2021

In terms of risk and disaster mitigation, older structures that have not been retrofitted or otherwise improved may be more susceptible to damage or destruction due to age and the fact that older building codes were less stringent than those required for newer structures. As a result, the inventory of older structures is a consideration when developing mitigation plans. In Hidden Hills, 87.6% of structures (606) were built prior to 2000 and 62.9% (435) before 1980.

Year Structure Built	Estimate	Percent
<b>Total housing units</b>	<b>692</b>	<b>100.0%</b>
Built 2020 or later	0	0.00%
Built 2010 to 2019	20	2.90%
Built 2000 to 2009	66	9.50%
Built 1990 to 1999	77	11.10%
Built 1980 to 1989	94	13.60%
Built 1970 to 1979	71	10.30%
Built 1960 to 1969	166	24.00%
Built 1950 to 1959	183	26.40%
Built 1940 to 1949	10	1.40%
Built 1939 or earlier	5	0.70%

Source: US Census Bureau American Community Survey 2021 5-Year Estimate

Table 40: Year Structures Built in the City of Hidden Hills

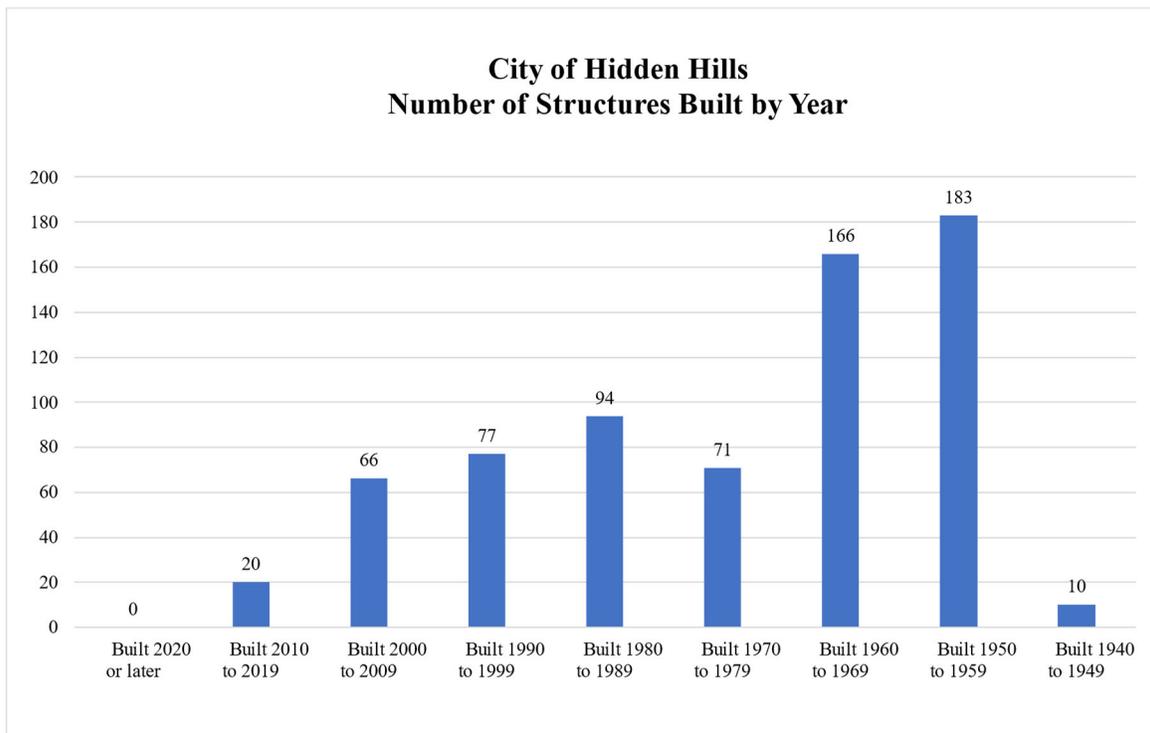


Figure 41: City of Hidden Hills Number of Structures Built by Year

Home values are an important consideration when evaluating the potential dollar loss due to disasters. These values can also be used to assess the cost/benefit of mitigation activities and planning. In Hidden Hills, almost all Owner Occupied Units are currently valued over \$1,000,000. Consequently, the potential dollar losses from a disaster can rapidly escalate – illustrating the need for mitigation planning.

Owner-Occupied Units by Value		
	Estimate	Percent
<b>Owner-Occupied Units</b>	<b>603</b>	<b>100.0%</b>
Less than \$50,000	6	1.00%
\$50,000 to \$99,999	0	0.00%
\$100,000 to \$149,999	0	0.00%
\$150,000 to \$199,999	0	0.00%
\$200,000 to \$299,999	0	0.00%
\$300,000 to \$499,999	0	0.00%
\$500,000 to \$999,999	12	2.00%
\$1,000,000 or more	585	97.00%
<b>Median (dollars)</b>	<b>\$2,000,000+</b>	<b>(X)</b>

Source: US Census Bureau American Community Survey 2021 5-Year Estimates  
 Table 41: City of Hidden Hills Home Value Distribution

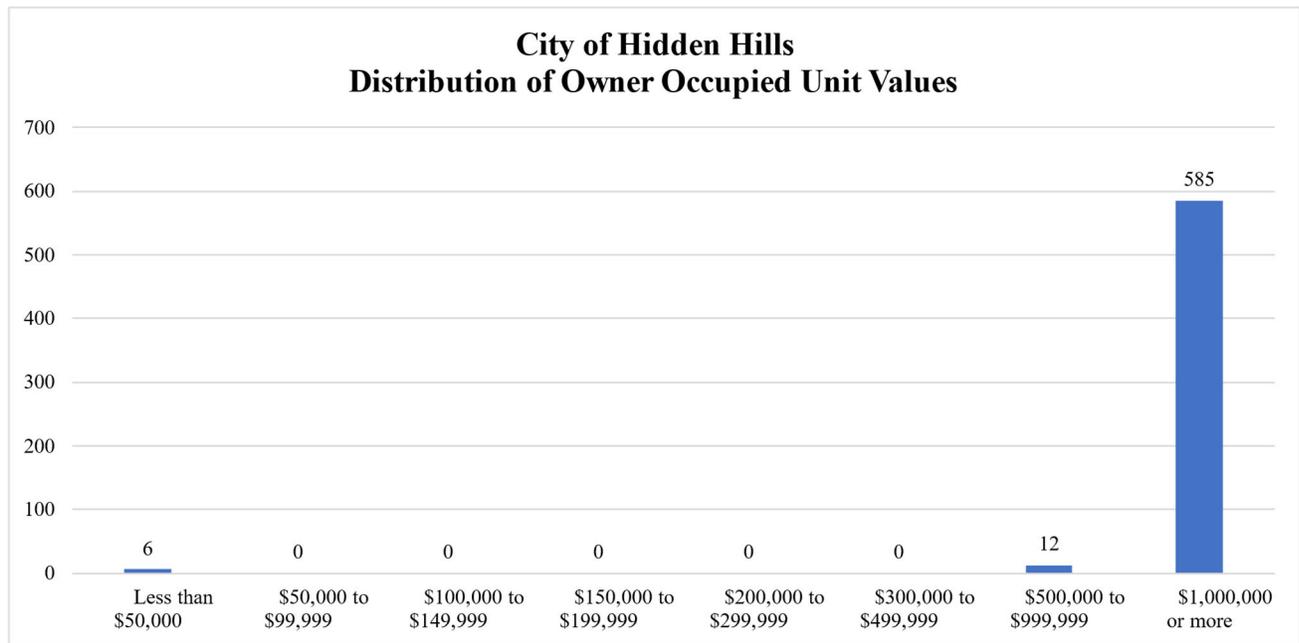


Figure 42: City of Hidden Hills Owner Occupied Unit Values

## ***Emergency Preparedness***

The City of Hidden Hills is a general law municipality operating on a contract basis for law enforcement, building and safety, planning and engineering, as well as legal counsel. The City's fire and emergency medical services are provided through the Consolidated Fire Protection District of Los Angeles County.

## **Emergency Operations Center**

The City of Hidden Hills has a fully equipped Emergency Operations Center (EOC) located at City Hall in the City Council Chambers. The primary Casualty Collection Point is located at Round Meadow Elementary School.

## **Office of Emergency Services**

The Hidden Hills Office of Emergency Services (OES) is responsible for the development of the City's Emergency Operations Plan, which provides for the effective mobilization of all the City's resources, both public and private, to meet any condition constituting a local emergency, state of emergency or state of war emergency.

OES consists of all officers and employees of the City, Public Safety Commissioners, volunteer forces enrolled to aid during an emergency, and all groups, organizations and persons who may, by agreement or operations of law, including persons impressed into service, be charged with duties incident to the protection of life and property in the City during an emergency.

OES provides a liaison to Round Meadow Elementary School. This liaison is a member of the school's Disaster Preparedness Committee.

## **Hidden Hills Community Association (HHCA) - Equestrian Services Committee**

This Committee is responsible for coordinating the evacuation of horses and other livestock in the community during emergency or disaster situations.

## **Community Emergency Response Team (CERT)**

The Community Emergency Response Team is a group of volunteers who have been certified as emergency response personnel. Volunteers receive training under a nationally recognized program for emergency and disaster response. CERT members have also received additional training to aid in preliminary damage assessment. To facilitate coordination of emergency response efforts, the City has been divided into seven (7) geographic regions.

## **Emergency Medical Response**

An Emergency Medical Response trailer is equipped to aid in providing services to 350 - 400 victims. Storage is also provided for medical supplies and search and rescue equipment.

## Emergency Response Equipment

The City has purchased multiple tools and equipment to assist in an emergency, including an emergency response/communications vehicle that contains various tools and PPE's. The vehicle is also outfitted with communications equipment capable of connecting to the City radio system, LASD, LACFD, and the MRCA. The vehicle also contains a 400-gallon water reserve and pump for assistance during a wildfire.

The City has also purchased an off-road quad vehicle that can provide assistance on City trails and/or access to homes that could be unreachable due to a road hazard. Additionally, a 75-gallon water/foam pump can be installed along with two pool pumps that can be strategically deployed during a wildfire as an alternate means to assist Firefighters.

## Communication Systems

The City has an assigned Federal Communications Commission, Public Safety Pool Radio frequency and maintains a repeater, several base stations positioned throughout the City, and handheld radios distributed for use throughout the city, as well as at the EOC. In addition, the City has several licensed HAM operators. The City can maintain contact with Round Meadow Elementary School and the Hidden Hills Community Association in emergencies. Lastly, the City has installed a back-up internet line and has purchased two satellite phones.

The City of Hidden Hills implemented the Finalsite Connect® service allowing authorized civic leaders to create and rapidly disseminate emergency messages to every telephone number stored in the notification database. In addition, the City is authorized to issue emergency messages via cell phones through IPAWS Wide Area Alerts.

Cable TV Channel 3 is used as a community notification and bulletin board. Throughout the year the station is used to show videos related to emergency and disaster preparedness. Additionally, in the event of an emergency, emergency messaging can be broadcast on Channel 3.

Hidden Hills uses an E-mail notification system that immediately provides important information to residents who have voluntarily joined the program. This system is also used to circulate public service announcements, such as reminding seniors to check alternate electrical power sources in the event of an electric shutdown.

Finally, the City of Hidden Hills circulates a monthly newsletter. The newsletter provides general bulletins as well as emergency preparedness recommendations and information.

## MALIBU

The City of Malibu is located along the Pacific Ocean northwest of the City of Los Angeles. Malibu is generally bounded on the north by the Santa Monica Mountains, on the east by Topanga Canyon, on the west by Ventura County and on the south by the Pacific Ocean. Malibu was incorporated on March 28, 1991. The City has 21 miles of coastline along the Pacific Ocean and has a population of 10,915 (2021 U.S. American Community Survey 5-Year Estimate).



The City of Malibu is a dynamic, internationally recognized community in Northern Los Angeles County that offers a high quality of life for its residents. Celebrated for its natural beauty and unique coastal resources, the City is also renowned for its leadership in environmental stewardship, excellent schools and political activism. Malibu has seven miles of public beaches, canyons and watershed along its 21 miles of coastline and provides numerous opportunities for recreation and outdoor activities.

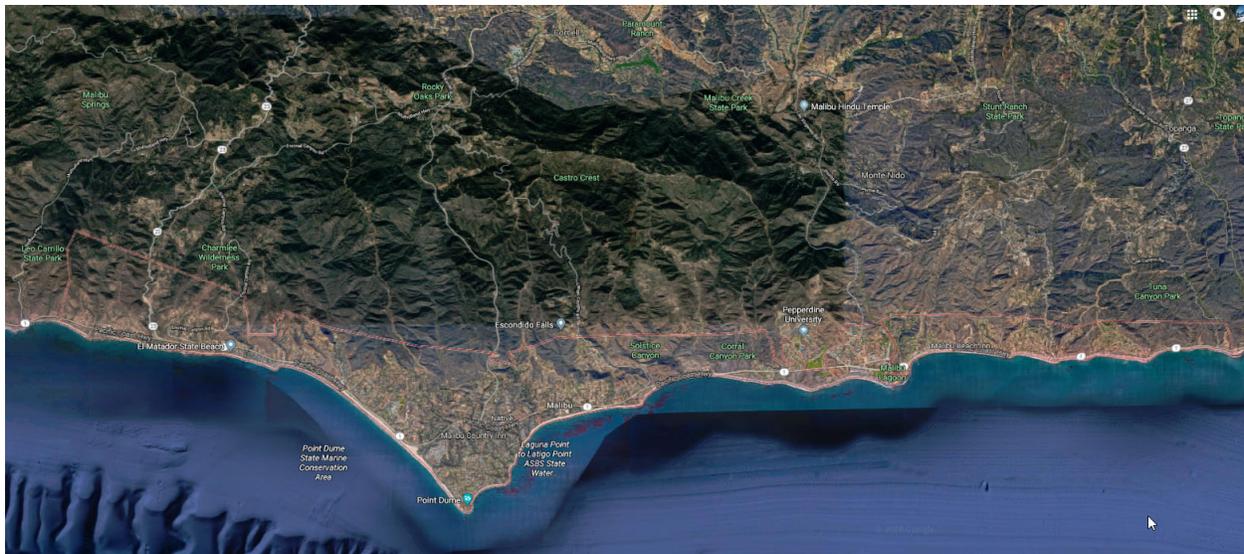


Figure 43: City of Malibu Aerial View

Source: Google Maps

General Coordinates	
Latitude	34° 2' 16" North
Longitude	118° 41' 34" West



Source: 2016 SCAG City Boundary Data  
 Map 10: Malibu Location Map

**Brief History**

The Malibu area was settled in the 1890s by the Rindge Family, which owned the Rancho Topanga Malibu Sequit, a large ranch. Its remote location between the ocean and the mountains led to its small-town, rural residential community development pattern. Malibu has remained a primarily residential community. Commercial areas are limited to small neighborhood-serving and visitor-serving uses interspersed throughout the City, but located primarily in the Las Flores, Civic Center, Point Dume and Trancas areas.



Figure 44: Malibu Coastline

**Climate/Topography**

Malibu has a unique climate due to its location, which is wedged between the Santa Monica Mountains and the Pacific Ocean. Average 2022 temperatures ranged from the low 50’s to the mid 60’s during the winter months and from the low 60’s to mid 80s in the summer months. The rainfall for the area was approximately 6 inches in 2022, with the winter months characterized as wetter than summer months.

Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Temperature (°F)	59.4	60.1	60.9	61.1	61.4	70.4	70.4	76.7	76.6	67.1	59.3	55.1
Minimum Temperature (°F)	53.6	53.7	54	53.5	53.8	61.7	61.1	67.9	68.6	60.5	54.1	50.9
Maximum Temperature (°F)	65.1	66.4	67.7	68.7	69	79.1	79.6	85.6	84.5	73.7	64.5	60
Average Rainfall (inches)	0.25	0	1.07	0.34	0	0	0	0	0.16	0	1.45	2.98

Source: Weather.gov (NOAA)

Table 42: City of Malibu Average Monthly Temperatures and Rainfall (2022)

The geography of Malibu includes a wide variety of terrain changes including mesas, canyons and rugged cliffs facing sandy beaches. The landscape ranges from lush greenery with exotic plants to natural habitats consisting of endemic chaparral, scrub grasses, riparian woodlands, and wetlands. Malibu lies on the fringe of the Santa Monica Mountains, which is an extensive chaparral wilderness area. The City has three large deep gorges and canyons with extensive vegetation growth due to its many streams and creeks.

### *Economic Activity*

Malibu is a residential community that is also a popular tourist destination. The City has 21 miles of coastline and its beaches are a main attraction. There are also parks owned and operated by the City, National Park Service, State of California, and the Santa Monica Mountains Conservancy / Mountains Recreation Conservation Authority in the Santa Monica Mountains.

Economic activity is one indicator of the potential losses that may be incurred in the event of a disaster. In addition to tourism and recreation, there are numerous retail locations along Pacific Coast Highway including the Malibu Civic Center area. Other service industries in Malibu include real estate, financial, health and beauty, medical, and construction.

### Malibu Principal Employer Categories and Number of Employees

Category (by NAICS code)	Number of Establishments	Number of Employees	Percent of Total City Employment
Wholesale Trade	17	71	1.10%
Retail Trade	97	860	13.27%
Information	55	190	2.93%
Finance and Insurance	41	187	2.88%
Real Estate and Rental and Leasing	106	298	4.60%
Professional, Scientific, and Technical Services	120	831	12.82%
Administrative and Support and Waste Management and Remediation Services	41	235	3.62%
Educational Services	10	204	3.15%
Health Care and Social Assistance	73	1,156	17.83%
Arts, Entertainment, and Recreation	96	234	3.61%
Accommodation and Food Services	71	2,056	31.71%
Other Services (Except Public Administration)	49	161	2.48%
<b>Total</b>	<b>776</b>	<b>6,483</b>	<b>100.00%</b>

Source: 2017 Economic Census of the U.S. for the City of Malibu

Table 43: City of Malibu Employer Categories and Number of Employees

The following tables list the principal property tax payers in Malibu and the City’s Revenues for the 2022 Fiscal Year. Each of these statistics provide an overall snapshot of economic activity.

### Malibu Principal Property Tax Payers

Company	Taxable Assessed Value (thousands)	Percent of Total City Assessed Value
HRL Laboratories LLC	\$138,881	0.71%
Jamestown Premier Malibu Village LP	135,901	0.69%
27600 PCH LLC	128,815	0.66%
Carbonview Limited LLC	128,208	0.66%
Malibu Realty LLC	118,428	0.61%
22310 PCH LLC	115,630	0.59%
22108 PCH LLC	91,137	0.47%
Malibu 2018 PCH LP	89,350	0.46%
27768 PCH LLC	85,881	0.44%
Goldman Sachs Trust	84,755	0.43%
<b>Top 10 Total</b>	<b>\$1,116,986</b>	<b>5.71%</b>

Source: 2021- 2022 Comprehensive Annual Financial Report for the City of Malibu, Fiscal Year Ended June 2022

Table 44: City of Malibu Principal Property Tax Payers

### Malibu Tax Revenues

Category	Revenues	Percent of Total
Property Taxes	\$16,054,850	39%
Other Taxes	20,028,925	48%
Other Revenues	5,528,268	13%
<b>Total 2022 Revenue</b>	<b>\$55,197,775</b>	<b>100.00%</b>

Source: 2021 - 2022 Comprehensive Annual Financial Report for the City of Malibu, Fiscal Year Ended June 2022

Table 45: City of Malibu Revenues

### Malibu Economy

The table below provides a breakdown of revenue channels for the City of Malibu in 2017. These categories include Accommodation and Food Services, Health Care and Social Assistance, Transportation and Warehousing, and Retail Sales. The total revenues accrued by the city amounted to approximately \$578.5 Million, which included Total Retail Sales per capita of \$15,575.

Category	Value (in thousands)	Percent
Total Accommodation and Food Services Sales	\$192,108	33.21%
Total Health Care and Social Assistance Receipts/Revenue	\$188,002	32.50%
Total Transportation and Warehousing Receipts/Revenue	N/A	N/A
Total Retail Sales	\$198,333	34.29%
<b>Total</b>	<b>\$578,443</b>	<b>100.00%</b>

Source U.S. Census Bureau 2017 Economic Census of the U.S.

Table 46: City of Malibu Economy

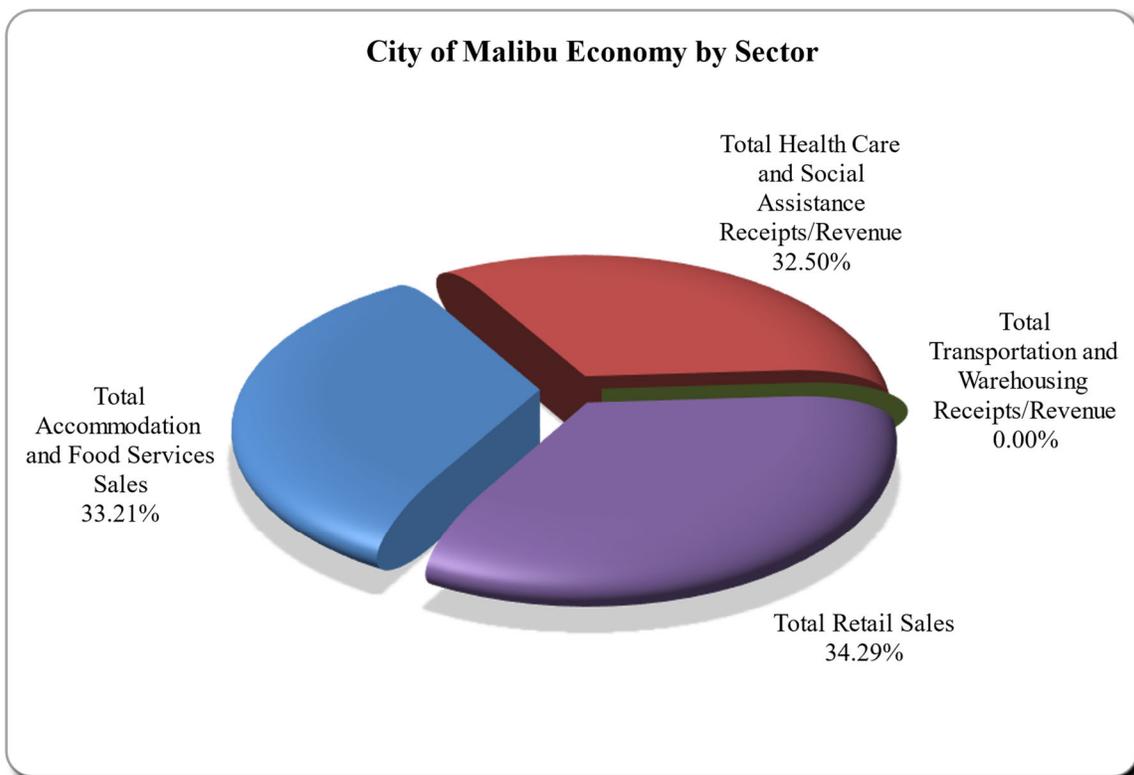


Figure 45: City of Malibu Economy by Sector

### Population Demographics

The following tables summarize the population and demographic groups at risk from natural disasters and other catastrophic events in Malibu.

#### Sex and Age Distribution

Demographic Estimates - 2021		
Sex and Age	Estimate	Percent
<b>Total Population</b>	<b>10,915</b>	<b>100%</b>
Male	5,457	50%
Female	5,458	50%
<b>Age Groups</b>		
Under 5 years	278	2.50%
5 to 9 years	470	4.30%
10 to 14 years	754	6.90%
15 to 19 years	749	6.90%
20 to 24 years	341	3.10%
25 to 29 years	400	3.70%
30 to 34 years	641	5.90%
35 to 39 years	504	4.60%
40 to 44 years	594	5.40%
45 to 49 years	812	7.40%
50 to 54 years	533	4.90%
55 to 59 years	820	7.50%
60 to 64 years	870	8.00%
65 to 69 years	1088	10.00%
70 to 74 years	908	8.30%
75 to 79 years	523	4.80%
80 to 84 years	334	3.10%
85 years and over	296	2.70%
<b>Median age (years)</b>	<b>49.6</b>	

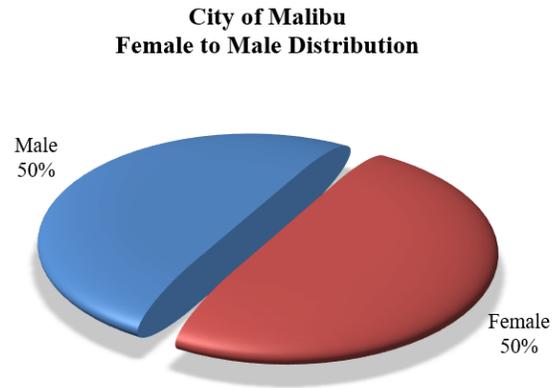


Figure 46: City of Malibu Female to Male Distribution

The average age of residents in Malibu is 49.6 years with females (50.0%) roughly similar to males (50.0%). Mitigation planning must consider the unique needs of population groups, for example those under 15 years of age and those over 65 years of age.

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 47: City of Malibu Sex and Age Demographics

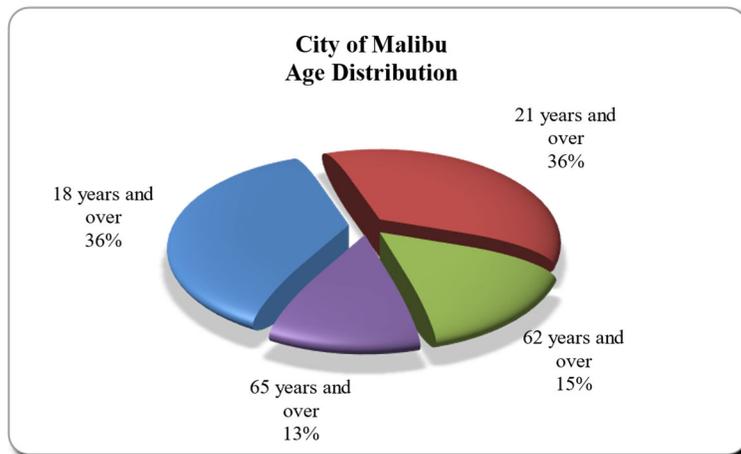


Figure 47: City of Malibu Age Distribution

## Race and Language Composition

### Race

One aspect of mitigation planning is the need to address the cultural and language (communications) needs of local populations. This includes the ability to distribute information and provide notification in the event of a regional emergency. For Malibu, an estimated 18.1% of the population speaks languages other than English (including English and another language or non-English only) with nearly 0.69% speaking English “less than well or not at all”. These language and communication challenges may pose additional difficulties for socially vulnerable groups during a disaster.

Race	2021 Estimated Population	Percent of Total
<b>Total Population</b>	<b>10,915</b>	<b>100.00%</b>
White alone	7,952	72.85%
Black or African American alone	70	0.64%
Hispanic or Latino (of any race)	1522	13.94%
American Indian and Alaska Native alone	0	0.00%
Asian alone	415	3.80%
Native Hawaiian and Other Pacific Islander alone	27	0.25%
Some other race alone	226	2.07%
Two or more races	703	6.44%

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 48: City of Malibu Race Composition

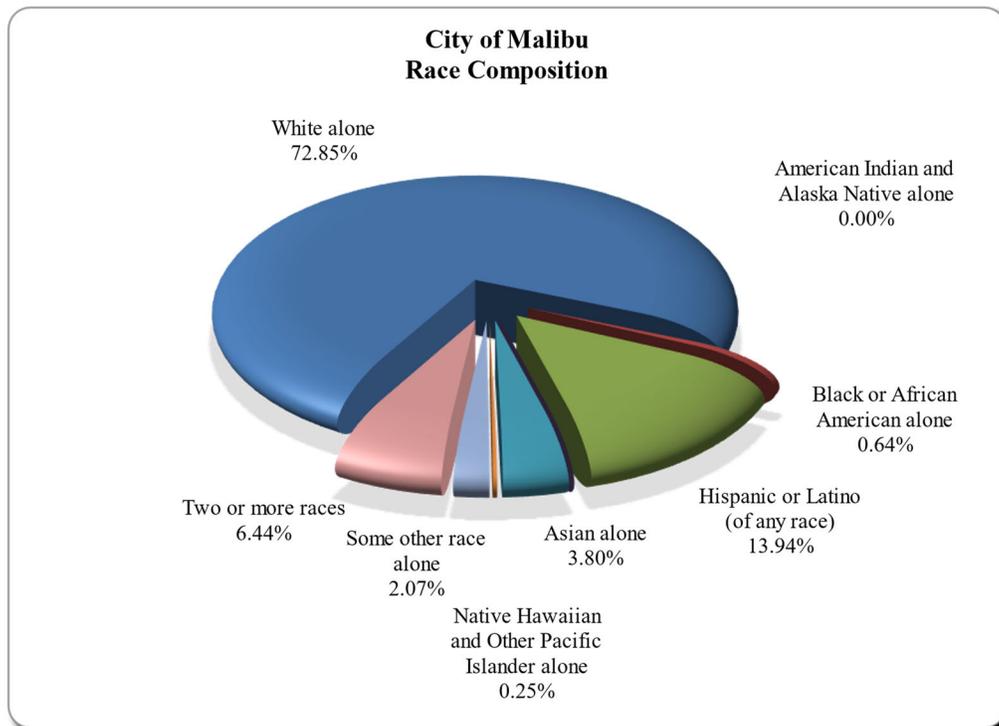


Figure 48: City of Malibu Race Composition

*Languages Spoken at Home*

Language	2021 Estimated Population	Percent of Total
Speaks only English	8,666	81.50%
Language other than English spoken at home, percent of persons age 5 years+, 2017-2021	1,971	18.50%
Speak a Language Other than English	2021 Estimated Population	Percent of Total
<b>Spanish</b>	839	7.90%
5 to 17 years old	44	0.40%
18 to 64 years old	673	6.30%
65 years old and over	122	1.10%
<b>Other Indo-European languages</b>	772	7.30%
5 to 17 years old	62	0.60%
18 to 64 years old	426	4.00%
65 years old and over	284	2.70%
<b>Asian and Pacific Island languages</b>	344	3.20%
5 to 17 years old	50	0.50%
18 to 64 years old	239	2.20%
65 years old and over	55	0.50%
<b>Other languages</b>	16	0.20%
5 to 17 years old	0	0.00%
18 to 64 years old	0	0.00%
65 years old and over	16	0.20%

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 49: City of Malibu Languages Spoken at Home

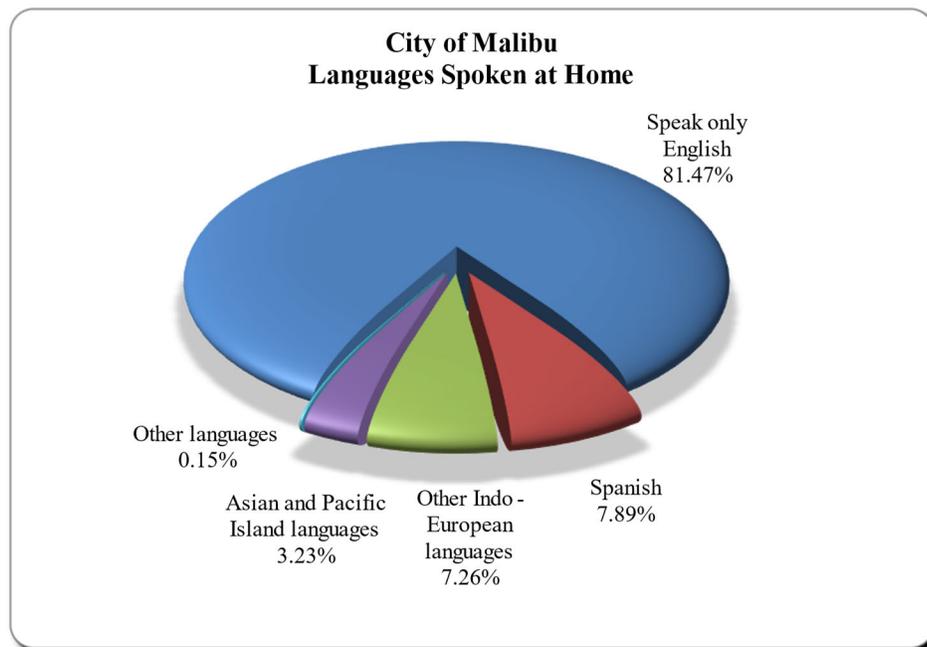


Figure 49: City of Malibu Languages Spoken at Home

### Income Distribution

Household income is a factor for mitigation planning since population groups in lower income ranges are less able to cope with the impact of disasters.

Furthermore, the availability of household funds can have a direct impact on the level of individual and family hazard mitigation activities and emergency preparedness.

While the mean household income in Malibu is over \$290,715 there are a limited number of households with incomes less than \$25,000, near the 2023 U.S. poverty level of \$24,860 for a family of three as defined by the 2023 HHS Poverty Guidelines, by the U.S. Department of Health & Human Services.\*

Income and Benefits (in 2021 Inflation-Adjusted Dollars)		
	Estimate	Percent
<b>Total Households</b>	<b>4,442</b>	<b>100.00%</b>
Less than \$10,000	333	7.50%
\$10,000 to \$14,999	31	0.70%
\$15,000 to \$24,999	191	4.30%
\$25,000 to \$34,999	160	3.60%
\$35,000 to \$49,999	84	1.90%
\$50,000 to \$74,999	262	5.90%
\$75,000 to \$99,999	213	4.80%
\$100,000 to \$149,999	515	11.60%
\$150,000 to \$199,999	737	16.60%
\$200,000 or more	1919	43.20%
<b>Median household income (dollars)</b>	<b>\$178,594</b>	<b>(X)</b>
<b>Mean household income (dollars)</b>	<b>\$290,715</b>	<b>(X)</b>

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 50: City of Malibu Income and Benefits (2021 Inflation Adjusted Dollars)

\*Note: The households with minimal incomes may also be attributable to retirees and others that have other sources of funds not reportable as income.

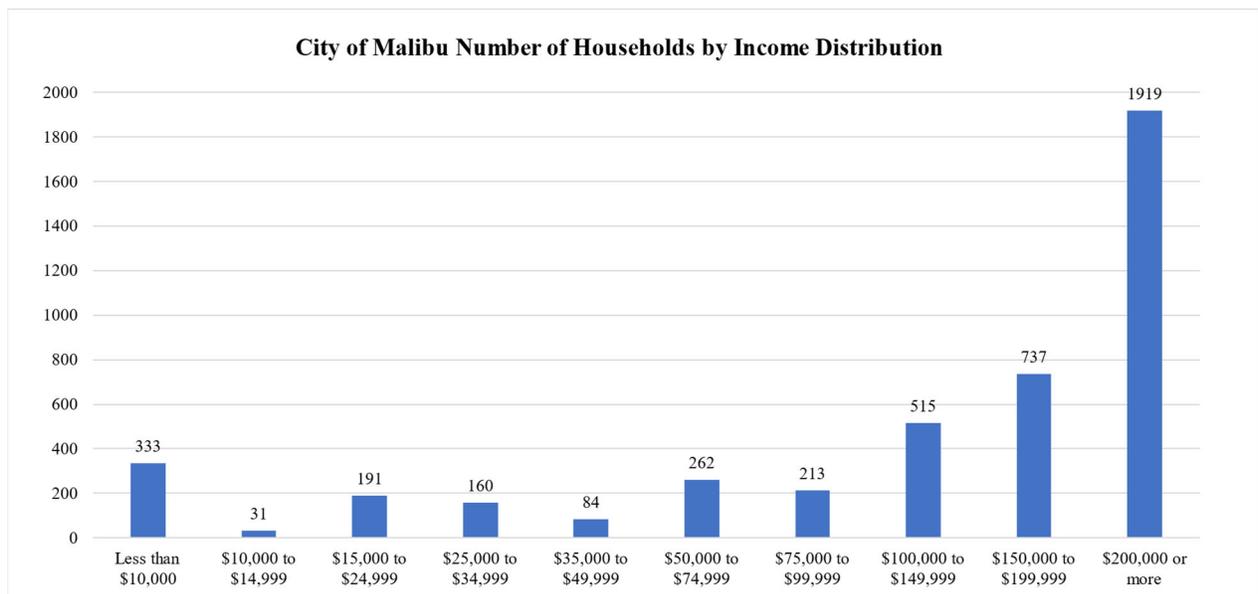


Figure 50: City of Malibu Income Distribution

## Land Use

Malibu is a beachfront community with the majority of residents living along Pacific Coast Highway (PCH) or in small residential communities that gain primary access from PCH. Designated as State Route 1, PCH is the major four lane arterial roadway traversing the City from east to west. PCH is a major transportation corridor with thousands of daily commuters. Beach traffic substantially increases congestion along PCH during the summer months.

The Santa Monica Mountains serve as a natural boundary to the north. A number of residences are interspersed throughout the Santa Monica Mountains along canyons and hillsides within a mile or more inland. Furthermore, the City has experienced a great deal of ‘in-fill’ development, which has increased the population density, creating greater service loads on the existing infrastructure including roads, water supplies, sewer services and storm drains. In-fill development is defined as development of vacant or partially developed parcels which are surrounded by or in close proximity to areas that are substantially or fully developed.

## Housing Characteristics

The following housing statistics provide a summary of the numbers and types of housing units that are at risk if a natural disaster or other catastrophic event were to occur in Malibu. Housing data includes: Housing Occupancy, Housing Unit Change from 2017 to 2021, Number of Structures Built by Year, Home Values, and Home Value Distribution. For Malibu, the number of multi-unit structures (20+ units) increased, while the number of smaller structures (1-unit, attached) and (3 or 4 units) has decreased since 2017.

Housing Occupancy	Estimate	Percent
<b>Total Housing Units</b>	<b>6,936</b>	<b>100.0%</b>
Occupied housing units	4,442	64.00%
Vacant housing units	2,494	36.00%

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 51: City of Malibu Housing Occupancy

Units In Structure	2021		2017		Change	
	Estimated Number	Percent of Units	Estimated Number	Percent of Units	Difference 2021-2017	Percent Change
<b>Total Housing Units</b>	<b>6,936</b>	<b>100.0%</b>	<b>7,448</b>	<b>100.0%</b>	<b>-512</b>	<b>-6.87%</b>
1-unit, detached	4,516	65.10%	4,552	61.10%	-36	-0.79%
1-unit, attached	442	6.40%	664	8.90%	-222	-33.43%
2 units	116	1.70%	172	2.30%	-56	-32.56%
3 or 4 units	332	4.80%	534	7.20%	-202	-37.83%
5 to 9 units	148	2.10%	131	1.80%	17	12.98%
10 to 19 units	220	3.20%	279	3.70%	-59	-21.15%
20 or more units	413	6.00%	227	3.00%	186	81.94%
Mobile home	749	10.80%	889	11.90%	-140	-15.75%
Boat, RV, van, etc.	0	0.00%	0	0.00%	0	-

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 52: City of Malibu Units in Structure Change from 2017 to 2021

In terms of risk and disaster mitigation, older structures that have not been retrofitted or otherwise improved may be more susceptible to damage or destruction due to age and the fact that older building codes were less stringent than those required for newer structures. As a result, the inventory of older structures is a consideration when developing mitigation plans.

In Malibu, 90.0% of structures (6,243) were built prior to 2000 and 67.30% (4,667) before 1980.

\*After the 2018 Woolsey Fire, 150 single family homes were re-built with the first home completed in January 2020.

Year Structure Built	Estimate	Percent
<b>Total housing units</b>	<b>6,936</b>	<b>100.00%</b>
Built 2020 or later	13*	0.20%
Built 2010 to 2019	201	2.90%
Built 2000 to 2009	479	6.90%
Built 1990 to 1999	710	10.20%
Built 1980 to 1989	866	12.50%
Built 1970 to 1979	2,001	28.80%
Built 1960 to 1969	976	14.10%
Built 1950 to 1959	838	12.10%
Built 1940 to 1949	362	5.20%
Built 1939 or earlier	490	7.10%

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 53: Year Structures Built in Malibu

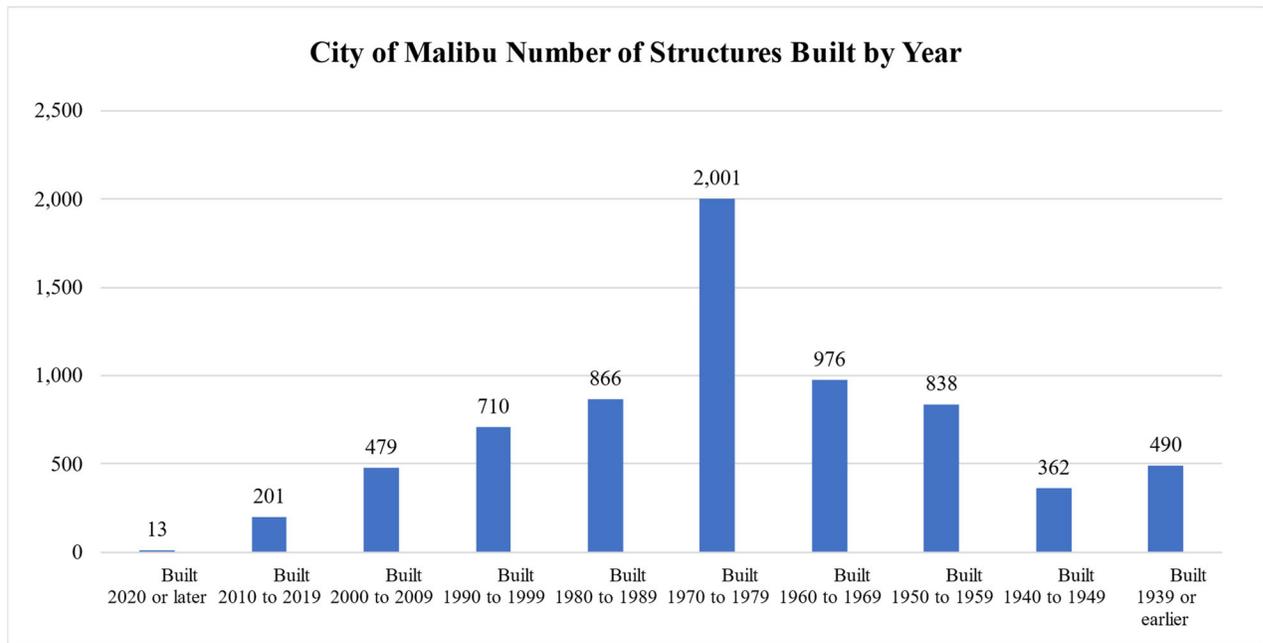


Figure 51: City of Malibu Number of Structures Built by Year

Home values are an important consideration when evaluating the potential dollar loss due to disasters. These values can also be used to assess the cost/benefit of mitigation activities and planning. In Malibu, the majority of Owner Occupied Units are valued over \$1,000,000. Consequently, the potential dollar losses from a disaster can rapidly escalate – illustrating the need for mitigation planning.

Owner-Occupied Units by Value		
	Estimate	Percent
<b>Owner-Occupied Units</b>	<b>3,395</b>	<b>100.0%</b>
Less than \$50,000	38	1.10%
\$50,000 to \$99,999	0	0.00%
\$100,000 to \$149,999	9	0.30%
\$150,000 to \$199,999	0	0.00%
\$200,000 to \$299,999	28	0.80%
\$300,000 to \$499,999	29	0.90%
\$500,000 to \$999,999	527	15.50%
\$1,000,000 or more	2,764	81.40%
<b>Median (dollars)</b>	<b>\$2,000,000+</b>	<b>(X)</b>

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate  
 Table 54: City of Malibu Home Value Distribution

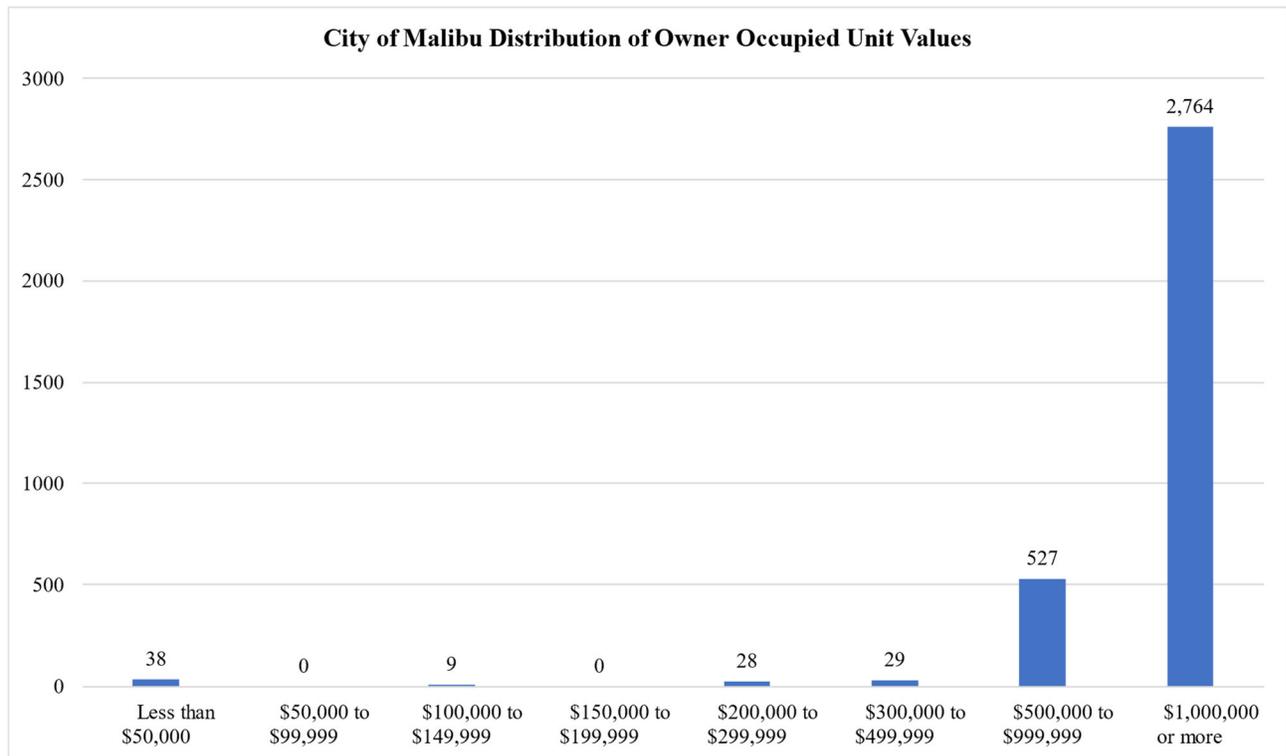


Figure 52: City of Malibu Distribution of Owner Occupied Unit Values

## *Emergency Preparedness*

The potential impacts of natural hazards associated with Malibu's unique terrain makes its environment and population vulnerable to natural disasters. Earthquakes, landslides, winter storms, floods, storm surge, and sea level rise can take their toll on Malibu. However, the most dangerous and perennial of hazards is wildfire. Driven by the dry Santa Ana winds in the summer months, wind speeds can reach up to 70 mph. As a result, small spot fires can quickly explode into huge firestorms capable of consuming entire communities.

### **Emergency Preparedness Program**

In response to numerous floods, fires, and storms that have occurred since incorporation, the City created a robust emergency preparedness program to train City personnel and the community in emergency preparedness and response procedures.

The City's emergency preparedness program includes quarterly training and exercises to familiarize staff with the functions of the Emergency Operations Center (EOC) and their individual roles under various potential disaster scenarios. The City also provides Community Emergency Response Team training, an annual Public Safety Expo and many other emergency preparedness public education events.

### **Malibu Search & Rescue Team**

The Malibu Search & Rescue Team (SAR) was founded in 1977 and is an all-volunteer organization comprised of Los Angeles County Sheriff's Department Reserve Deputy Sheriffs and a select group of Civilian Volunteer Specialists and Incident Support Personnel. The Malibu SAR Team is a unit of the Los Angeles County Sheriff's Department and a member of the California region of the Mountain Rescue Association.

The Malibu SAR jurisdiction covers 187 square miles of the Santa Monica Mountains from the Los Angeles/Ventura County line to Pacific Palisades, the east face of the Santa Susana Mountains and the contract cities of Westlake Village, Agoura Hills, Malibu, Calabasas, and Hidden Hills.

The Malibu SAR will also travel anywhere in Los Angeles County to assist other LASD teams. Furthermore, the team will respond to other states or other country if requested to do so through the California Governor's Office of Emergency Services (Cal OES). The Los Angeles County Sheriff's Department provides the team with rescue vehicles and rescue operations are conducted under the guidance of the Los Angeles County Sheriff.

### **Beacon Box**

The City of Malibu has strategically placed 47 fire-resistant Beacon Boxes around the city which display critical information for public safety personnel such as water resources, road networks, egress areas, safe refuge areas, and high burn risk areas.

## Home Ignition Zone Assessments

Since 2019, the City has conducted over 300 home ignition zone assessments to assist residents with recommendations for hardening their homes against flying embers. The assessments are done according to the National Fire Protection Association's Assessing Structure Ignition Potential from Wildfire training that covers wildfire behavior, structure exposure, and the concepts of the Home Ignition Zone and Structure Ignition Potential. A survey of 322 participants of the program indicated that a majority had implemented most, all or more of the recommendations.

## Hazard Tree Removal Program

The City has recently removed more than 500 hazard trees. These included trees that were dead or dying that posed a threat of falling and injuring individuals, damaging property, blocking exit routes or providing additional fuel in a fire.

## Firewise Communities

As of 2023, there were two Firewise Communities in Malibu and one in the process of being certified. The Firewise USA® recognition program is administered by the National Fire Protection Association (NFPA) and provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level. In 2023, the City launched a program to assist more neighborhoods to become recognized as Firewise Communities.

## *Public Involvement Groups*

The City has over 60 Home Owners Associations, some of which are very active in public services.

In addition, the City sponsors the Malibu Volunteer Patrol (MVP), a group of residents trained to assist law enforcement personnel. The volunteers work various assignments including patrolling the community, assisting with dissemination of information to the community and providing community services. The involvement of members of the community working alongside Sheriff's Department personnel improves the communication and understanding between the two groups.

The City participates in the Community Emergency Response Team Program (CERT). Under the CERT Program, volunteers are provided with a FEMA-approved 20-hour program. The City holds CERT trainings three times per year. Approximately 30 CERT graduates have taken additional training to become part of the Malibu CERT Team and are registered as Disaster Service Workers.

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## WESTLAKE VILLAGE

Westlake Village is a master-planned community located on the western edge of Los Angeles County in the Conejo Valley. It borders the City of Thousand Oaks and Ventura County to the west and the Santa Monica Mountains to the south. It is 40 miles west of downtown Los Angeles along the US Highway 101 corridor. With a total land area of 5.4 square miles, the community supports a population of approximately 8,081 people (2021 U.S. American Community Survey 5-year Estimate). Westlake Village is comprised of a mixture of residential and commercial areas.

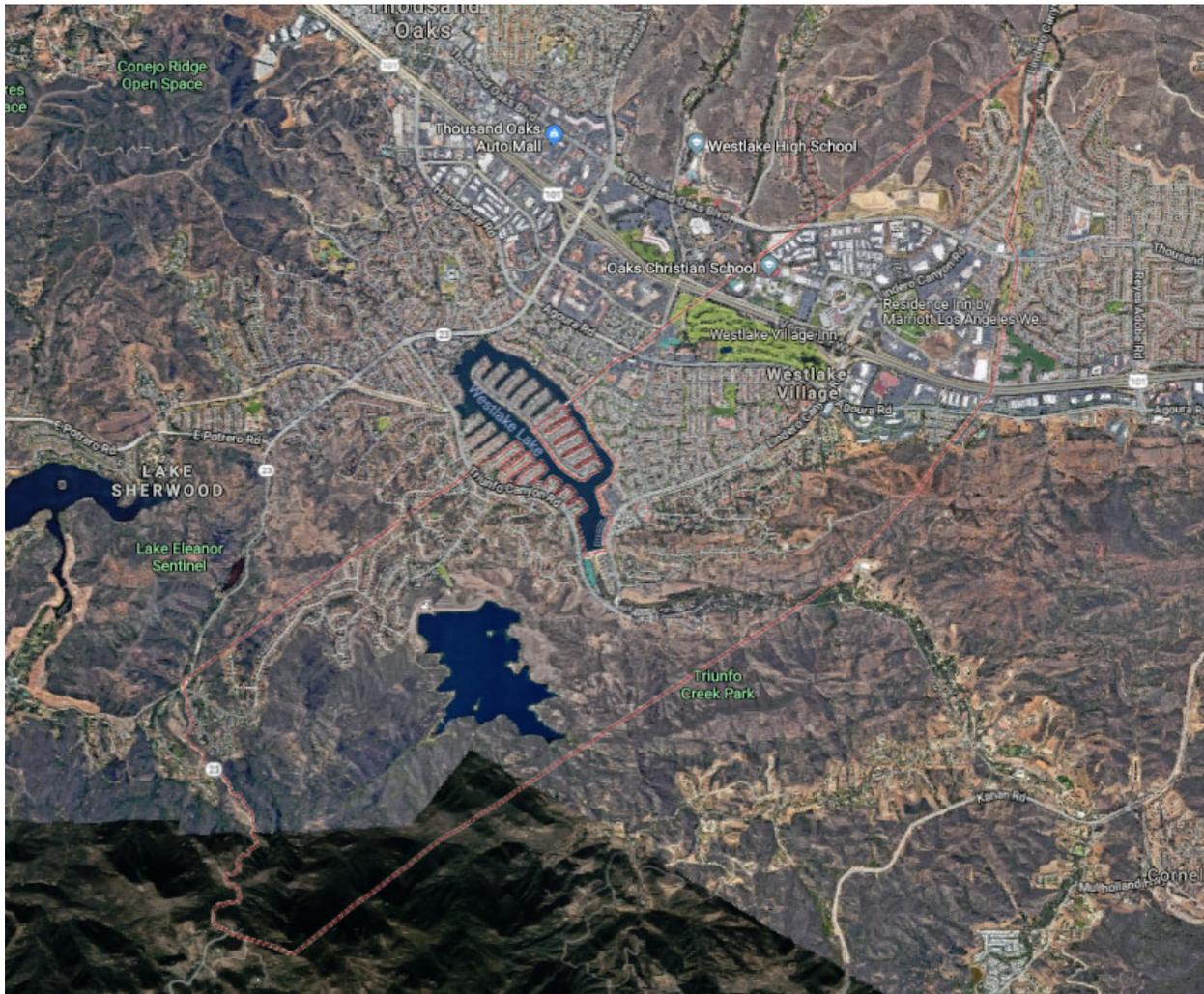


Figure 53: City of Westlake Village Aerial View

Source: Google Maps

General Coordinates	
Latitude	34° 8' 31" North
Longitude	118° 49' 10" West



Source: 2016 SCAG City Boundary Data  
 Map 11: Westlake Village Location Map

**Brief History**

The City of Westlake Village is located on a portion of the former Albertson Ranch, whose cattle-grazing operation on the land ended in the mid-1960’s when construction of Westlake Village commenced. The ranch was a portion of the former El Conejo land grant, the original boundary lines that form the City’s southern and eastern limits today. In 1966 the American Hawaiian Steamship Company developed Westlake Village as a master-planned community. Responsibilities subsequently passed to the Prudential Insurance Company.

The original community straddled the Los Angeles-Ventura County line. The Ventura portion was incorporated as part of the City of Thousand Oaks in 1968. However, the build-out of the two halves has proceeded in a coordinated and interlinked manner, relatively indifferent to the corporate limits which separate them.

The City of Westlake Village was incorporated on December 11, 1981, as the 82<sup>nd</sup> city in Los Angeles County. As a master-planned community, Westlake Village is characterized by its wide, tree-lined boulevards, its cohesive, yet identifiable neighborhoods with interconnected greenbelts, its lakeside parks and promenades, and its diverse office and commercial centers.

The City of Westlake Village is a general law municipality, operating on a contract basis in which many of the day-to-day services of local government are provided by public and private agencies. The residents of Westlake Village elect a five-member City Council to oversee City operations and guide future development of the community. Council members are elected to serve a four-year term. Each year the Council selects one of its members to serve as Mayor and Mayor Pro Tem.

**Climate/Topography**

The climate in Westlake Village is characterized by mild winters with average 2022 temperatures ranging from the high 40’s to the high 60’s, and warm summers with average temperatures ranging from the low 60’s to the mid 90’s. Rainfall in 2022 was approximately 6 inches with the greatest portion of precipitation occurring in the winter months. The City averages 900 feet above sea level, and is framed by the Simi Hills to the north and the Santa Monica Mountains to the south.

Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Temperature (°F)	59.6	60.3	62.6	64.4	66.7	76.4	77.1	81.6	79.8	70.7	59.4	55
Minimum Temperature (°F)	52.6	52.3	52.8	52.9	53.5	61.3	62	67.7	67.6	59.4	51.9	49.1
Maximum Temperature (°F)	66.5	68.2	72.5	75.8	79.8	91.5	92.1	95.5	92	82	67	61
Average Rainfall (inches)	0.25	0	1.07	0.34	0	0	0	0	0.16	0	1.45	2.98

Source: Weather.gov (NOAA)

Table 55: City of Westlake Village Average Monthly Temperatures and Rainfall (2022)

### Economic Activity

There are approximately 598 businesses within the Westlake Village City limits, with the largest industry being Professional Services (19%), followed by Healthcare (18%) and Financial Services (15%). The city is located along the “Technology Corridor” that runs along US Highway 101 from Calabasas to the Oxnard plain. In addition, there are multiple business parks and the city is home to several company headquarters.

### Westlake Village Principal Employers

Company	Employees	Percent of Total City Employment
Bank of America Corporate	1,200	15.49%
Guitar Center HQ	615	7.94%
Four Seasons Hotel WLV	450	5.81%
Westlake Village Inn	389	5.02%
Warner Pacific Insurance	380	4.90%
Dole Food Company, Inc.	312	4.03%
Costco Wholesale	250	3.23%
Oaks Christian School	203	2.62%
Target	200	2.58%
Securitas Security Services, Inc.	175	2.26%
<b>Top 10 Total</b>	<b>4,174</b>	<b>53.87%</b>
<b>Total City of Westlake Village Employment</b>	<b>7,749</b>	<b>100.0%</b>

Source: Westlake Village Business Census Report 2023

Note: Data is based on full-time employees

Table 56: City of Westlake Village Principal Employers

### Westlake Village Principal Property Tax Payers

Company	Taxable Assessed Value	Percent of Total City Assessed Value
Dole Food Company Inc	\$96,843,192	2.44%
Drawbridge 31303 Agoura LP	69,714,840	1.76%
Russell Ranch Road II LLC	67,345,813	1.70%
Teachers Insurance and Annuity Associates	65,019,315	1.64%
Conrad N Hilton Foundation	52,919,265	1.33%
Westlake Properties Inc	45,881,459	1.16%
SVAP III North Ranch Gateway	36,069,847	0.91%
TREA 30700 Russell Ranch Road	35,056,804	0.88%
Westlake Wellbeing Properties LLC	31,691,081	0.80%
Westlake HHG Hotel Development LP	27,199,164	0.69%
<b>Top 10 Total</b>	<b>\$527,740,780</b>	<b>13.29%</b>
<b>Total Property Tax Assessed Value</b>	<b>\$3,969,705,005</b>	<b>100.0%</b>

Source: 2021- 2022 Comprehensive Annual Financial Report for the City of Westlake Village, Fiscal Year Ended June 2022

Table 57: City of Westlake Village Principal Property Tax Payers

**Westlake Village Taxable Sales**

Category	Taxable Sales	Percent of Total
Business to Business	512,674	11.73%
Construction	410,982	9.41%
Food Products	1,173,738	26.87%
General Retail	2,019,598	46.23%
Miscellaneous	31,854	0.73%
Transportation	220,119	5.04%
<b>Total</b>	<b>\$4,368,965</b>	<b>100.00%</b>

Source: 2021- 2022 Comprehensive Annual Financial Report for the City of Westlake Village, Fiscal Year Ended June 2022  
 Table 58: City of Westlake Village Taxable Sales

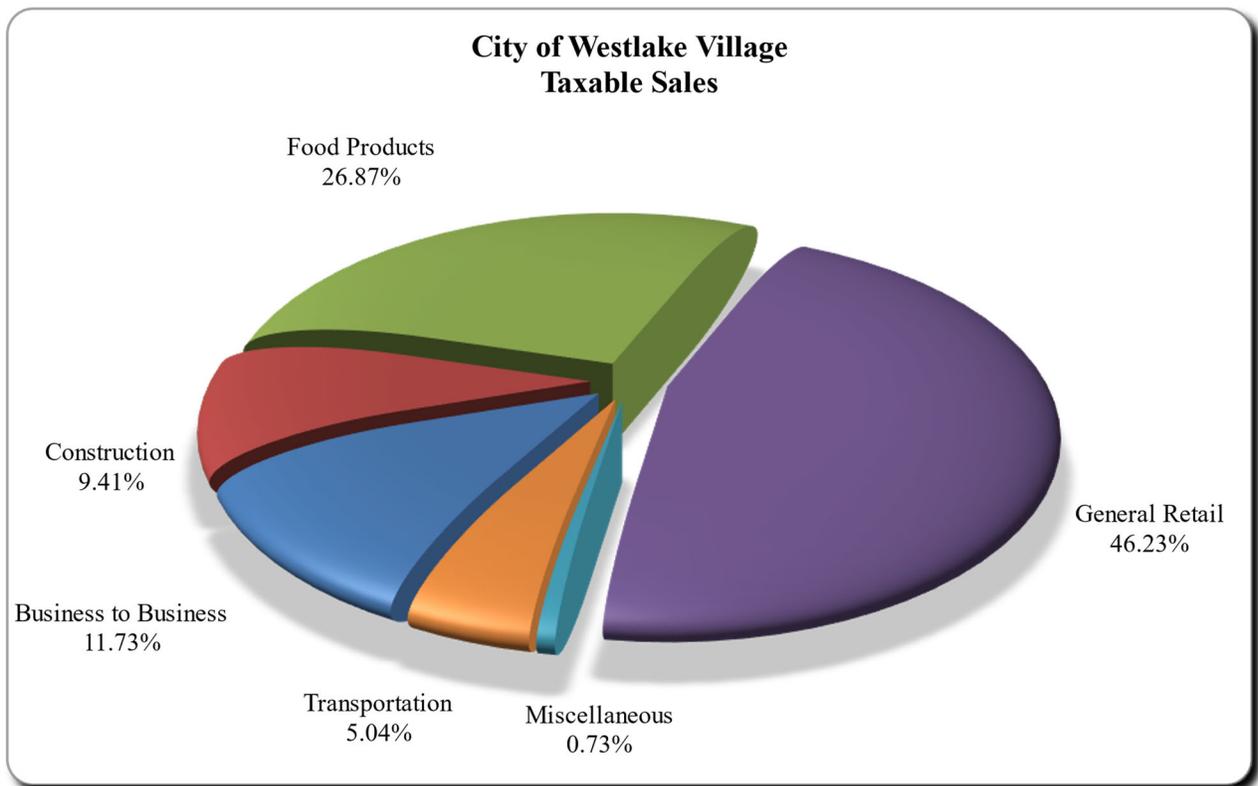


Figure 54: City of Westlake Village Taxable Sales Percentage by Category

### Westlake Village Economy

The table below provides a breakdown of revenue channels for the City of Westlake Village in 2017. These categories include Accommodation and Food Services, Health Care and Social Assistance, Transportation and Warehousing, and Retail Sales. The total revenues accrued by the city amounted to approximately \$576.35 Million, which included Total Retail Sales per capita of \$41,342.

Category	Value (in thousands)	Percent
Total Accommodation and Food Services Sales	\$130,840	22.70%
Total Health Care and Social Assistance Receipts/Revenue	\$101,332	17.58%
Total Transportation and Warehousing Receipts/Revenue	NA	0.00%
Total Retail Sales	\$344,134	59.71%
<b>Total</b>	<b>\$576,306</b>	<b>100.00%</b>

Source U.S. Census Bureau 2017 Economic Census of the U.S.

Table 59: City of Westlake Village Economy

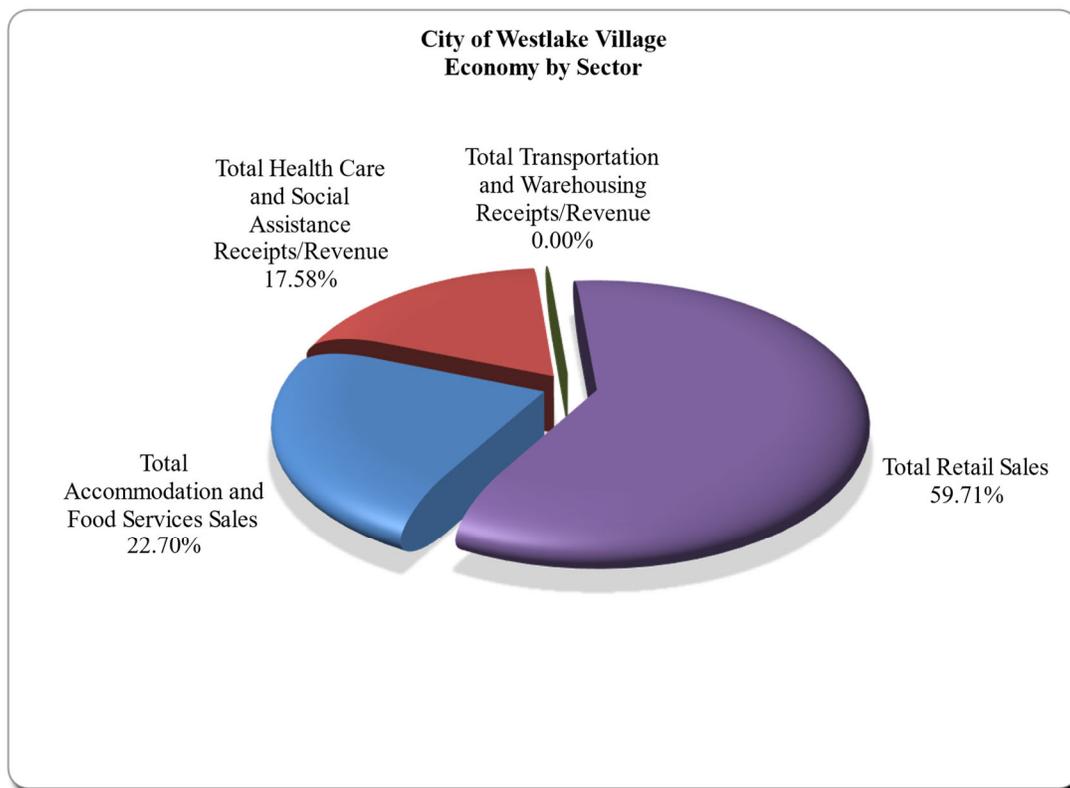


Figure 55: City of Westlake Village Economy by Sector

### Population and Demographics

The following tables summarize the population and demographic groups at risk from a disaster in Westlake Village.

#### Sex and Age Distribution

Demographic Estimates - 2021		
Sex and Age	Estimate	Percent
<b>Total Population</b>	<b>8,081</b>	<b>100.0%</b>
Male	3,773	47%
Female	4,308	53%
<b>Age Distribution</b>		
Under 5 years	323	4.00%
5 to 9 years	424	5.20%
10 to 14 years	417	5.20%
15 to 19 years	452	5.60%
20 to 24 years	284	3.50%
25 to 29 years	233	2.90%
30 to 34 years	448	5.50%
35 to 39 years	496	6.10%
40 to 44 years	401	5.00%
45 to 49 years	607	7.50%
50 to 54 years	578	7.20%
55 to 59 years	452	5.60%
60 to 64 years	863	10.70%
65 to 69 years	658	8.10%
70 to 74 years	658	8.10%
75 to 79 years	347	4.30%
80 to 84 years	170	2.10%
85 years and over	270	3.30%
<b>Median age (years)</b>	<b>49.4</b>	

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 60: City of Westlake Village Sex and Age Demographics

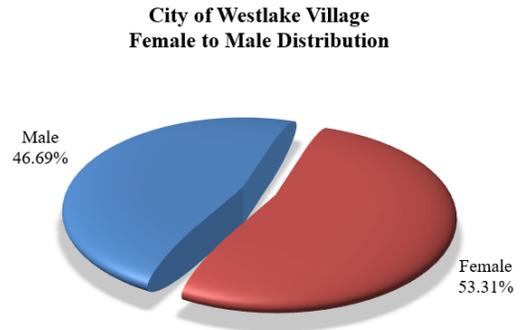


Figure 56: City of Westlake Village Female to Male Distribution

The average age of residents in Westlake Village is 49.4 with females (53.31%) outnumbering males (46.69%). Mitigation planning must consider the unique needs of population groups, for example those under 15 years of age and those over 65 years of age.

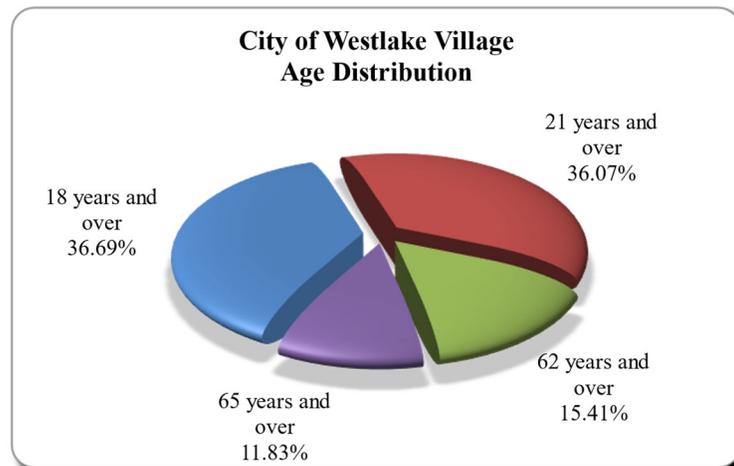


Figure 57: City of Westlake Village Age Distribution

## Race and Language Composition

### Race

One aspect of mitigation planning is the need to address the cultural and language (communications) needs of local populations. This includes the ability to distribute information and provide notification in the event of a regional emergency. For Westlake Village, an estimated 14.7% of the population speaks languages other than English (including English and another language or non-English only) with 1.1% speaking English “less than well or not at all”. These language and communication challenges may pose additional difficulties for socially vulnerable groups during a disaster.

Race	2021 Estimated Population	Percent of Total
<b>Total Population</b>	<b>8,081</b>	<b>100.0%</b>
White alone	6,217	76.93%
Black or African American alone	51	0.63%
Hispanic or Latino (of any race)	785	9.71%
American Indian and Alaska Native alone	3	0.04%
Asian alone	515	6.37%
Native Hawaiian and Other Pacific Islander alone	0	0.00%
Some other race alone	0	0.00%
Two or more races	510	6.31%

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 61: City of Westlake Village Race Composition

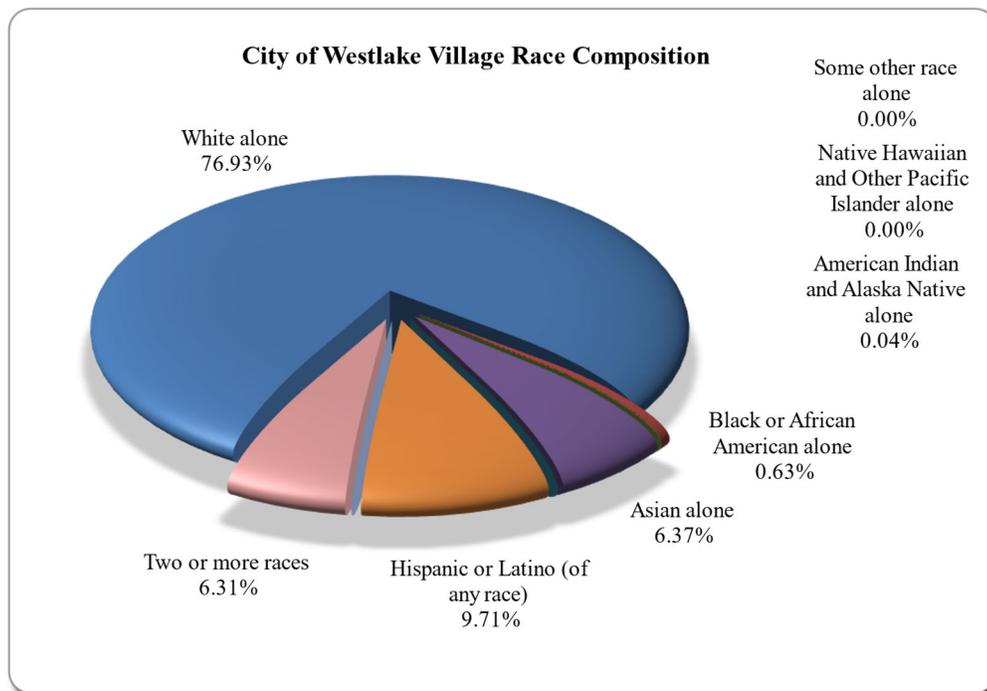


Figure 58: City of Westlake Village Race Distribution

*Languages Spoken at Home*

Language	2021 Estimated Population	Percent of Total
Speaks only English	6,568	84.70%
Language other than English spoken at home, percent of persons age 5 years+, 2017-2021	1,190	15.30%
Speak a Language Other than English	2021 Estimated Population	Percent of Total
<b>Spanish</b>	<b>412</b>	<b>5.30%</b>
5 to 17 years old	118	1.50%
18 to 64 years old	261	3.40%
65 years old and over	33	0.40%
<b>Other Indo-European languages</b>	<b>390</b>	<b>5.00%</b>
5 to 17 years old	6	0.10%
18 to 64 years old	299	3.90%
65 years old and over	85	1.10%
<b>Asian and Pacific Island languages</b>	<b>347</b>	<b>4.50%</b>
5 to 17 years old	98	1.30%
18 to 64 years old	178	2.30%
65 years old and over	71	0.90%
<b>Other languages</b>	<b>41</b>	<b>0.50%</b>
5 to 17 years old	16	0.20%
18 to 64 years old	25	0.30%
65 years old and over	0	0.00%

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 62: City of Westlake Village Languages Spoken at Home

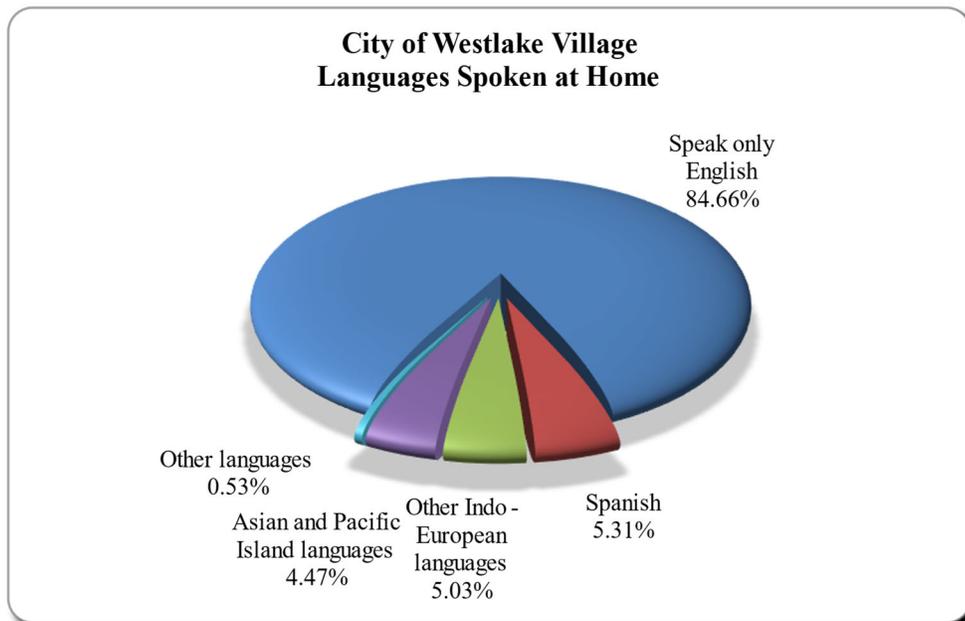


Figure 59: City of Westlake Village Languages Spoken at Home

**Income Distribution**

Household income is a factor for mitigation planning since population groups in lower income ranges are less able to cope with the impact of disasters.

Furthermore, the availability of household funds can have a direct impact on the level of individual and family hazard mitigation activities and emergency preparedness.

In Westlake Village, while the mean household income is \$243,719 there are a limited number of households with incomes less than \$25,000, near the 2023 U.S. poverty level of \$24,860 for a family of three as defined by the 2023 HHS Poverty Guidelines, by the U.S. Department of Health & Human Services.\*

Income and Benefits (in 2021 Inflation-Adjusted Dollars)		
	Estimate	Percent
<b>Total Households</b>	<b>3,090</b>	<b>100.0%</b>
Less than \$10,000	87	2.80%
\$10,000 to \$14,999	93	3.00%
\$15,000 to \$24,999	49	1.60%
\$25,000 to \$34,999	59	1.90%
\$35,000 to \$49,999	155	5.00%
\$50,000 to \$74,999	334	10.80%
\$75,000 to \$99,999	173	5.60%
\$100,000 to \$149,999	433	14.00%
\$150,000 to \$199,999	457	14.80%
\$200,000 or more	1,251	40.50%
<b>Median household income (dollars)</b>	<b>166,316</b>	<b>(X)</b>
<b>Mean household income (dollars)</b>	<b>243,719</b>	<b>(X)</b>

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 63: City of Westlake Village Income and Benefits (2021 Inflation Adjusted Dollars)

\*Note: The households with minimal incomes may also be attributable to retirees and others that have other sources of funds not reportable as income.

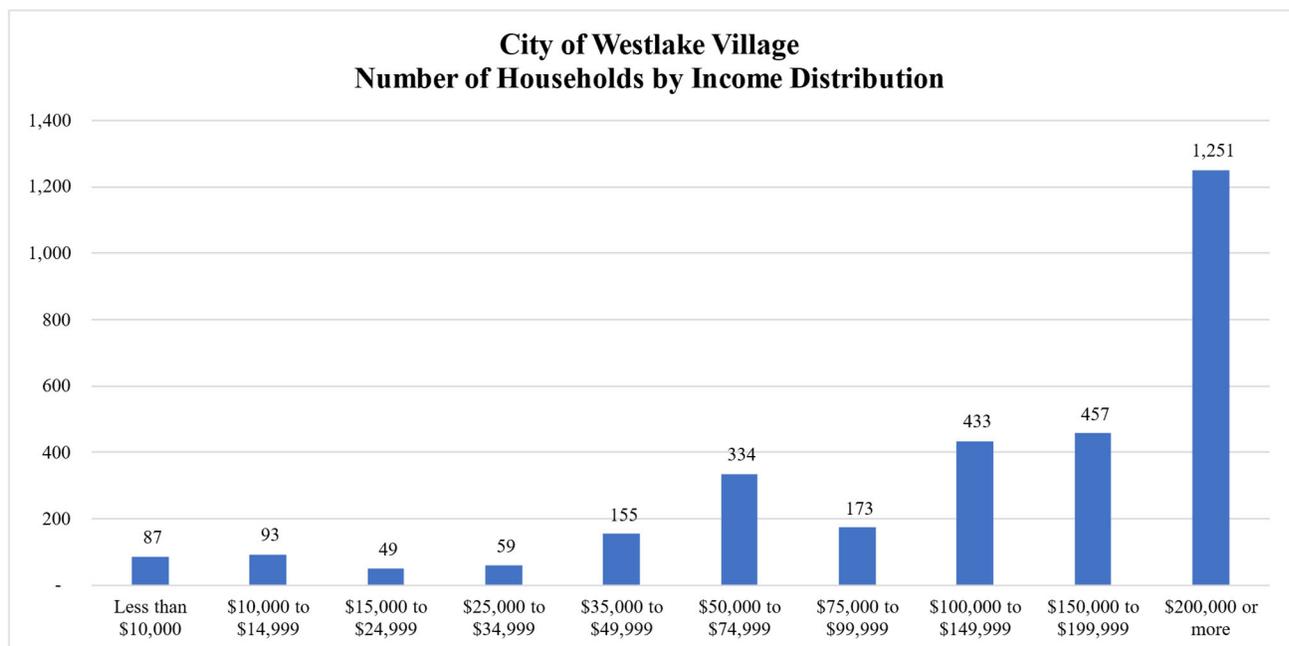


Figure 60: City of Westlake Village Income Distribution

**Land Use**

Westlake Village is a master-planned community which began development in 1966. The City is centered around a man-made lake which straddles the Los Angeles and Ventura County line. Westlake Village encompasses twenty individual neighborhoods, with active homeowners' associations to promote and maintain architectural standards. The City has an array of housing types including: townhomes, condominiums, mobile homes, single-family and lakefront residences, and view-oriented estates. In addition, within the Westlake Village city limits are approximately 850 commercial and light industrial businesses. There multiple business parks and the city hosts several company headquarters.

**Housing Characteristics**

The following housing statistics provide a summary of the numbers and types of housing units that are at risk if a disaster were to occur in Westlake Village. Housing data includes: Housing Occupancy, Units in Structure Change from 2017 to 2021, Number of Structures Built by Year, Home Values, and Home Value Distribution. In Westlake Village, there has been an overall decrease in structures since 2017, with the largest decrease in smaller (1-unit, detached) structures.

Housing Occupancy	Estimate	Percent
<b>Total Housing Units</b>	<b>3,273</b>	<b>100.00%</b>
Occupied housing units	3,090	94.40%
Vacant housing units	183	5.60%

Source U.S. Census Bureau 2017-2021 American Community Survey 5-Year Estimate

Table 64: City of Westlake Village Housing Occupancy

Units In Structure	2021		2017		Change	
	Estimated Number	Percent of Units	Number	Percent of Units	Difference 2021-2017	Percent Change
<b>Total Housing Units</b>	<b>3,273</b>	<b>100.00%</b>	<b>3,569</b>	<b>100.00%</b>	<b>-296</b>	<b>-8.29%</b>
1-unit, detached	2,243	68.50%	2,486	69.70%	-243	-9.77%
1-unit, attached	590	18.00%	714	20.00%	-124	-17.37%
2 units	0	0.00%	26	0.70%	-26	-100.00%
3 or 4 units	88	2.70%	58	1.60%	30	51.72%
5 to 9 units	120	3.70%	82	2.30%	38	46.34%
10 to 19 units	18	0.50%	34	1.00%	-16	-47.06%
20 or more units	20	0.60%	40	1.10%	-20	-50.00%
Mobile home	194	5.90%	129	3.60%	65	50.39%
Boat, RV, van, etc.	0	0.00%	0	0.00%	0	-

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 65: City of Westlake Village Units in Structure Change from 2017 to 2021

In terms of risk and disaster mitigation, older structures that have not been retrofitted or otherwise improved may be more susceptible to damage or destruction due to age and the fact that older building codes were less stringent than those required for newer structures. As a result, the inventory of older structures is a consideration when developing mitigation plans.

In Westlake Village, 96.9% of structures (3,173) were built prior to 2000 and 64.2% (2,102) before 1980.

Year Structure Built	Estimate	Percent
<b>Total housing units</b>	<b>3,273</b>	<b>100.00%</b>
Built 2020 or later	0	0.00%
Built 2010 to 2019	9	0.30%
Built 2000 to 2009	91	2.80%
Built 1990 to 1999	409	12.50%
Built 1980 to 1989	662	20.20%
Built 1970 to 1979	926	28.30%
Built 1960 to 1969	1,125	34.40%
Built 1950 to 1959	46	1.40%
Built 1940 to 1949	0	0.00%
Built 1939 or earlier	5	0.20%

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 66: Year Structures Built in Westlake Village

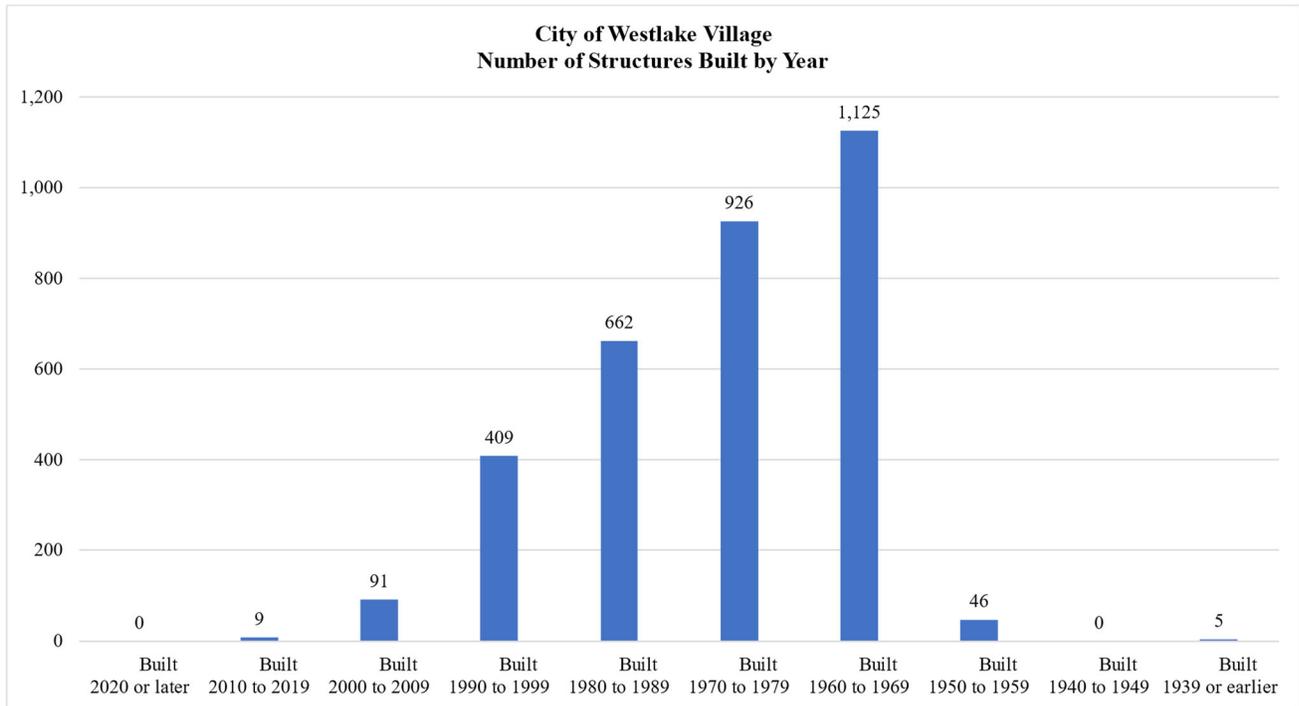


Figure 61: City of Westlake Village Number of Structures Built by Year

Home values are an important consideration when evaluating the potential dollar loss due to disasters. These values can also be used to assess the cost/benefit of mitigation activities and planning. In Westlake Village, the majority of Owner Occupied Units are valued over \$500,000. Consequently, the potential dollar losses from a disaster can rapidly escalate – illustrating the need for mitigation planning.

Value		
	Estimate	Percent
<b>Owner-Occupied Units</b>	<b>2,492</b>	<b>100.0%</b>
Less than \$50,000	0	0.00%
\$50,000 to \$99,999	0	0.00%
\$100,000 to \$149,999	9	0.40%
\$150,000 to \$199,999	8	0.30%
\$200,000 to \$299,999	16	0.60%
\$300,000 to \$499,999	255	10.20%
\$500,000 to \$999,999	905	36.30%
\$1,000,000 or more	1,299	52.10%
<b>Median (dollars)</b>	<b>\$1,029,100</b>	<b>(X)</b>

Source U.S. Census Bureau 2021 American Community Survey 5-Year Estimate

Table 67: Westlake Village Home Value Distribution

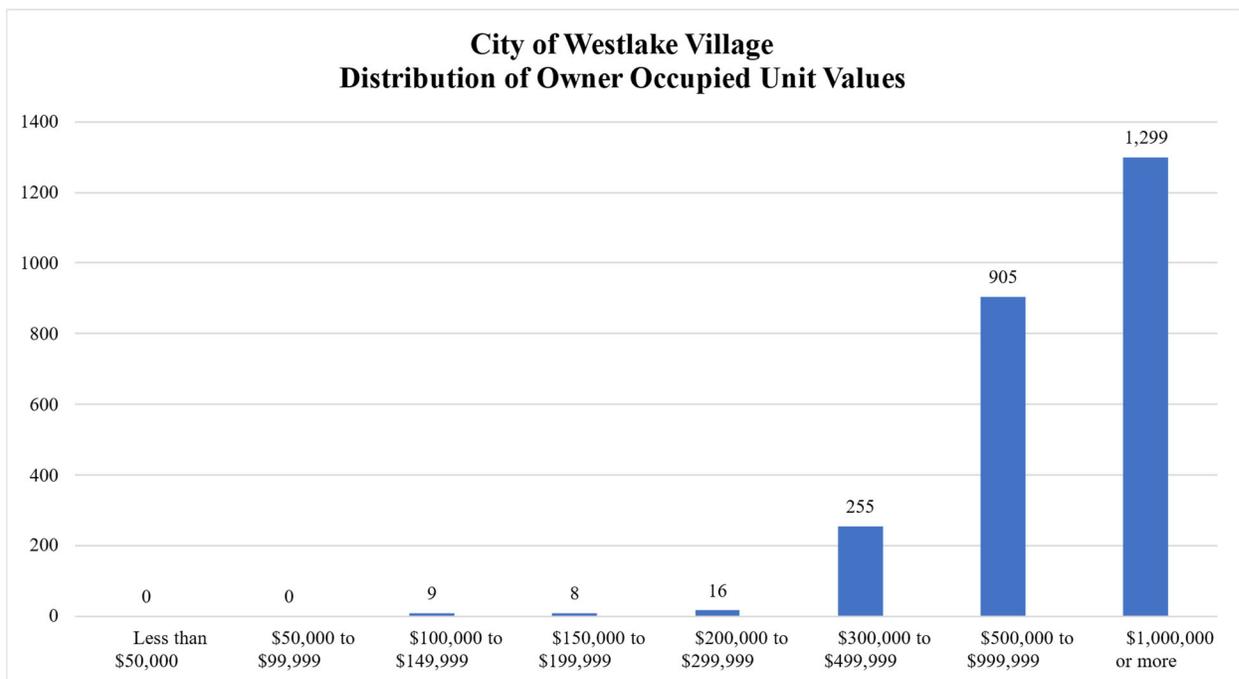


Figure 62: Westlake Village Distribution of Owner Occupied Unit Values

## ***Emergency Preparedness***

The City of Westlake Village contracts with the Los Angeles County Sheriff for local public safety services primarily through the Malibu/Lost Hills Sheriff Station. Fire protection is through the Los Angeles County Fire Protection District with Fire Station #144 providing suppression, rescue, and fire prevention services. Westlake Village also provides Emergency Preparedness information to the public via the Westlake Village website.

## **Standard Emergency Management System**

The City of Westlake Village has adopted California's Standardized Emergency Management System (SEMS) for managing the response to a multi-agency and multi-jurisdiction emergency. SEMS also serves to facilitate communications and coordination among all levels of the response system and among all responding agencies.

## **Public Involvement Groups**

Public input and participation plays an important role in Westlake Village's emergency preparedness efforts. Residents participate on advisory boards and committees (e.g., the Public Safety Advisory Board) as well as the Westlake Village Community Emergency Response Team.

## **Community Emergency Response Team (CERT)**

Since 1994 the City of Westlake Village has maintained a volunteer disaster response team comprised of local residents. The Westlake Village CERT is activated in the event of a disaster and functions to aid local neighborhoods and assist emergency response personnel. An order for activation can come from the City Council, the City Manager, the Sheriff's Department or the Fire Department.

The Westlake Village CERT also provides community disaster preparedness education by conducting basic training classes for residents. Residents who attend the basic training are better prepared to protect themselves, their families, and their businesses in the event of a disaster. The intent is that for every person who attends this training there will be one less person who will need aid during a disaster.

## **Volunteers on Patrol**

The City of Westlake Village enhances local law enforcement services through the City's Volunteers on Patrol Program. The program consists of a core group of volunteers who are sponsored by the City of Westlake Village and are trained by the Malibu/Lost Hills Sheriff's Station. Westlake Village provides a marked vehicle, uniforms, and specialized equipment. The program volunteers provide a variety of services including patrolling neighborhoods and shopping centers, performing patrol checks of businesses, checking on the homes of residents when they are on vacation, and responding to related civilian requests. In addition, the volunteer patrol members serve as a mobile Neighborhood Watch for the community.

## Finalsite Connect

The City of Westlake Village implemented the Connect-CTY (Finalsite Inc.) service allowing authorized civic leaders to create and rapidly disseminate emergency messages to every telephone number stored in the notification database.



Welcome to the Blackboard Connect Portal website for the CITY OF WESTLAKE VILLAGE. Please enter your contact information here so local leadership may contact you with important messages in the public interest.

Email:

Password:

[Forgot your password?](#)

Remember me

or [Sign Me Up!](#)

Figure 63: City of Westlake Village Finalsite Connect Sign-up Page

## Notify Me

The City of Westlake Village uses an additional communication function via the city website known as “Notify Me” to communicate emergency alerts as well as other notifications to its residents.

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## SECTION 3. RISK ASSESSMENT

The goal of mitigation is to reduce the future impacts of hazards. Hazards can result in injuries and the loss of life, cause property damage, disrupt the local economy, and force the expenditure of large amounts of public and private funds to assist with recovery. In order to focus efforts on the most likely and highest impact scenarios, mitigation must be based on a comprehensive Risk Assessment.

A Risk Assessment measures the potential loss from a hazard event by evaluating the vulnerability of buildings, infrastructure and people. It identifies the characteristics and potential consequences of hazards, how much of the community could be affected by a hazard, and the impact on community assets. Risk Assessments consist of:

- Hazard Identification and Risk Analysis
- Vulnerability Analysis / Loss Estimates

*Note: This Risk Assessment presents loss estimates and provides a foundation for evaluating mitigation measures should a real hazard event occur. The loss estimates are intended to support the decision-making process for mitigation efforts.*

*It is important to note that the loss estimates calculated for this Risk Assessment used available data and methodologies and are approximate. These estimates should be used to understand the relative risk from hazards and potential losses and are not intended to be predictive of precise results.*

*Uncertainties are inherent in any loss estimation methodology arising in part from incomplete scientific knowledge concerning natural hazards and their effects on the built environment. Uncertainties also result from approximations and simplifications that are necessary in developing vulnerability estimates (e.g., risk of loss projections and relative likelihood of occurrence). These factors can result in a range of uncertainty in loss estimates produced by this analysis.*

## DISASTER HISTORY

Emergencies and disasters can cause damage to the Las Virgenes-Malibu Region and its residents, businesses, infrastructure and the environment. These disasters can cause fatalities or injuries and expense in terms of response and recovery dollars.

The cities that comprise the Las Virgenes-Malibu Council of Governments have experienced natural disasters in the past and continue to have the potential for future events. While the risk of disasters cannot be eliminated, the effects can be reduced through a well-organized public education and awareness effort, preparedness and mitigation. In addition, communities must be prepared to provide efficient and effective response and recovery. Furthermore, careful planning and collaboration among public agencies, private sector organizations, and citizens within the community can minimize the losses that result from disasters.

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To illustrate the potential hazards to the region, a review of historical events can provide indicators for future threats to the area. The table below provides a summary of FEMA declared disasters occurring in Los Angeles County from 2017 to October 2023.

Disaster Number	Declaration Type	FY Declared	Incident Type	Declaration Title	IH Program Declared	IA Program Declared	PA Program Declared	HM Program Declared	Incident Begin Date	Incident End Date
4699	DR	2023	Severe Storm	SEVERE WINTER STORMS, STRAIGHT-LINE WINDS, FLOODING, LANDSLIDES, AND MUDSLIDES	0	0	1	1	2023-02-21	2023-07-10
4683	DR	2023	Flood	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, AND MUDSLIDES	0	0	1	1	2022-12-27	2023-01-31
3592	EM	2023	Flood	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, AND MUDSLIDES	0	0	1	0	2023-03-09	2023-07-10
3591	EM	2023	Flood	SEVERE WINTER STORMS, FLOODING, AND MUDSLIDES	0	0	1	0	2023-01-08	2023-01-31
4569	DR	2021	Fire	WILDFIRES	1	0	1	1	2020-09-04	2020-11-17
5374	FM	2020	Fire	BOBCAT FIRE	0	0	1	1	2020-09-13	
5297	FM	2020	Fire	GETTY FIRE	0	0	1	1	2019-10-28	
5296	FM	2020	Fire	TICK FIRE	0	0	1	1	2019-10-24	
5293	FM	2020	Fire	SADDLERIDGE FIRE	0	0	1	1	2019-10-10	
4482	DR	2020	Biological	COVID-19 PANDEMIC	1	0	1	1	2020-01-20	2023-05-11
3428	EM	2020	Biological	COVID-19	0	0	1	0	2020-01-20	2023-05-11
5280	FM	2019	Fire	WOOLSEY FIRE	0	0	1	1	2018-11-08	
4407	DR	2019	Fire	WILDFIRES	1	0	1	1	2018-11-08	2018-11-25
3409	EM	2019	Fire	WILDFIRES	0	0	1	0	2018-11-08	2018-11-25
5227	FM	2018	Fire	SKIRBALL FIRE	0	0	1	1	2017-12-06	2017-12-15
5226	FM	2018	Fire	RYE FIRE	0	0	1	1	2017-12-05	2017-12-14
5225	FM	2018	Fire	CREEK FIRE	0	0	1	1	2017-12-05	2017-12-14
4353	DR	2018	Fire	WILDFIRES, FLOODING, MUDFLOWS, AND DEBRIS FLOWS	1	0	0	1	2017-12-04	2018-01-31
3396	EM	2018	Fire	WILDFIRES	0	0	1	0	2017-12-04	2017-12-29
5201	FM	2017	Fire	LA TUNA FIRE	0	0	1	1	2017-09-01	2017-09-10
4305	DR	2017	Flood	SEVERE WINTER STORMS, FLOODING, AND MUDSLIDES	0	0	1	1	2017-01-18	2017-01-23

Table 68: Los Angeles County Federal Declared Disasters from 1995-2010

Source: FEMA

**FEMA Disaster Declaration Key**

<b>Disaster Number</b>	Sequentially assigned number used to designate an event or incident declared as a disaster.
<b>Disaster Type</b>	Two-character code that defines if this is a major disaster, fire management or emergency declaration.
<b>Incident Type</b>	Type of incident such as fire or flood. For more information on incident types, please visit <a href="https://www.fema.gov/disasters/how-declared">https://www.fema.gov/disasters/how-declared</a> .
<b>IH</b>	Denotes whether the Individuals and Households program was declared for this disaster
<b>IA</b>	Denotes whether the Individual Assistance program was declared for this disaster.
<b>PA</b>	Denotes whether the Public Assistance program was declared for this disaster.
<b>HM</b>	Denotes whether the Hazard Mitigation program was declared for this disaster.
<b>Incident Date</b>	Date the incident itself ended
<b>Disaster Closeout Date</b>	Date all financial transactions for all programs are completed

## FEDERAL REQUIREMENTS FOR RISK ASSESSMENTS

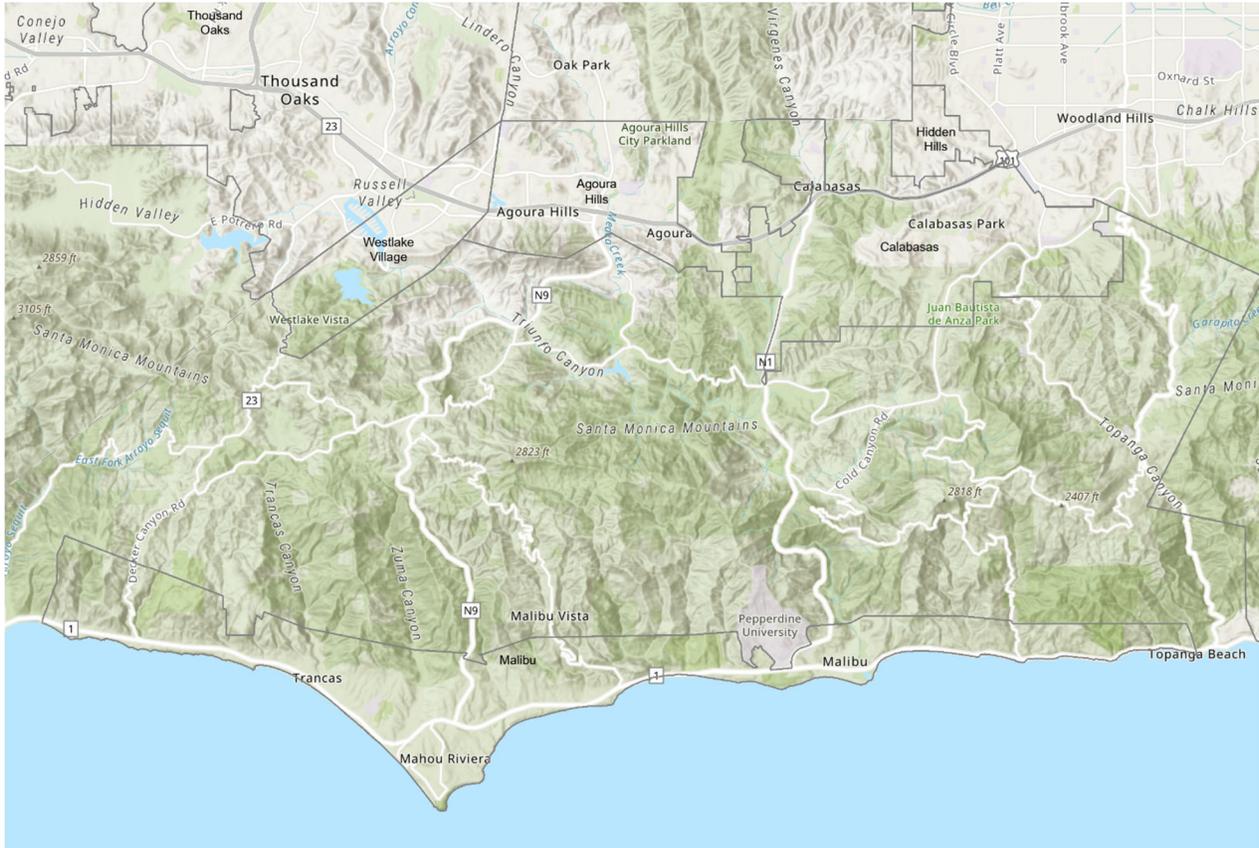
Federal regulations for hazard mitigation plans outlined in 44 CFR Part 201 include a requirement for conducting a Risk Assessment. This Risk Assessment requirement is intended to provide information that will help communities identify and prioritize mitigation activities that will reduce losses from the identified hazards. The hazards profiled in this mitigation plan, include: earthquakes, earth movement (including landslide), flooding, fires (including wildland and structural), windstorms and terrorism.

The Federal criteria for conducting Risk Assessments under 44 CFR Part 201 (Section 322 of the Stafford Act, 42 U.S.C. 5165) and information on how the Las Virgenes-Malibu Council of Governments Hazard Mitigation Plan meets those criteria are outlined below.

Section 322 Plan Requirement	How is this addressed?
Identifying Hazards	Each hazard section includes an inventory of selected available data sources that identify hazard areas. Maps identifying the locations of hazards in the Las Virgenes-Malibu Council of Governments Region are provided in this Risk Assessment and in each individual hazard section, i.e., Earthquake, Wildfire, Wind, Landslide, Flood, and Terrorism.
Profiling Hazard Events	Each hazard section includes documentation of the history and causes and characteristics of the hazard in the Region.
Assessing Vulnerability: Identifying Assets	The “hazard identification” and “risk assessment” provide a summary of the vulnerability assessment from each hazard and (where data is available) contain the types and numbers of existing buildings, infrastructure and critical facilities exposed to each hazard.
Assessing Vulnerability: Estimating Potential Losses	The calculations of the impact of the hazard (if data was available), the economic exposure, and physical losses, are discussed in this Risk Assessment and under each hazard of this Hazard Mitigation Plan. Vulnerability assessments were completed for the hazards addressed in the plan, and quantitative estimates were made (when data was available) for each hazard.
Assessing Vulnerability: Analyzing Development Trends	The Community Profile Section of this plan provides a description of the development trends in the Region, including the geography and environment, population and demographics, land use and development, housing and community development, employment, business-base, and transportation data.

## HAZARD IDENTIFICATION AND RISK ANALYSIS

Hazard identification consists of (1) defining the study area in terms of scale and coverage; and (2) collecting and compiling a list of prevalent hazards in the study area to help narrow the focus of the analysis. The figure below depicts the study area (Las Virgenes-Malibu COG jurisdictions).



Map 12: LVMCOG Study Area

## Hazard Identification Process

### Incorporation of Existing Plans

The State of California Hazard Mitigation Plan, Los Angeles County All-Hazard Mitigation Plan, and Los Angeles County Operational Area (OA) Emergency Response Plan, Hazard Analysis and Mitigation section were reviewed to update and validate this HMP Risk Assessment, prioritized list of hazards, as well as inform potential strategies for mitigation. Specific information from these plans that assisted in the development of the HMP included:

State of California Hazard Mitigation Plan	Los Angeles County All-Hazard Mitigation Plan
<ul style="list-style-type: none"> <li>• LHMP Identified Hazards and Risks</li> <li>• Earthquakes and Geologic Hazards</li> <li>• Flood Hazards</li> <li>• Fire Hazards</li> <li>• Other Hazards including:                             <ul style="list-style-type: none"> <li>○ Climate and Weather Influenced Hazards</li> <li>○ Terrorism</li> <li>○ Cyber Threats</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Risk Assessment</li> <li>• Earthquake Hazard</li> <li>• Flood Hazard</li> <li>• Wildfire Hazard</li> <li>• Tsunami</li> <li>• Non-Significant Hazards</li> <li>• Mitigation Strategy Goals and Strategies</li> </ul>
<ul style="list-style-type: none"> <li>• Annex 1 – Guide to California Hazard Mitigation Laws, Policies, and Institutions</li> </ul>	<p><b>Los Angeles County OA Emergency Response Plan, Hazard Analysis and Mitigation Section</b></p> <ul style="list-style-type: none"> <li>• Hazard Analysis and Mitigation</li> <li>• Hazard Mitigation Goals</li> <li>• High, Moderate, and Low Risk Priority Hazards</li> </ul>

### Local Input and Surveys

In addition to the incorporation of existing plans, input on the types of hazards and relative risk was solicited from the Planning Group. Further, members of the community were asked for their feedback and participation in a Community Disaster Preparedness and Risk Survey that asked questions regarding the public’s general preparedness for disasters as well as which hazards were most likely to impact the local area. The following sections describe the process and results obtained.

### Planning Group Hazard Ratings

In order to obtain a more comprehensive rating of the hazards, LVMCOG MJHMP Planning Group participated in assesses the risk and vulnerability of hazards in the region. This method of tabulation considers the probability, magnitude/severity, the duration and warning time for each hazard and then produces a risk index. Hazard Rating Survey

### *Community and Public Participation*

The cities of Agoura Hills, Calabasas, Hidden Hills, Malibu and Westlake Village posted the Community Disaster Preparedness and Risk Survey (see **Annex C**) on their city websites. The public was asked for their input on the major risks to their communities and ideas for mitigating the impact of disasters. Further, five separate Preparedness and Mitigation Planning Workshops were held for each city to obtain additional feedback on the public’s disaster preparedness concerns and mitigation ideas (see **Annex E: Planning and Public Involvement**).

The public’s feedback was then incorporated into the HMP planning process. Specifically, the results of the survey were used to validate the risk assessment and risk rankings. Overall, based on magnitude, impact and probability - the community participants felt that earthquake and fire were the most likely hazard events to affect the area (which coincided with the results from the Planning Group).

### *Hazard Risk Survey*

The Planning Group completed a Hazard Risk Survey (see **Annex D**) to rank identified hazards according to probability, magnitude/severity, warning time, and duration using the values listed below and on the following pages.

#### **Probability**

Description	Value
<b>Highly Likely:</b> Frequent events with a well-documented history of occurrence OR an annual probability that is greater than 0.1.	4
<b>Likely:</b> Occasional occurrences with at least two or more documented historic events OR an annual probability that is between 0.1 and 0.01.	3
<b>Possible:</b> Rare occurrences with at least one documented or anecdotal historic event OR an annual probability between 0.01 and 0.001.	2
<b>Unlikely:</b> Extremely rare with no documented history of occurrence or events OR an annual probability less than 0.001.	1
<b>Not Applicable</b>	0

### Magnitude/Severity

Description	Value
<b>Catastrophic:</b> Severe property damages (greater than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and multiple deaths. Shut down of critical facilities for more than 1 month.	4
<b>Critical:</b> Moderate property damages (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least one death. Shut down of critical facilities for more than 1 week and less than 1 month.	3
<b>Limited:</b> Slight property damages (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). Injuries or illnesses do not result in permanent disability and there are no deaths. Moderate quality of life lost. Shut down of critical facilities for more than 1 day and less than 1 week.	2
<b>Negligible:</b> Negligible property damages (less than 5% of critical and non-critical facilities and infrastructure). Injuries or illnesses are treatable with first aid and there are no deaths. Negligible quality of life lost. Shut down of critical facilities for less than 24 hours.	1
Not Applicable	0

### Warning Time

*From the initial notification of a possible event to the actual occurrence of the event.*

Description	Value
Less than 6 hours or no warning	4
6 to 12 hours	3
12 to 24 hours	2
More than 24 hours	1
Not Applicable	0

### Duration

*From the start of the event to the return to normal conditions.*

Description	Value
More than 1 week	4
Greater than 24 hours, up to 1 week	3
Greater than 6 hours, up to 24 hours	2
Less than 6 hours	1
Not Applicable	0

### Hazard Risk Survey Results

The following table summarizes the results using the following equation and weighting factors:<sup>2</sup>

$$\text{Risk} = 0.45 * \text{Probability} + 0.3 * \text{Magnitude/Severity} + 0.15 * \text{Warning Time} + 0.1 * \text{Duration}$$

Hazard	Probability	Magnitude or Severity	Warning Time	Duration	Risk
Wildfire	4.28	2.7	0.45	2	9.43
Major Earthquake (M6.0 and above)	3.83	1.5	3	0.95	9.28
Power Outage / Energy Disruption	2.55	4.5	0.5	0.65	8.20
Pandemic	2.70	1.65	0.83	2	7.18
Terrorism / Mass Casualty	4.50	1.4	3	0.95	9.85
Severe Windstorm	1.95	1.1	0.45	0.43	3.93
Climate Change	4.05	1.8	0.45	0.95	7.25
Tsunami	0.75	0.5	0.34	0.37	1.95
Tsunami (Malibu)	0.9	0.6	0.3	0.4	2.20
Landslide / Mudslide	1.35	1.1	3	0.95	6.40
Severe Winter Storm	1.95	1.8	0.45	0.37	4.57

Table 69: Hazard Rating Survey

<sup>2</sup> Formula published by the Arizona Division of Emergency Management (2008)

### *Identified Hazards*

Based on the risk ratings for each hazard to the region, the Planning Group chose to incorporate the following hazards into the Hazard Mitigation Plan:

- Earthquake
- Wildfire
- Climate Change (including Drought and Extreme Heat)
- Energy Disruption / Power Outage
- Landslide (including Earth Movement/Debris Flow)
- Windstorm
- Flood and Severe Winter Storm
- Pandemic
- Terrorism

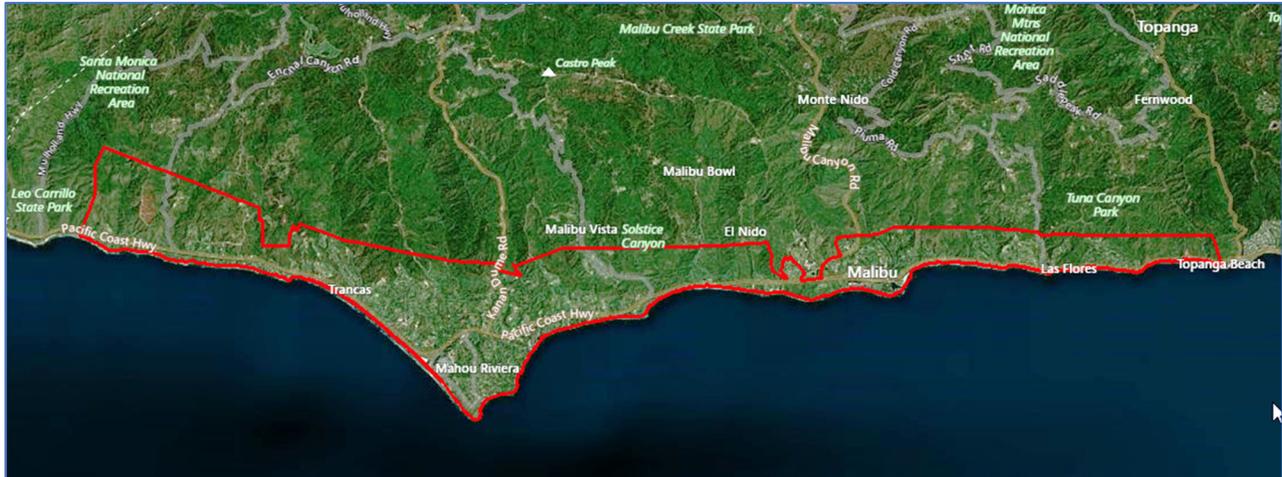
Each of these disasters can have widespread effects that include loss of life and property, disruption to critical infrastructure (utilities, communications, transportation, etc.), and economic impact to the area. Note: The only human generated disaster included in the plan for the Las Virgenes-Malibu Council of Governments is terrorism. Although this threat is viewed as unlikely, the lack of warning time raises the overall risk score.

### *Other Natural Disasters*

Tsunami, storm surge, sea-level rise, and drought are natural disasters that are other potential natural disasters. However, the overall risks of tsunami, storm surge, and sea-level rise are unique to the City of Malibu and not applicable to the other cities within the LVMCOG. Information and a discussion of the impact of tsunami, storm surge, and sea-level rise, are included below and in the **Flood, Tsunami, and Severe Winter Storm** section. Additionally, information and a discussion of the impact of drought is included below and in the **Climate Change** section.

## Tsunami

Although a tsunami has not been recorded within the Las Virgenes-Malibu Region, the City of Malibu is adjacent to the Pacific Ocean. So, while there is no record of a tsunami or repercussions of such an event in the area, the risk cannot be fully eliminated.



Map 13: City of Malibu Boundaries and Coastline

A 2013, a USGS study<sup>3</sup> developed a hypothetical but plausible tsunami scenario created by an earthquake of magnitude 9.1 along a fault length of 360 km in the Semidi subduction sector off the coast of Alaska. Based on this scenario, the study stated that, “*The SAFRR tsunami scenario demonstrates that many of the currently eroding beaches will have severe tsunami impacts and are at risk of beach loss. Malibu Beach will experience tsunami amplitudes of up to 2.5 m. Current velocities will average 2–3 m/s with some shoreline velocities of 5–8 m/s. The results show that much of the beach will be repeatedly inundated, as will several beach-front properties, including many high value homes.*”



Map 14: Tsunami Malibu Flood Zone Scenario of a M9.1 Alaska Earthquake

SOURCE: USGS

<sup>3</sup> Brosnan, Wein, and Wilson, SAFRR Tsunami Scenario – Impacts on California Ecosystems, Species, Marine Natural Resources, and Fisheries, 2013 (USGS Open File Report 2013-1170-G).

To address and mitigate the threats documented, plans have been developed for reducing the impact of a tsunami to the general public. Specifically, the City of Malibu has developed a tsunami information brochure and has designated several Tsunami Safe Areas and evacuation routes.

Tsunami Safe Areas
<ul style="list-style-type: none"> <li>• Malibu Bluffs Park</li> <li>• Hughes Research Labs parking lot</li> <li>• Malibu Creek State Park</li> <li>• Salvation Army Camps (behind Tapia Park)</li> </ul>
Evacuation Routes
<ul style="list-style-type: none"> <li>• Topanga Canyon Blvd.</li> <li>• Malibu Canyon Road</li> <li>• Kanan Road</li> <li>• Encinal Canyon Road</li> <li>• Mulholland Highway</li> </ul>



Table 70: City of Malibu Tsunami Safe Areas and Evacuation Routes

### Storm Surge

As a coastal community, the City of Malibu is vulnerable to high waves and storm surge. For example, in August 2014, Hurricane Marie caused extremely high surf in the region which resulted in the closure of several beaches in Los Angeles County and damage to the Malibu Pier. During this event, wave heights peaked from 10 to 15 feet. The damage to the pier took more than 2 years to completed at an estimated cost of \$4.6 million which included the replacement of at least 59 pilings.<sup>4</sup>



Figure 64: Topanga State Beach

Source: Source: California Department of Parks & Recreation



Figure 65: Malibu Pier

Source: California Department of Parks & Recreation

This risk of storm surge is related to the continued impact of [sea-level](#) rise and will continue to escalate as a risk in terms of life, safety, and economic impact into the future. In order to mitigate the threat of sea-level rise, the City of Malibu regulates development activities along the coast in conjunction with the regulatory authority of the State of California.

<sup>4</sup> Tallal, The Malibu Times, Phase II of Malibu Pier Repairs to Being This Week, December 21, 2016.

**Sea-Level Rise**

According to the City of Malibu General Plan, “Elevations within the City range from sea level to approximately 1,700 feet above sea level. Most of the developed areas along the coast lie below 100 feet with the exception of the Point Dume and Malibu Park areas which reach an elevation of 500 feet. The hillsides and coastal mesas such as Big Rock and Las Flores have elevations ranging from 300 to 400 feet above sea level.” As a consequence, the threat of sea level rise is a concern. According to a 2016 report on the risk of sea-level rise prepared for the County of Los Angeles<sup>5</sup>, the City of Malibu is at risk of sea-level rise due to the close proximity of assets and infrastructure to the shoreline and the anticipated reduction of beach width (sand front) along the coast due to wave runup and inundation. Further, continued sea-level rise will leave the City of Malibu more vulnerable to future storm events. Finally, if the situation continues, the erosion and loss of beaches can have a significant economic impact to the City.

As with the risk of storm surge, the City of Malibu regulates development activities along the coast in conjunction with the regulatory authority of the State of California. Other mitigation strategies in the future that may be undertaken by the State or County of Los Angeles may include beach sand replacement, sand dune maintenance, and shorefront protection strategies. These strategies were summarized in the 2016 report in the table, “Suggested Adaptive Management Strategy for Los Angeles County Public Beach Assets”<sup>5</sup> as follows:

Potential strategy for existing or future asset on beach	Region Malibu										Region Santa Monica Bay						Region Palos Verdes		
	Nicholas Canyon County Beach	El Sol County Beach	Zuma County Beach	Point Dume County Beach	Latigo Shores County Beach	Dan Blocker County Beach	Malibu Surfrider County Beach	Las Tunas County Beach	Topanga County Beach	Will Rogers State Beach	Venice Beach	Dockweiler State Beach	Manhattan Beach	Hermosa Beach	Redondo Beach	Torrance Beach	Royal Palms County Beach	White Point County Beach	Point Fermin Beach
Temporary winter berm protection			1							2	1	1	2	1	2	2			
Dune building and maintenance	2											2							
Maintain existing sand retention devices									2	2	2				2				
Beach nourishment			3	3					3	3	3	3	3	3	3				
Natural dunes and retreat	3	3			3	3	3	3									3	3	3

**Adaptive management strategy key**

- 1 = Short term period when sea-level rise is less than than 1 foot
- 2 = Transitional period when sea-level rise is between 1 and 2 feet
- 3 = Long term period when sea-level rise exceeds 2 feet

Table 71: Suggested Adaptive Management Strategy for Los Angeles County Public Beach Assets

<sup>5</sup> Noble Consultants-G.E.C., Inc., Final Report Los Angeles County Public Beach Facilities Sea-Level Rise Vulnerability Assessment, 2016.

## Drought

Drought can have a major economic, wildland/wildlife, and human impact. As of 2018, the Las Virgenes-Malibu region and much of the population in the State of California remain under severe drought conditions after more than 6 years of drought (U.S. Drought Monitor for California map below). Additional details on the impact of drought and climate change on the LVMCOG Region are included in the **Climate Change** section of this HMP.

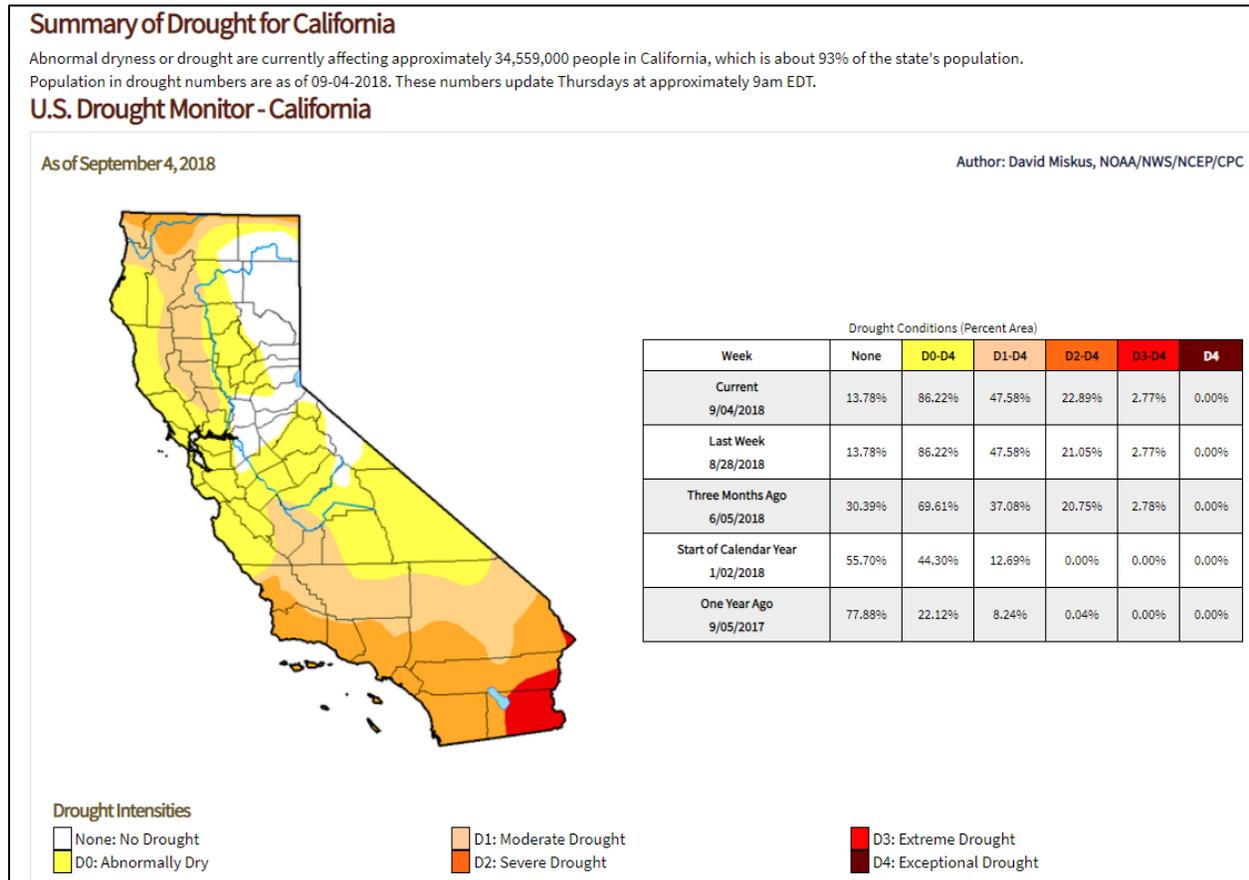


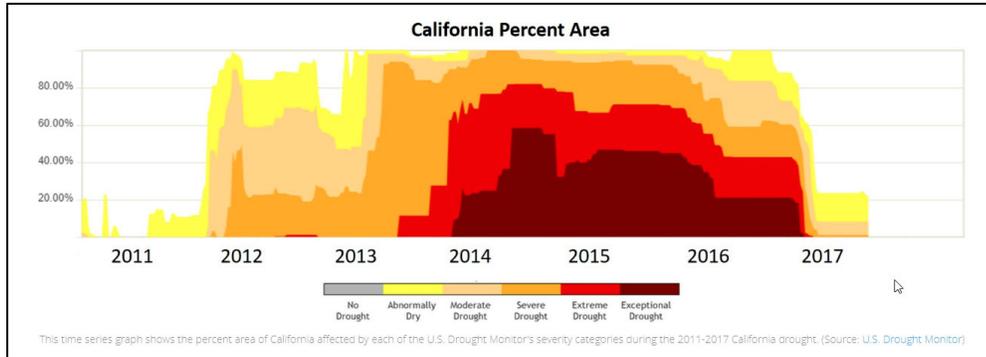
Figure 66: California Drought Monitor, September 2018

Source: National Integrated Drought Information System

Further, it is important to note that drought can have a secondary impact to the hydro-electric power generation capabilities of the entire western U.S. As a result, drought remains a concern for the entire western region.

### 2011 to 2017 Drought

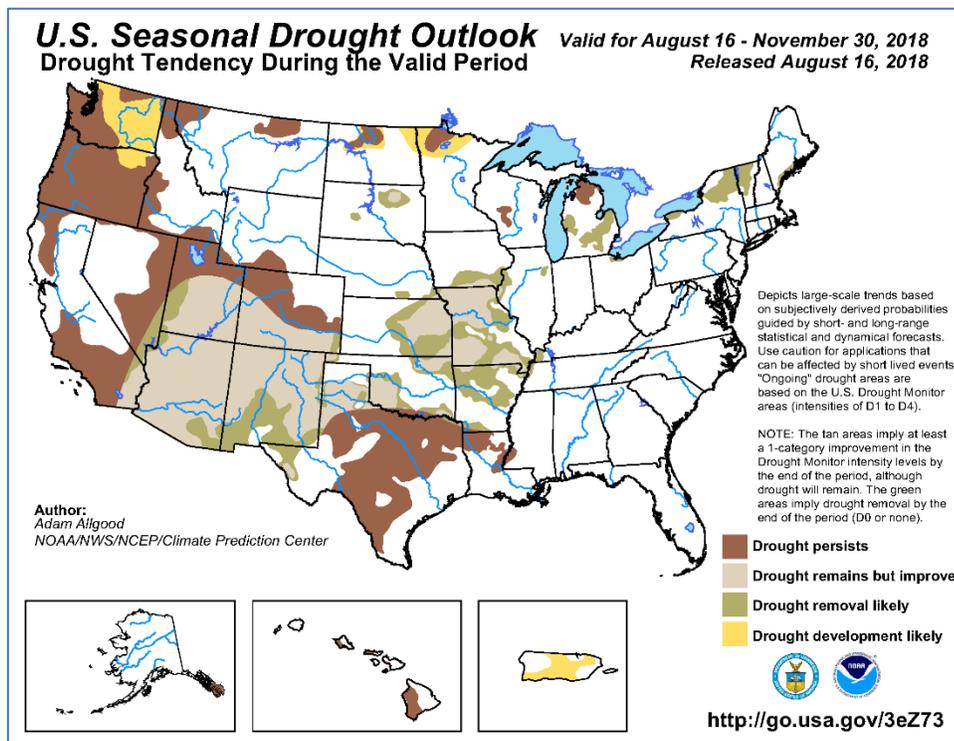
The 2011 to 2017 drought had a major impact on the entire state including the imposition of water use restrictions, water shortages in some areas, agricultural losses, and an increase in the threat of wildfire.



**Figure 67: 2011-2017 California Drought Percent of Area Impact by Year**  
 Source: National Integrated Drought Information System

### Future Drought Projections

Despite the heavy rains in 2017 that ended the historic California drought, the threat of ongoing and frequent drought remains. In fact, throughout 2018, drought has persisted in Southern California and much of the Western U.S. (see U.S. Seasonal Drought Outlook map below).

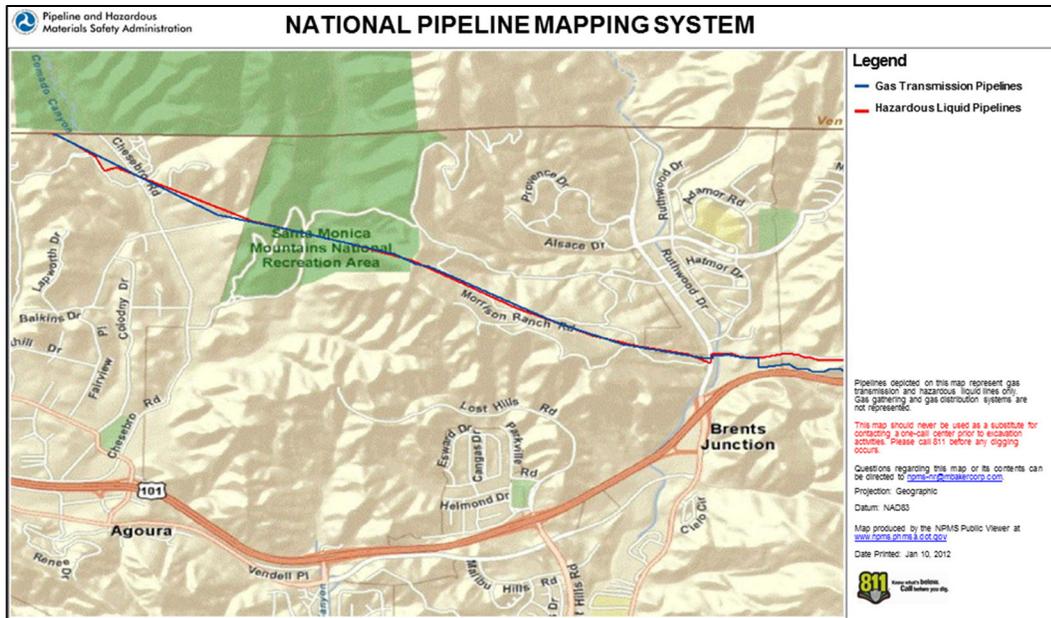


**Map 15: U.S. Seasonal Drought Outlook**  
 Source: NWS Climate Prediction Center

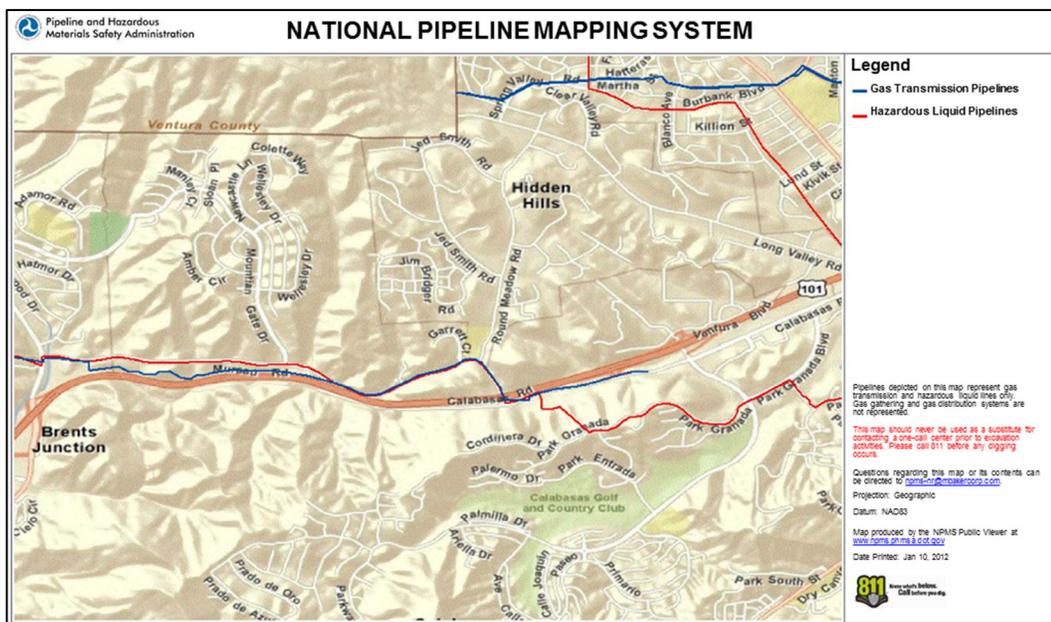
## Human Generated and Technology Disasters

### Pipeline Rupture / Explosion

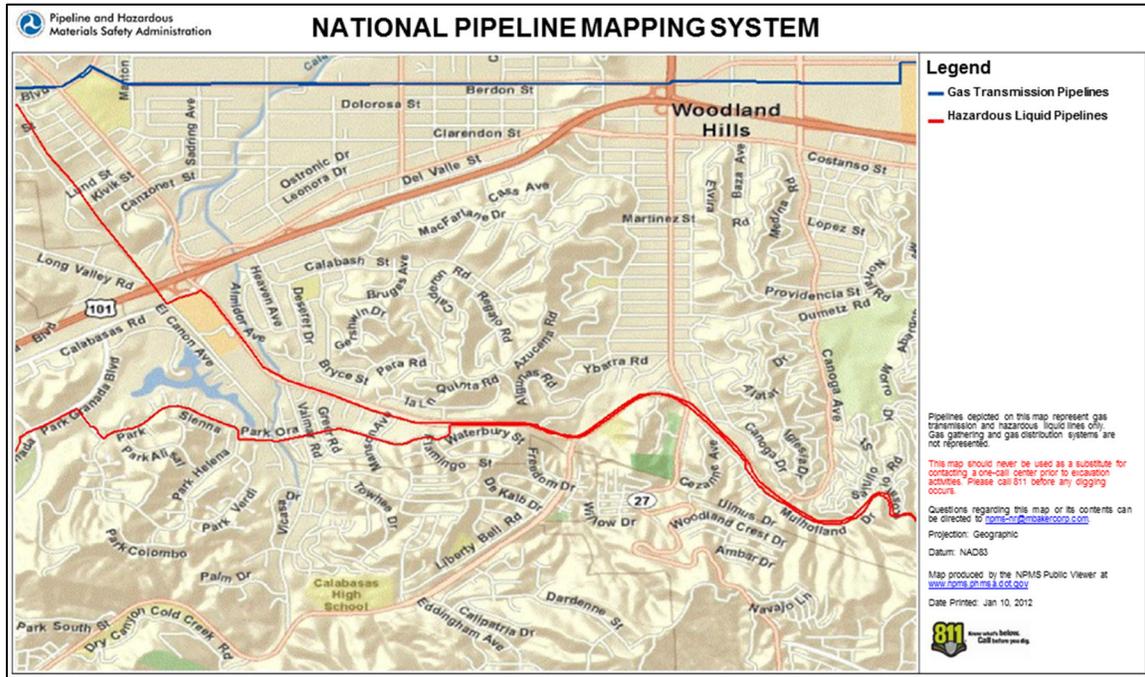
Natural gas transmission and hazardous liquid pipelines are present within the Las Virgenes-Malibu Region and there is a conceivable risk from rupture and/or explosion. Portions of Agoura Hills, Calabasas and Hidden Hills including areas of US 101 (Ventura Freeway), Ventura Boulevard, and surrounding neighborhoods have underground pipelines that pose a potential risk to discrete locations in the community.



Map 16: Pipelines - Agoura Hills



Map 17: Pipelines – West Calabasas and Hidden Hills



Map 18: Pipelines - East Calabasas

The San Bruno, California natural gas transmission pipeline rupture and fire on September 9, 2010 demonstrated the impact of this type of disaster to local populations. The pipeline operated by Pacific Gas and Electric Company ruptured releasing 47.6 million standard cubic feet of natural gas and produced a 72 foot-long by 26 foot-wide crater.

The explosion and resulting fire killed 8 people, left numerous injuries, destroyed 38 homes and damaged 70.<sup>6</sup> In addition, people in the surrounding neighborhood had to be evacuated until the danger subsided. While catastrophic in terms of lives and property loss, a pipeline rupture and/or explosion would be a localized event and not impact the Las Virgenes-Malibu Region as a whole. In terms of regional impact, the most widespread disruption would occur if there were significant damage to US 101. This would cause transportation issues for the entire area.



Figure 68: San Bruno Pipeline Explosion

Source: Cal-OES

<sup>6</sup> NTSB Pipeline Accident Report, Pacific Gas and Electric Company Natural Gas Transmission Pipeline Rupture and Fire, San Bruno, California, September 9, 2010 (NTSB Number: PAR-11-01, NTIS Number: PB2011-916501, Adopted: August 30, 2011).

## Hazardous Material Accidents

The Las Virgenes-Malibu Region could be affected by hazardous materials incidents. The spills/releases of material can result from both stationary and mobile sources. The level of exposure from stationary sources is considered to be very low, due to the types of business and industry conducted within the Region (traffic from major highways and railways still pose a risk). Although there are sites in the general vicinity known to harbor hazardous materials, there is no record of a major hazardous material spill or incident in the cities within the Region. Because of this low historical frequency, the Planning Group did not address this disaster.

## Cyber Attacks

The threat of a cyber-attack is persistent across the country and could occur at any time. In both 2022 and 2023, schools in the Los Angeles region experienced targeted cyber-attacks resulting in computer system shutdowns and compromise of student records. While the threat of a cyber-attack is not unique to the LVMCOG region, there is a risk that is consistent with the prevailing cybersecurity challenges faced nationwide.

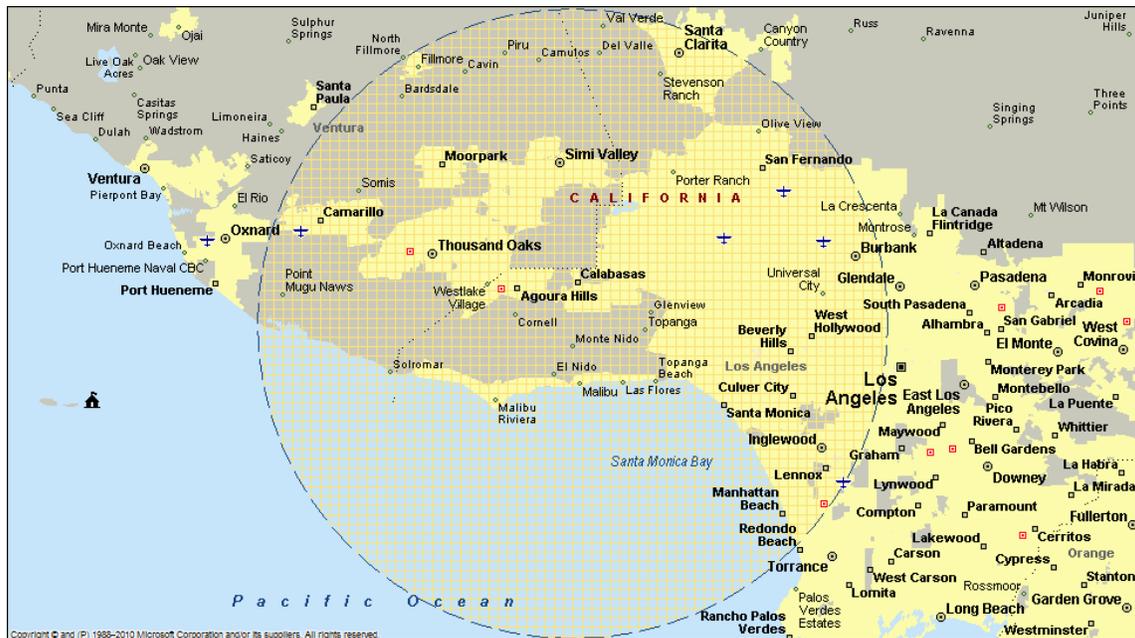
## Aircraft Crash

The airports nearest to the Las Virgenes-Malibu Region which handle the greatest amount of air traffic that could cause a risk to the area are Los Angeles International Airport and Burbank Bob Hope Airport. There are also multiple general aviation airports, military airports, and heliports that support air traffic in the Los Angeles region.

The airports within 25 miles of the Las Virgenes-Malibu Region are:

- Los Angeles International Airport
- Santa Monica Municipal Airport
- Van Nuys Airport
- Whiteman Airport (including Los Angeles County Fire Department operations from Barton Heliport)
- Burbank (Bob Hope) Airport
- Camarillo Airport
- Hawthorne Municipal Airport

There is a small but existing risk of an aircraft crash in the Las Virgenes-Malibu Region. Nevertheless, if an aircraft were to crash, the impact would be limited to a localized area and would not disrupt the entire region.



Map 19: Airports within 25 miles

### Civil Unrest/Riot

Los Angeles County experienced the Los Angeles Civil Unrest in 1992 and the Watts Riots in 1965. During these periods, the Las Virgenes-Malibu Region suffered no loss of life or property. Similarly, during 2011 “Occupy LA” and other civil protests were staged in Los Angeles County and across the U.S. While somewhat disruptive to the immediate vicinities and targeted sites, the Las Virgenes-Malibu Region was unaffected. As a result, the actual risk of a riot or major civil disturbance is considered minimal.

## VULNERABILITY AND LOSS ESTIMATES

Assessing vulnerability is a three-step process. The first step is to identify existing structures and critical facilities that are located within the hazard area. Government critical facilities are of particular concern because these buildings provide essential products and services to the general public that are necessary to preserve the welfare and quality of life in the Region and fulfill important public safety, emergency response, and/or disaster recovery functions.

Once existing structures are identified, the next step is to include an estimate of losses for the identified asset. Estimating potential loss involves assessing the damage, injuries, and financial costs likely to be sustained in a geographic area over a given period of time. This level of analysis involves using mathematical models.

The two measurable components of risk analysis are magnitude of the harm that may result and the likelihood of the harm occurring. Describing vulnerability in terms of dollar losses provides the community and the state with a common framework in which to measure the effects of hazards on assets. The last step in assessing the Region’s vulnerability to hazards is to analyze development trends in the Region.

The following loss exposures have been developed using assessed property values for the five cities within the Las Virgenes-Malibu COG as documented by the California Board of Equalization (Assessment Years 2022 to 2023). As indicated below, the total assessed value for the five cities is over \$44 billion.

City Name	Total Exposure
Agoura Hills	\$6,233,917,000
Calabasas	\$9,915,137,000
Hidden Hills	\$2,495,676,000
Malibu	\$21,446,012,000
Westlake Village	\$4,163,187,000
<b>Total</b>	<b>\$44,253,929,000</b>

Table 72: Total Assessed Property Value by City

Assessed Property Values, by City <https://boe.ca.gov/dataportal/dataset.htm?url=PropTaxAssessedValueStateCountyIncorp>

### *Profiling Hazards*

The profiling hazards process describes the causes and characteristics of each hazard, how the selected hazard has affected the Las Virgenes-Malibu Region in the past, and what part of the Las Virgenes-Malibu Region population, infrastructure, and environment has historically been vulnerable to each specific hazard. A careful examination of hazard event profiles within the study area provides a reference point for understanding the potential impacts from future events.

Reviewing historic data assists in evaluating hazard event profiles. Hazard profiles focus on answering the following questions: *What/Where/How Often/How Bad?* Summaries of the hazards included in this plan are provided below. Detailed profiles are provided in each of the individual hazard sections included in this plan:

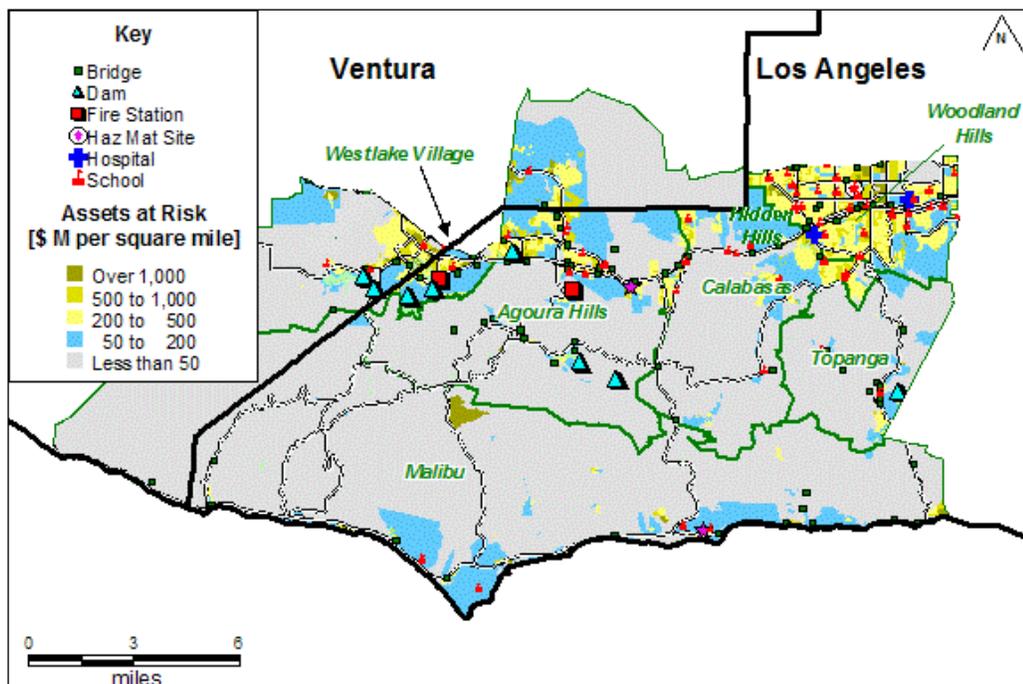
- Section 6 Earthquake
- Section 7 Wildfire
- Section 8 Climate Change
- Section 9 Energy Disruption
- Section 10 Landslide, Debris Flow, and Mudslide
- Section 11 Severe Wind
- Section 12 Flood, Tsunami, and Severe Winter Storm
- Section 13 Pandemic
- Section 14 Terrorism

**Facilities and Infrastructure Overview**

Critical and essential facilities are those facilities that are vital to the continued delivery of key government services or that may significantly impact the public’s ability to recover from the emergency. The lists below and on the following pages illustrate the critical and essential facilities and public infrastructure within the Las Virgenes-Malibu Region. These facilities were deemed “critical” by the Planning Group.

City Name	Schools	Hospitals	Bridges	Dams
Agoura Hills (including Agoura)	10	0	17	3
Calabasas / Hidden Hills	11	0	7	0
Malibu	6	0	15	0
Westlake Village Area	6	1	9	4

Table 73: Estimated Number of Critical Facilities in the Area



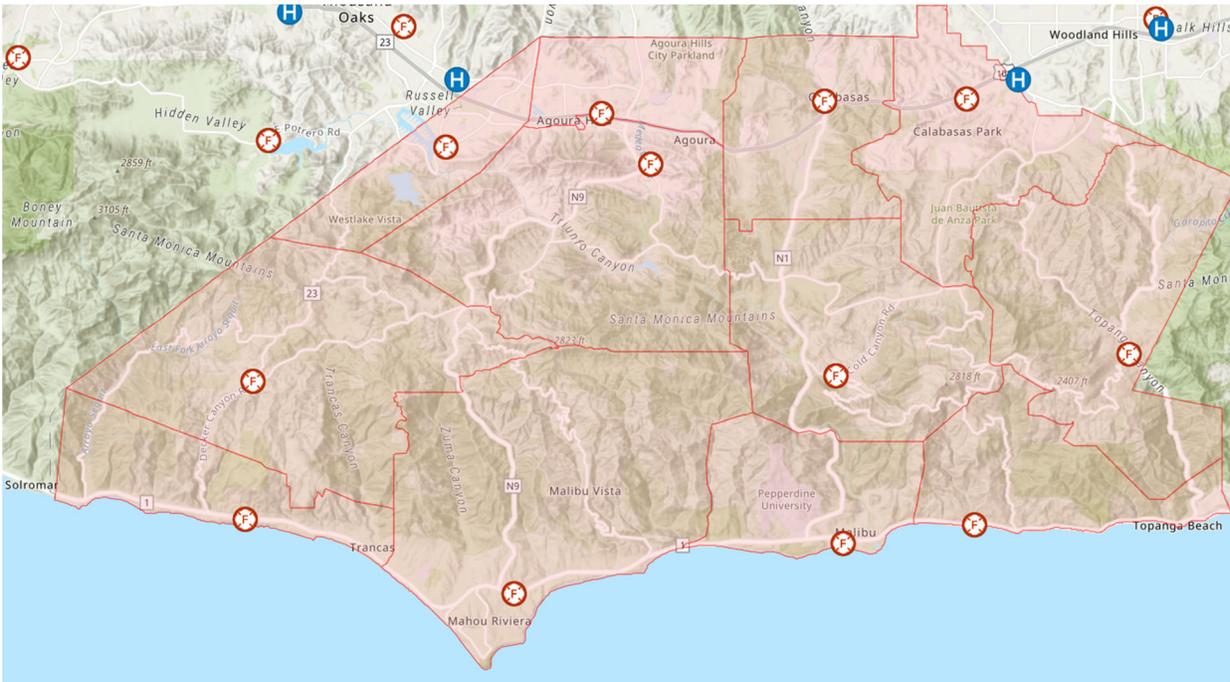
Map 20: Estimated Critical Facilities in the Area

**Fire Stations**

The following fire stations are located within the Las Virgenes-Malibu COG Region.

<b>LOS ANGELES COUNTY FIRE DEPARTMENT BATTALION 5</b>	
<b>Fire Station #65</b>	4206 N Cornell Rd, Agoura, 91301
<b>Fire Station #67</b>	25801 Piuma Rd, Calabasas, 91302
<b>Fire Station #68</b>	24130 Calabasas Rd, Calabasas, 91302
<b>Fire Station #69</b>	401 S Topanga Cyn Blvd, Topanga, 90290
<b>Fire Station #70 - Headquarters</b>	3970 Carbon Cyn Rd, Malibu, 90265
<b>Fire Station #71</b>	28722 W Pacific Coast Hwy, Malibu, 90265
<b>Fire Station #72</b>	1832 Decker Canyon Rd, Malibu, 90265
<b>Fire Station #88</b>	23720 W Malibu Rd, Malibu, 90265
<b>Fire Station #89</b>	29575 Canwood St., Agoura Hills, 91301
<b>Fire Station #99</b>	32550 Pacific Coast Hwy, Malibu, 90265
<b>Fire Station #125</b>	5215 N Las Virgenes Rd, Calabasas, 91302
<b>Fire Station #144</b>	31981 Foxfield Dr, Westlake Village, 91361

Table 74: Las Virgenes-Malibu COG Fire Stations



Map 21: Las Virgenes-Malibu COG Fire Stations

## Los Angeles County Sheriff's Stations

The LVMCOG region's sheriff's station is located at 27050 Agoura Road, Agoura Hills, CA 91301. This station serves the western portion of Los Angeles County, which is a blend of residential, rural, mountain, beach and recreational areas. The cities served by this station include Agoura Hills, Calabasas, Hidden Hills, Malibu, and Westlake Village as well as the unincorporated communities of Chatsworth Lake Manor, Malibu Lake, Topanga, and West Hills.

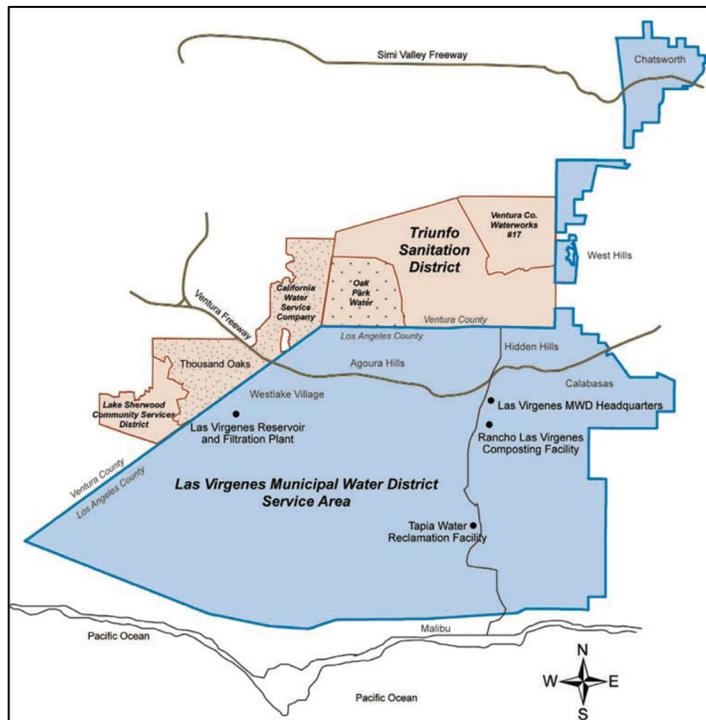
## Las Virgenes Municipal Water District

The Las Virgenes Municipal Water District (LVMWD) serves the cities of Agoura Hills, Calabasas, Hidden Hills and Westlake Village (the City of Malibu is served by Los Angeles County Water District 29). They have 24 water tanks and 24 pumping stations, 10,000 acre-foot Las Virgenes Reservoir, and the Westlake Village Filtration Plat.

The Las Virgenes Reservoir dam is located at 2860 Three Springs Drive, Westlake Village. The water filtration plant is located at 32601 Torchwood Place, Westlake Village. Water is also purchased from the Metropolitan Water District of Southern California (MWD).

The LVMWD takes precautions to secure their facilities including fencing sites and securing facilities with alarms. Major facilities have security access gates locked 24/7 and a security company monitors and responds to alarms.

The district has operating and response procedures to ensure that any potential interruption of services will be as short as possible. Further, the district has completed a Vulnerability Assessment as required by federal law to assess and mitigate any potential security issues.



Map 22: Las Virgenes Municipal Water District Service Area

**Summary of Critical Facilities and Infrastructure**

The following locations have been identified by the individual cities within the Las Virgenes- Malibu COG as essential due to the impact of a disaster on the public (e.g., large public meeting places), economy, or key infrastructure. The Critical Infrastructure Sectors listed are based on Homeland Security Presidential Directive 7 (HSPD-7).

Critical Infrastructure Sectors	Description	Agoura Hills	Calabasas	Hidden Hills	Malibu	Westlake Village
Agriculture and Food	Farming, livestock, poultry, food distribution, etc.	Bennett’s Best	N/A	N/A	N/A	California Family Farms Dole Foods
Banking and Finance	Banks, thrifts, credit unions, insurers, securities brokers/dealers, investment companies, financial services, etc. Includes Bank / Financial headquarters, loan processing centers, credit card processing centers, data centers	Bank of America Chase Bank Citibank First Citizens Bank Private National Mortgage Acceptance U.S. Bank Wells Fargo Bank Westlake Financial Services	Bank of America Chase Bank Citibank Logix U.S. Bank Wells Fargo Bank	N/A	Bank of America Citibank First Bank First Citizens Bank Goldman Sachs Trust Kinecta Federal Credit Union University Credit Union U.S. Bank Wells Fargo Bank	Chase Bank Pacific Western Bank Warner Pacific Insurance
Chemical Industry	Chemical manufacturers, pharmaceutical, consumer products, agricultural chemicals, etc.	N/A	N/A	N/A	N/A	N/A

Critical Infrastructure Sectors	Description	Agoura Hills	Calabasas	Hidden Hills	Malibu	Westlake Village
Commercial Facilities	Public Assembly (e.g., arenas, stadiums, aquariums, zoos, museums, convention centers), Sports Leagues (e.g., professional sports leagues and federations) Gaming (e.g., casinos), Lodging (e.g., hotels, motels, conference centers), Outdoor Events (e.g., theme and amusement parks, fairs, campgrounds, parades), Entertainment and Media (e.g., motion picture studios, broadcast media), Real Estate (e.g., office/apartment buildings, condominiums, mixed-use facilities, self-storage) and, Retail (e.g., retail centers and districts, shopping malls)	Civic Center Recreation and Event Center Agoura Hills Commercial Center Agoura Hills Town Center Reyes Adobe Plaza Whizin Market Square Twin Oaks Shopping Center Shops at Oak Creek Sheraton Agoura Hills Hampton Inn & Suites Homewood Suites Regency 8 Theater	Bob Smith BMW & Mini Civic Center Creekside Village The Commons (retail, food, entertainment) Harbor Freight Tools Parkway Calabasas The Summit at Calabasas Auto Row Hilton Garden Inn The Anza A Hotel Edwards 6 Theater	Community Center (not city owned)	Civic Center Malibu Village Malibu Colony Plaza Malibu Country Mart Point Dume Plaza Shopping Center Trancas Country Market Zuma Beach Evacuation Area Malibu Playhouse Lisa Smith Wengler Center for the Arts	Civic Center County Line Shopping Center Shoppes at WLV Four Seasons Hotel Residence Inn The Landing Westlake Spectrum Westlake Village Inn Westlake Village Marketplace YMCA
Communications	Terrestrial, satellite, and wireless transmission systems (major hubs, transmission/reception centers, etc.)	Spectrum Communications LVUSD & City Antennas City CERT Antenna (Kimberly Peak)	City CERT Antennas	N/A	N/A	Time Warner Building Agoura Road, Fiber Optics trunk Line parallel to 101 freeway and La Tienda
Critical Manufacturing	Primary metal manufacturing (iron and steel mills, ferro-alloys, aluminum, nonferrous metal production and processing), machinery manufacturing (engine, turbine, power transmission), electrical equipment (electrical equipment, appliance, and component manufacturing), transportation equipment manufacturing (motor vehicle, aerospace, railroad, etc.)	Motor Vehicle Software Corp.	Keysight Technologies HRL Labs Xperi	N/A	N/A	N/A

Critical Infrastructure Sectors	Description	Agoura Hills	Calabasas	Hidden Hills	Malibu	Westlake Village
Dams	Dams, navigation locks, levees, hurricane barriers, mine tailings impoundments, or other similar water retention and/or control facilities	N/A	N/A	N/A	N/A	Las Virgenes Reservoir
Defense Industrial Base	Department of Defense (DoD), government, and the private sector worldwide industrial complex with the capabilities of performing research and development, design, production, delivery, and maintenance of military weapons systems, subsystems, components, or parts to meet military requirements	N/A	N/A	N/A	HRL Laboratories	N/A
Emergency Services	First-responder disciplines that include: emergency management, emergency medical services, fire, hazardous material, law enforcement, bomb squads, tactical operations/special weapons assault teams, and search and rescue	LA County Fire Station #89	LA County Fire Stations: #68 and #125  LA County Sheriff Lost Hills Station	Hidden Hills EOC	LA County Fire Station #70: Battalion HQ  LA County Fire Stations: #71, #72, #88, #99	LA County Fire Station #144
Energy	Electricity, petroleum, natural gas	Natural Gas Pipelines Oil Pipelines Edison Substation	Natural Gas Pipelines Oil Pipelines	Oil Pipelines	N/A	N/A
Government Facilities	General-use office buildings and special-use military installations, embassies, courthouses, national laboratories, and structures that may house critical equipment and systems, networks, and functions as well as cyber elements that contribute to the protection of sector assets (e.g., access control systems and closed-circuit television systems) and the protection of individuals who possess tactical, operational, or strategic knowledge or perform essential functions	Agoura Hills City Hall Agoura Hills Library	Calabasas City Hall Calabasas Library	Hidden Hills City Hall	Malibu City Hall	Westlake Village City Hall  Westlake Village Library
Information Technology	Public and private sector information systems including the Internet	IBM Corporation Teradyne Inc.	Alcatel Internetworking IXIA Communications	N/A	N/A	N/A

Critical Infrastructure Sectors	Description	Agoura Hills	Calabasas	Hidden Hills	Malibu	Westlake Village
National Monuments and Icons	Listed in the National Register of Historic Places, List of National Historic Landmarks, icons, or other recognized physical structures, objects, or geographic sites	Reyes Adobe Historical Site	Leonis Adobe Museum (in Los Angeles City limits / adjacent to Calabasas)	N/A	N/A	N/A
Nuclear Reactors, Materials, and Waste	Nuclear power plants; non-power nuclear reactors used for research, testing, and training; nuclear materials used in medical, industrial, and academic settings; nuclear fuel fabrication facilities; decommissioning reactors; and the transportation, storage, and disposal of nuclear material and waste	N/A	N/A	N/A	N/A	N/A
Postal & Shipping	High volume processing facilities, delivery units, collection locations, retail operations, transport vehicles, postal/delivery information and communications networks	U.S. Post Office	U.S. Post Office	N/A	U.S. Post Office	N/A
Healthcare and Public Health	Public and private hospitals and healthcare facilities	N/A	UCLA Health	N/A	N/A	N/A
Transportation	Aviation, highways, maritime transportation, mass transit, pipeline systems, and rail	101 Freeway Pipelines (see Energy)	101 Freeway Natural Gas and Oil Pipelines (see Energy)	101 Freeway	Highway 1 PCH	101 Freeway
Water	Drinking water and waste water	Water Storage Tanks	Las Virgenes Malibu Water District HQ	N/A	Water Storage Tanks	Las Virgenes Reservoir

Critical Infrastructure Sectors	Description	Agoura Hills	Calabasas	Hidden Hills	Malibu	Westlake Village
Other	Other locations not otherwise defined	Agoura High School  Lindero Canyon Middle School  Mariposa School of Global Education  Sumac Elementary School  Willow Elementary School  Yerba Buena Elementary School  Buttercup Preschool	Las Virgenes Unified School District HQ  Calabasas High School  A.C. Stelle Middle School  A.E. Wright Middle School  Las Virgenes Independent School  Bay Laurel Elementary School  Chaparral Elementary  Lupin Hill Elementary  Viewpoint Private School	Round Meadow Elementary	Malibu High School  Malibu Middle School  Malibu Elementary School  John L. Webster Elementary School  Pepperdine University  Santa Monica College  Our lady of Malibu Catholic School	Calvary Chapel  Oaks Christian School  Westlake Village Community Park  White Oak Elementary

Table 75: Summary of Critical Facilities and Infrastructure

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**Earthquake and Flood Loss Estimates**

The **Hazards U.S. Multi-Hazard (HAZUS-MH)** tool is a nationally applicable standardized methodology. The Federal Emergency Management Agency (FEMA) developed HAZUS-MH under contract with the National Institute of Building Sciences (NIBS). HAZUS-MH uses state-of-the-art Geographic Information Systems (GIS) software to map and display hazard data and the results of damage and economic loss estimates for buildings and infrastructure. It also allows users to estimate the impacts of earthquakes, hurricane winds, and floods on populations. The following loss exposures have been developed using HAZUS-MH (from available base data).

NOTE: HAZUS-MH utilizes data at the census tracts/block level from diverse sources such as the U.S. Census. Due to the data compilation process, estimates based on city boundaries are difficult to generate. Consequently HAZUS-MH data groups some areas and city specific figures should be considered approximate. Also, for security reasons some data (such as pipeline and potable water locations) are not included. Furthermore, the following disclaimer applies to HAZUS-MH generated reports:

**Disclaimer:**

*The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.*

**HAZUS-MH Estimated Dollar Exposure**

Dollar Exposure represents the value of residential, commercial, and industrial properties in the area. Note: the sums provided are not equal to the total value of the area since some groups such as agriculture, government, and education are omitted.

City Name	Total Exposure [\$B]	Residential [\$B]	Commercial [\$B]	Industrial [\$B]
Agoura Hills (including Agoura) Note: HAZUS-MH aggregates portions of Agoura Hills under Westlake Village	1.833	1.273	0.431	0.077
Calabasas/Hidden Hills	3.355	2.781	0.468	0.043
Malibu	3.453	2.271	1.070	0.044
Westlake Village (includes portions of Agoura Hills and Los Angeles County)	2.998	2.231	0.602	0.092
<b>Totals</b>	<b>11.639</b>	<b>8.555</b>	<b>2.571</b>	<b>0.257</b>

Table 76: Estimated \$ Exposure

City Name	Total Depreciated Exposure [\$B]	Depreciated Residential [\$B]	Depreciated Commercial [\$B]	Depreciated Industrial [\$B]
Agoura Hills (including Agoura) Note: HAZUS-MH aggregates portions of Agoura Hills under Westlake Village	1.278	0.909	0.286	0.051
Calabasas/Hidden Hills	2.323	1.972	0.287	0.025
Malibu	2.207	1.493	0.653	0.025
Westlake Village (includes portions of Agoura Hills and Los Angeles County)	2.062	1.590	0.370	0.056
<b>Totals</b>	<b>7.870</b>	<b>5.964</b>	<b>1.595</b>	<b>0.157</b>

Table 77: Estimated Depreciated Exposure

## HAZUS-MH Estimated Building Counts

Estimated Building Counts represent the number of residential, commercial, and industrial properties in the area. Note: the sums provided are not equal to the total number of the area since some groups such as agriculture, government, and education are omitted.

City Name	Total Number of Buildings	Residential Buildings	Commercial Buildings	Industrial Buildings
Agoura Hills (including Agoura) Note: HAZUS-MH aggregates portions of Agoura Hills under Westlake Village	4,751	4,193	397	108
Calabasas/Hidden Hills	10,816	9,989	577	153
Malibu	8,996	8,132	594	165
Westlake Village (includes portions of Agoura Hills and Los Angeles County)	9,548	8,700	614	154
<b>Totals</b>	<b>34,111</b>	<b>31,014</b>	<b>2,183</b>	<b>580</b>

Table 78: Estimated Building Count

## HAZUS-MH Loss Scenarios

The following HAZUS-MH loss estimates were generated for two earthquake and two flood scenarios:

- Magnitude 7.0 Simi-Santa Rosa Fault Earthquake
- Magnitude 7.0 Malibu Coast Fault Earthquake
- 50-year Flood
- 100-year Flood

In terms of earthquake, the Simi-Santa Rosa Fault and Malibu Coast Fault were selected based on their proximity to the study area and potential magnitude. For each earthquake scenario, a hypothetical epicenter was chosen to model the impact on the local area. Based on HAZUS-MH projections, maps of Peak Ground Acceleration and potential losses were generated. For reference purposes, the USGS developed an Instrumental Intensity Scale that provides relative values for selected PGA ranges.

Instrumental Intensity	Acceleration (g)	Perceived Shaking	Potential Damage
I	< 0.0017	Not Felt	None
II-III	0.0017 - 0.014	Weak	None
IV	0.014 - 0.039	Light	None
V	0.039 - 0.092	Moderate	Very light
VI	0.092 - 0.18	Strong	Light
VII	0.18 - 0.34	Very Strong	Moderate
VIII	0.34 - 0.65	Severe	Moderate to Heavy
IX	0.65 - 1.24	Violent	Heavy
X+	> 1.24	Extreme	Very Heavy

Table 79: USGS PGA Instrumental Intensity Scale

Flood estimates used 50-year and 100-year scenarios. A 100-year flood is defined as an event having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard “base flood”. The base flood is used by the NFIP and all Federal agencies for the purposes of requiring the purchase of flood insurance and regulating new development. Base Flood Elevations (BFEs) are typically shown on Flood Insurance Rate Maps (FIRMs). A 50-year flood has a 2% chance of being equaled or exceeded in any given year.

### Magnitude 7.0 Simi-Santa Rosa Fault Earthquake Scenario

HAZUS-MH was used to estimate the impact of a magnitude 7.0 earthquake on the Simi-Santa Rosa Fault (epicenter “red circle” at Latitude 34.2902 Longitude -118.741 and a depth of 1 Km with a rupture length of 35.48 Km). The map below depicts the estimated Peak Ground Acceleration for the area.

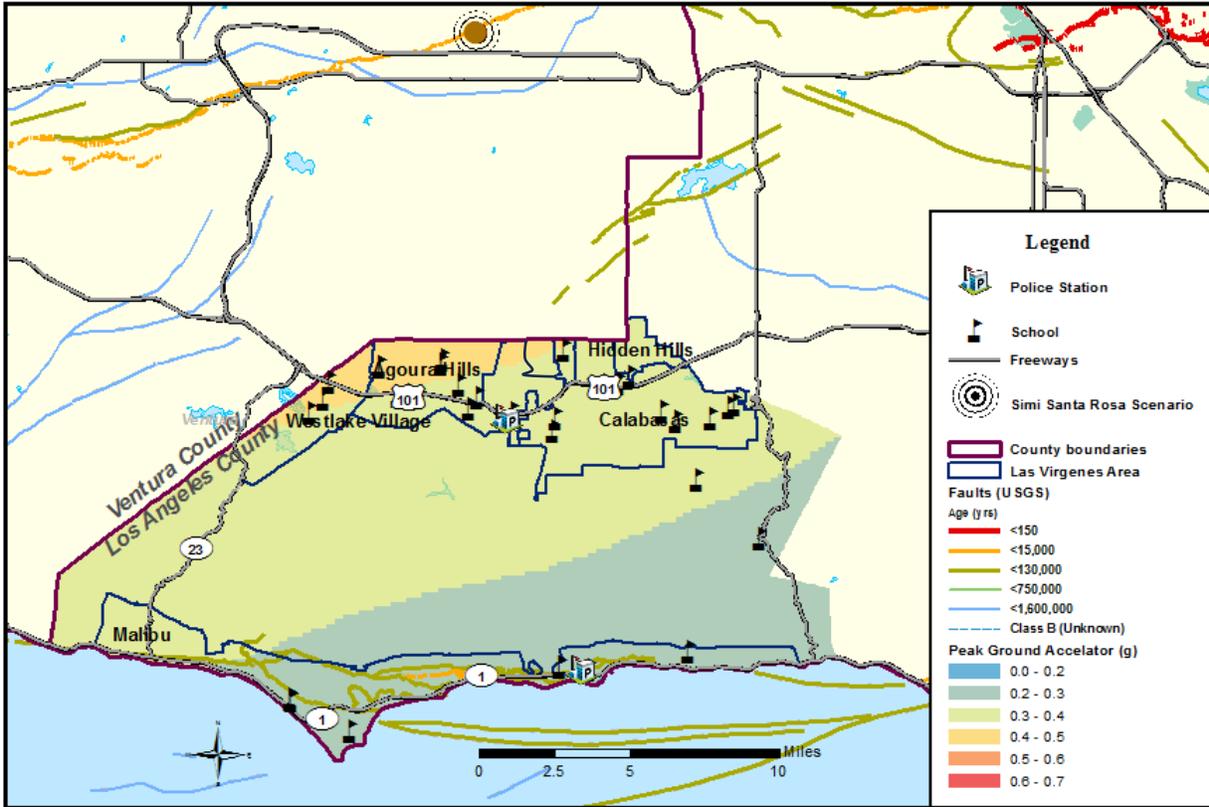


Figure 69: Simi-Santa Rosa M7.0 EQ Peak Ground Acceleration Estimate

Based on projected Peak Ground Acceleration, the greatest impact (and damage) will be in the Agoura Hills and Westlake Village areas (PGA 0.4 to 0.5). This corresponds to severe shaking and moderate to heavy damage. Though somewhat less intense, Calabasas and Hidden Hills (PGA 0.3 to 0.4) would also experience severe shaking and moderate to heavy damage while Malibu (PGA 0.2 to 0.3) would experience very strong shaking with moderate damage.

Additional projected impacts on the Las Virgenes-Malibu Council of Governments area are included in the following sections for:

- Casualties
- Shelter Requirements
- Fire
- Debris Generation
- Financial Impact to Infrastructure and Buildings
- Damage by Building and Facility Type
- Economic Loss

### Casualties

HAZUS-MH estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows:

Severity Level 1	Injuries will require medical attention, but hospitalization is not needed.
Severity Level 2	Injuries will require hospitalization but are not considered life-threatening.
Severity Level 3	Injuries will require hospitalization and can become life threatening if not promptly treated.
Severity Level 4	Victims are killed by the earthquake.

Casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is at maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are at maximum and 5:00 PM represents peak commute time. The table below provides a summary of the casualties estimated for this earthquake scenario.

Time	Sector	Level 1	Level 2	Level 3	Level 4
2 AM	Commercial	4	1	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	1	0	0	0
	Industrial	5	1	0	0
	Other-Residential	28	6	1	1
	Single Family	47	5	0	0
	<b>Total</b>	<b>85</b>	<b>13</b>	<b>1</b>	<b>1</b>
2 PM	Commercial	190	48	7	14
	Commuting	0	0	0	0
	Educational	36	9	1	3
	Hotels	0	0	0	0
	Industrial	40	10	2	3
	Other-Residential	4	1	0	0
	Single Family	7	1	0	0
	<b>Total</b>	<b>277</b>	<b>69</b>	<b>10</b>	<b>20</b>
5 PM	Commercial	152	38	6	11
	Commuting	30	42	69	13
	Educational	5	1	0	0
	Hotels	0	0	0	0
	Industrial	25	6	1	2
	Other-Residential	10	2	0	0
	Single Family	18	2	0	0
	<b>Total</b>	<b>240</b>	<b>91</b>	<b>76</b>	<b>26</b>

Table 80: Simi-Santa Rosa Fault M7.0 EQ Casualty Estimates

**Shelter Requirement**

HAZUS-MH estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 195 households to be displaced due to the earthquake. Of these, 104 people will seek temporary shelter in public shelters.

**Fires**

Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. HAZUS-MH uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimated that there would be little or no impact of fires to the area.

**Debris Generation**

HAZUS-MH estimates the amount of debris that will be generated by the earthquake. The model classifies debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 0.22 million tons of debris will be generated. Of the total amount, Brick/Wood comprises 31.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 8,880 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.

**Financial Impact to Infrastructure and Buildings**

The following estimates were generated using HAZUS-MH.

System	Component	# Locations/ # Segments	Replacement Value (millions of dollars)
Highway	Bridges	67	80.1
	Segments	28	901.1
	Tunnels	7	17.9
	<b>Total</b>		<b>999.1</b>

Table 81: Simi-Santa Rosa Fault M7.0 EQ Transportation System Lifeline Inventory Replacement Values

System	Component	# Locations / Segments	Replacement Value (millions of dollars)
Potable Water	Distribution Lines	Multiple	28.6
	Facilities	0	0.0
		Subtotal	28.6
Waste Water	Distribution Lines	Multiple	17.2
	Facilities	2	170.2
		Subtotal	187.3
Natural Gas	Distribution Lines	Multiple	11.5
	Facilities	0	0.0
		Subtotal	11.5
		<b>Total</b>	<b>454.7</b>

Table 82: Simi-Santa Rosa Fault M7.0 EQ Water Utility Lifeline Inventory Replacement Values

Note: Electric Power, Communication, and Oil System data was not available.

Occupancy Type	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	45	0.28	28	0.26	20	0.47	8	0.9	3	1.18
Commercial	794	4.96	502	4.64	490	11.48	210	24.51	68	27.38
Education	30	0.19	16	0.15	11	0.26	4	0.46	1	0.44
Government	14	0.09	7	0.07	7	0.16	3	0.37	1	0.44
Industrial	194	1.21	129	1.19	139	3.24	64	7.42	23	9.05
Other Residential	1,504	9.39	1,066	9.86	799	18.7	383	44.63	105	42.4
Religion	49	0.31	30	0.27	24	0.56	11	1.24	4	1.46
Single Family	13,388	83.57	9,037	83.56	2,782	65.12	175	20.47	44	17.65
<b>Total</b>	<b>16,018</b>		<b>10,815</b>		<b>4,272</b>		<b>858</b>		<b>249</b>	

Table 83: Simi-Santa Rosa Fault M7.0 EQ Expected Building Damage by Occupancy

*Damage by Building and Facility Type*

Building Type	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	14,552	90.84	9827	90.86	3,039	71.15	200	23.32	56	22.43
Steel	213	1.33	143	1.32	198	4.64	99	11.55	33	13.19
Concrete	255	1.59	161	1.49	129	3.02	64	7.46	24	9.59
Precast	191	1.19	123	1.14	145	3.39	60	6.94	17	6.68
RM	508	3.17	196	1.82	198	4.62	85	9.97	18	7.34
URM	64	0.4	50	0.46	51	1.21	23	2.69	10	4.17
MH	237	1.48	315	2.91	511	11.97	326	38.06	91	36.6
Total	16,020		10,815		4,271		857		249	

Table 84: Simi-Santa Rosa Fault M7.0 EQ Expected Building Damage by Building Type

Notes:

- RM Reinforced Masonry
- URM Unreinforced Masonry
- MH Manufactured Housing

Classification	Total	Number of Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Schools	32	0	0	14

Table 85: Simi-Santa Rosa Fault M7.0 EQ Expected Damage to Essential Facilities - Schools

System	Component	Locations/ Segments	Number of Locations			
			With at Least Mod. Damage	With Complete Damage	With Functionality > 50%	
					After Day 1	After Day 7
Highway	Bridges	67	4	0	62	67
	Segments	28	0	0	28	28
	Tunnels	7	0	0	7	7

Table 86: Simi-Santa Rosa Fault M7.0 EQ Expected Damage to Transportation Systems

System	Total #	Number of Locations			
		With at Least Mod. Damage	With Complete Damage	With Functionality > 50%	
				After Day 1	After Day 7
Waste Water	2	2	0	0	2

Table 87: Simi-Santa Rosa Fault M7.0 EQ Expected Damage to Waste Water Utility Systems

System	Total Pipelines Length (kms)	Number of Leaks	Number of Breaks
Potable Water	1,322	324	81
Waste Water	793	163	41
Natural Gas	529	529	14

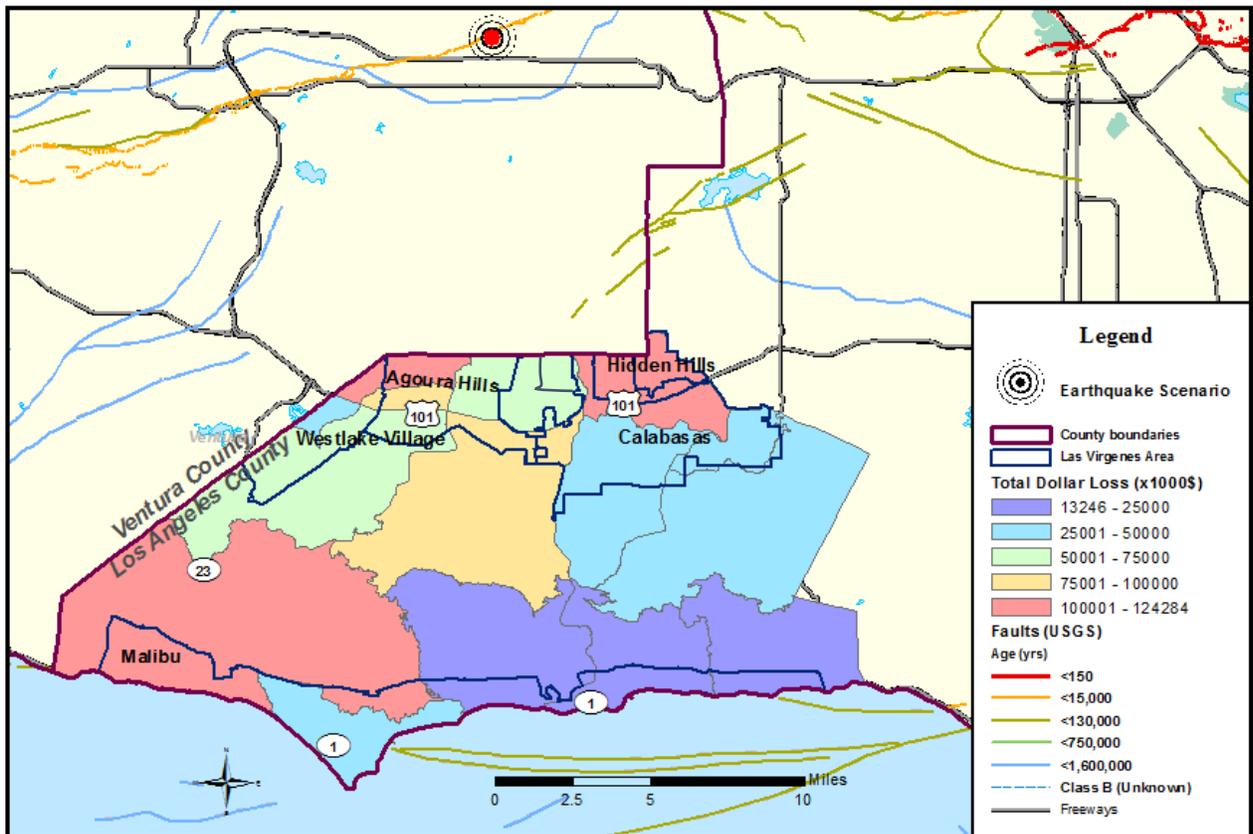
Table 88: Simi-Santa Rosa Fault M7.0 EQ Expected Utility System Pipeline Damage

System	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	29,844	4,665	7	0	0	0
Electric		4,171	2,248	753	119	7

Table 89: Simi-Santa Rosa Fault M7.0 EQ Expected Potable Water and Electric Power System Performance

**Economic Loss**

The total economic loss estimated for the earthquake is \$1,284,000,000 which includes building and lifeline related losses based on the region's available inventory.



Map 23: Simi-Santa Rosa M7.0 EQ Total \$ Loss Estimate

Losses are anticipated to be greatest in the northern areas of Agoura Hills, Hidden Hills, and Westlake Village as well as the western portion of Malibu. Additional details are provided in the following sections.

### ***Building - Related Losses***

Building losses are segmented into two categories: direct building losses and business interruption losses. Direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. Business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake. The total estimated building-related losses are \$1,215.64 million (19% of the estimated losses were related to the business interruption of the region). By far, the largest loss was sustained by the residential occupancies which made up over 45 % of the total loss.

The table below provides a summary of the losses associated with income and capital stock.

Category	Area	Single Family \$M	Other Residential \$M	Commercial \$M	Industrial \$M	Others \$M	Total \$M
Income Losses	Wage	0	0.97	36.67	0.83	1.19	39.67
	Capital-Related	0	0.42	40.82	0.49	0.31	42.04
	Rental	4.98	3.46	28.41	0.42	0.58	37.86
	Relocation	18.67	3.96	40.35	2.33	4.75	70.06
	<b>Subtotal</b>	<b>23.65</b>	<b>8.82</b>	<b>146.25</b>	<b>4.07</b>	<b>6.84</b>	<b>189.64</b>
Capital Stock	Losses						
	Structural	42.16	6.99	55.23	5.89	5.48	115.75
	Non-Structural	239.10	37.55	180.27	20.97	16.78	494.67
	Content	85.53	9.27	85.33	13.79	8.42	202.33
	Inventory	0.00	0.00	1.44	2.03	0.14	3.62
	<b>Subtotal</b>	<b>366.79</b>	<b>53.81</b>	<b>322.27</b>	<b>42.68</b>	<b>30.82</b>	<b>816.37</b>
	<b>Total</b>	<b>390.44</b>	<b>62.63</b>	<b>468.53</b>	<b>46.75</b>	<b>37.66</b>	<b>1006.00</b>

Table 90: Simi-Santa Rosa Fault M7.0 EQ Building-Related Economic Loss Estimates

### ***Transportation and Utility Lifeline Losses***

For the transportation and utility lifeline systems, HAZUS-MH computes the direct repair cost for each component only. There are no losses computed by HAZUS-MH for business interruption due to lifeline outages. The following table provides a detailed breakdown in the expected lifeline losses for selected categories.

System	Component	Inventory Value \$M	Economic Loss \$M	Loss Ratio (%)
Highway	Bridges	80.10	6.25	7.79
	Segments	901.08	0.00	0.00
	Tunnels	17.89	0.58	3.28
	<b>Total</b>	<b>999.07</b>	<b>6.83</b>	

Table 91: Simi-Santa Rosa Fault M7.0 EQ Transportation System Economic Losses

System	Component	Inventory Value \$M	Economic Loss \$M	Loss Ratio (%)
Potable Water	Distribution Lines	28.58	1.58	5.53
	Facilities	NA	-	-
	<b>Subtotal</b>	<b>28.58</b>	<b>1.58</b>	
Waste Water	Distribution Lines	17.21	0.79	4.59
	Facilities	170.15	20.94	12.31
	<b>Subtotal</b>	<b>187.36</b>	<b>21.73</b>	
Natural Gas	Distribution Lines	11.47	0.27	2.36
	Facilities	NA	-	-
	<b>Subtotal</b>	<b>11.47</b>	<b>0.27</b>	
	<b>Total</b>	<b>227.41</b>	<b>23.59</b>	

Table 92: Simi-Santa Rosa Fault M7.0 EQ Utility System Economic Losses

Note: Electric Power, Communication, and Oil System data was not available (NA).

### 15 Year Projected Impact

HAZUS-MH estimates the long-term economic impacts to the region for 15 years after the earthquake. The model quantifies this information in terms of income and employment changes within the region.

Year	Loss	Total	Percent
First Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<7>	-0.61%
Second Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<21>	-1.87%
Third Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<27>	-2.41%
Fourth Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<27>	-2.41%
Fifth Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<27>	-2.41%
Years 6 to 15	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<27>	-2.41%

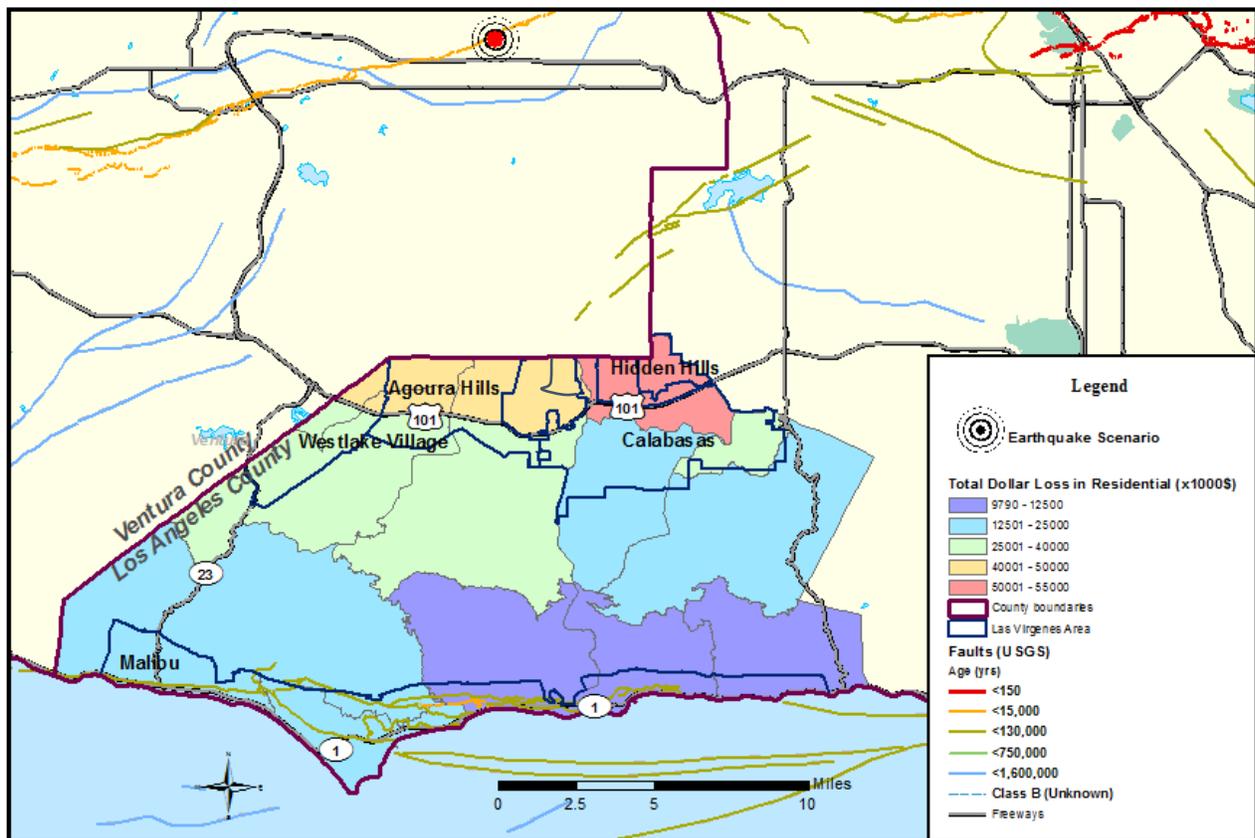
Table 93: Simi-Santa Rosa Fault M7.0 EQ Indirect Economic Impact

*Estimated Losses by City*

The following dollar loss estimates for residential, commercial, and industrial facilities were generated utilizing HAZUS-MH. Note: The total loss is not equal to the sum due to overlaps in structural and building losses.

City Name	Residential Total Loss [\$M]	Residential Structural Loss [\$M]	Residential Non-Structural Loss [\$M]	Residential Building Loss [\$M]	Residential Content Loss [\$M]
Agoura Hills (including Agoura)	78.91	8.01	48.38	56.39	16.24
Calabasas/Hidden Hills	137.68	15.05	84.32	99.36	29.44
Malibu	76.74	8.55	47.52	56.07	15.48
Westlake Village	159.65	17.53	96.44	113.98	33.66
<b>Totals</b>	<b>452.98</b>	<b>49.14</b>	<b>276.66</b>	<b>325.80</b>	<b>94.82</b>

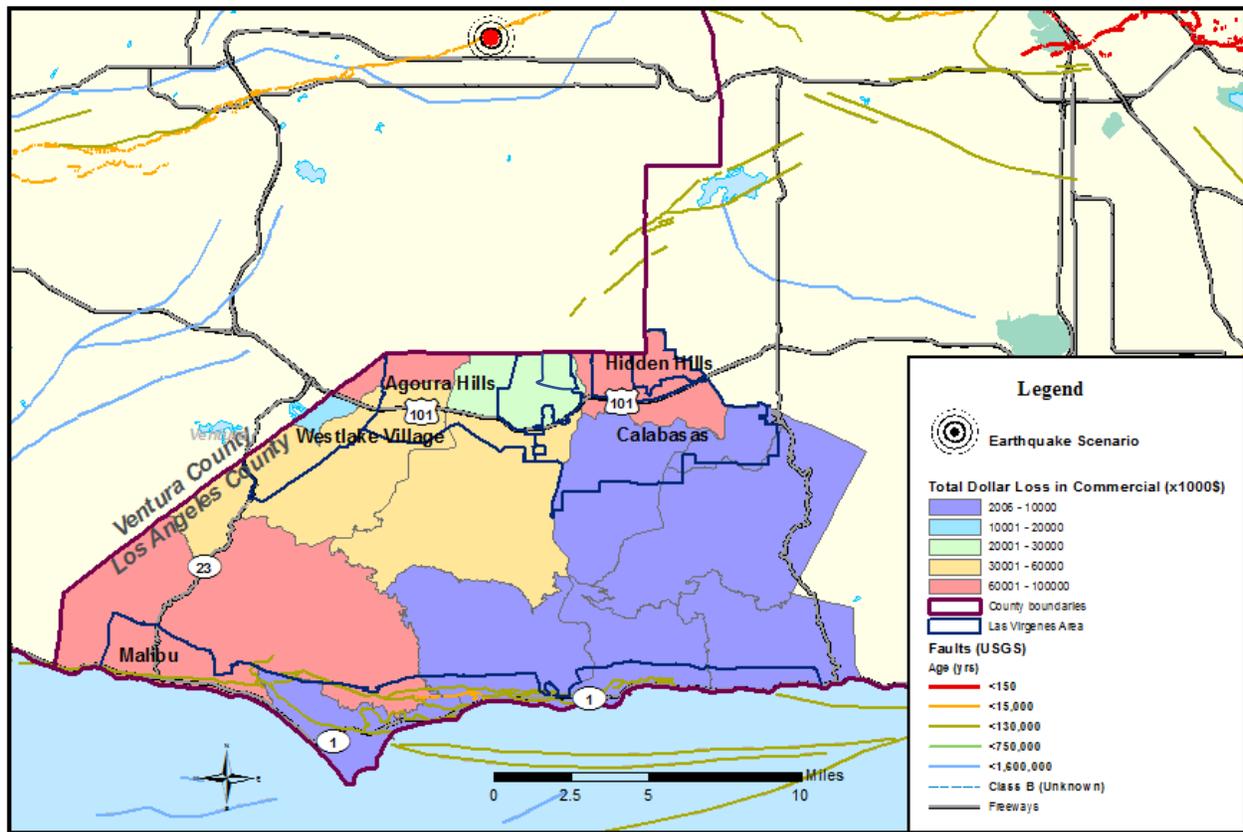
Table 94: Simi-Santa Rosa Fault M7.0 EQ Residential Loss \$ Exposure



Map 24: Simi-Santa Rosa Fault M7.0 EQ Residential \$ Loss Estimate

City Name	Commercial Total Loss [\$M]	Commercial Structural Loss [\$M]	Commercial Non-Structural Loss [\$M]	Commercial Building Loss [\$M]	Commercial Content Loss [\$M]
Agoura Hills (including Agoura)	88.43	10.50	32.04	42.54	15.37
Calabasas/Hidden Hills	91.68	10.07	34.53	44.59	16.24
Malibu	131.62	15.37	53.90	69.27	25.44
Westlake Village	156.84	19.37	59.75	79.12	28.36
<b>Totals</b>	<b>468.57</b>	<b>55.31</b>	<b>180.22</b>	<b>235.53</b>	<b>85.40</b>

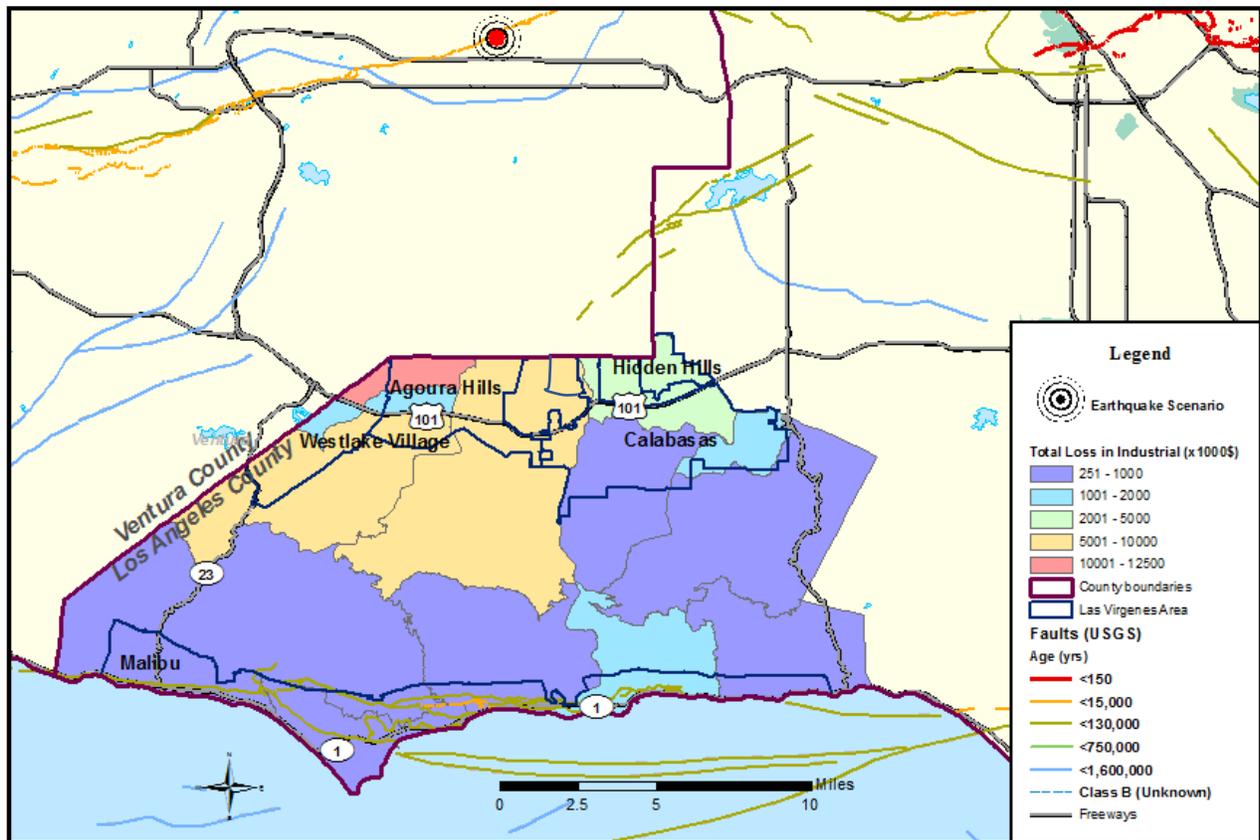
Table 95: Simi-Santa Rosa Fault M7.0 EQ Commercial \$ Loss



Map 25: Simi-Santa Rosa Fault M7.0 EQ Commercial \$ Loss Estimate

City Name	Industrial Total Loss [SM]	Industrial Structural Loss [SM]	Industrial Non-Structural Loss [SM]	Industrial Building Loss [SM]	Industrial Content Loss [SM]
Agoura Hills (including Agoura)	14.07	1.73	6.28	8.01	4.11
Calabasas/Hidden Hills	6.71	0.87	3.14	4.00	1.84
Malibu	4.00	0.54	1.73	2.27	1.19
Westlake Village	21.97	2.71	9.85	12.56	6.60
<b>Totals</b>	<b>46.76</b>	<b>5.84</b>	<b>21.00</b>	<b>26.84</b>	<b>13.75</b>

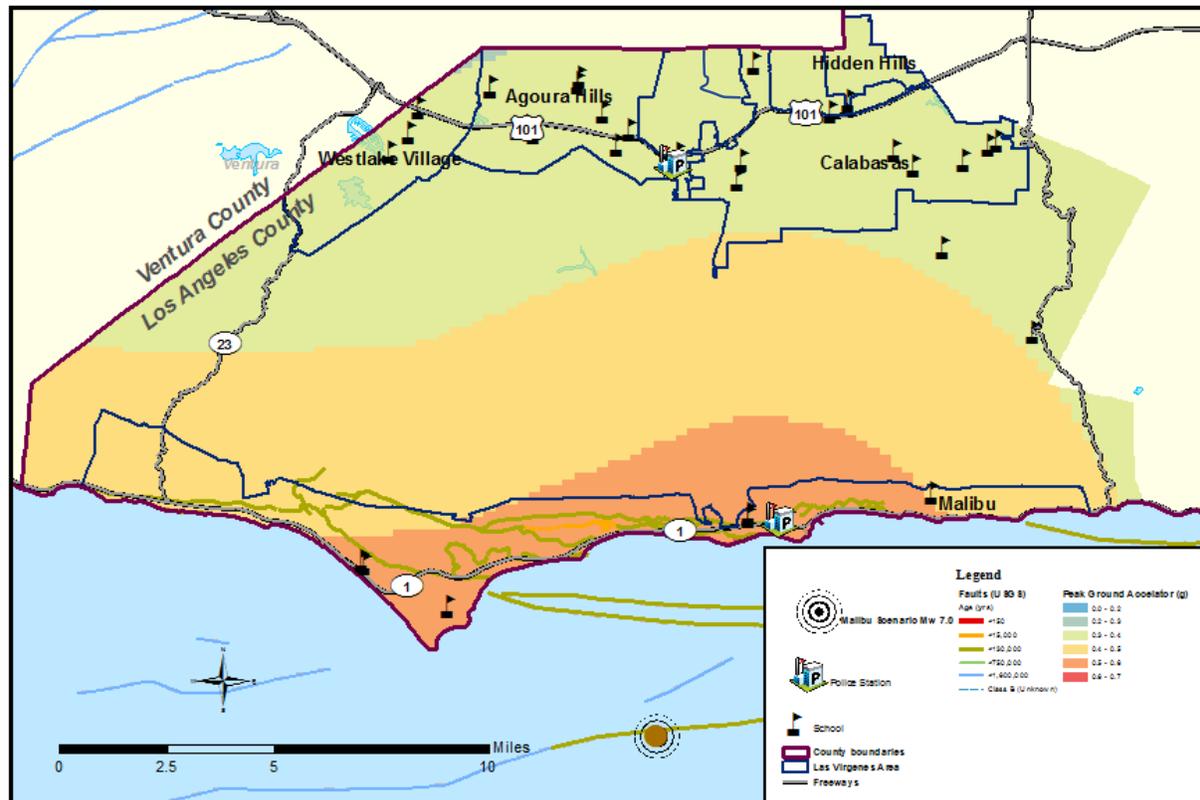
Table 96: Simi-Santa Rosa Fault M7.0 EQ Industrial Loss \$ Exposure



Map 26: Simi-Santa Rosa Fault M7.0 EQ Industrial \$ Loss Estimate

## Magnitude 7.0 Malibu Coast Fault Earthquake Scenario

HAZUS-MH was used to estimate the impact of a magnitude 7.0 earthquake on the Malibu Coast Fault (epicenter “orange circle” at Latitude 33.9684 Longitude -118.729 and a depth of 1 Km). The map below provides a project of peak ground acceleration for the area.



Map 27: Malibu Coast M7.0 EQ Peak Ground Acceleration Estimate

Based on projected Peak Ground Acceleration, the greatest impact (and damage) will be along the coast in the central and eastern portions of Malibu (PGA 0.5 to 0.6). This corresponds to severe shaking and moderate to heavy damage. Though somewhat less intense, the northern sections of Malibu and the extreme southern tip of Calabasas (PGA 0.4 to 0.5) would also experience severe shaking and moderate to heavy damage. The cities of Agoura Hills, Hidden Hills, Westlake Village, and the majority of Calabasas, (PGA 0.3 to 0.4) would experience very strong shaking with moderate damage to severe shaking with moderate to heavy damage.

Additional projected impacts on the Las Virgenes-Malibu Council of Governments area are included in the following sections for:

- Casualties
- Shelter Requirements
- Fire
- Debris Generation
- Financial Impact to Infrastructure and Buildings
- Damage by Building and Facility Type
- Economic Loss

### Casualties

HAZUS-MH estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows:

Severity Level 1	Injuries will require medical attention, but hospitalization is not needed.
Severity Level 2	Injuries will require hospitalization but are not considered life-threatening.
Severity Level 3	Injuries will require hospitalization and can become life threatening if not promptly treated.
Severity Level 4	Victims are killed by the earthquake.

Casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is at maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are at maximum and 5:00 PM represents peak commute time. The table below provides a summary of the casualties estimated for this earthquake scenario.

Time	Sector	Level 1	Level 2	Level 3	Level 4
2 AM	Commercial	4	1	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	2	1	0	0
	Industrial	6	1	0	0
	Other-Residential	62	14	1	2
	Single Family	56	7	0	1
	<b>Total</b>	<b>130</b>	<b>24</b>	<b>2</b>	<b>4</b>
2 PM	Commercial	235	62	10	19
	Commuting	0	1	1	0
	Educational	47	12	2	4
	Hotels	0	0	0	0
	Industrial	41	11	2	3
	Other-Residential	9	2	0	0
	Single Family	9	1	0	0
	<b>Total</b>	<b>341</b>	<b>89</b>	<b>14</b>	<b>26</b>
5 PM	Commercial	192	50	8	14
	Commuting	41	57	93	18
	Educational	8	2	0	1
	Hotels	1	0	0	0
	Industrial	26	7	1	2
	Other-Residential	23	5	1	1
	Single Family	21	3	0	0
	<b>Total</b>	<b>310</b>	<b>123</b>	<b>102</b>	<b>36</b>

Table 97: Malibu Coast Fault M7.0 EQ Casualty Estimates

**Shelter Requirement**

HAZUS-MH estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 282 households to be displaced due to the earthquake. Of these, 151 people will seek temporary shelter in public shelters.

**Fires**

Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. HAZUS-MH uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimated that there would be little or no impact of fires to the area.

**Debris Generation**

HAZUS-MH estimates the amount of debris that will be generated by the earthquake. The model classifies debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 0.31 million tons of debris will be generated. Of the total amount, Brick/Wood comprises 31.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 12,280 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.

**Financial Impact to Infrastructure and Buildings**

The following estimates were generated using HAZUS-MH.

System	Component	# Locations/ # Segments	Replacement Value (millions of dollars)
Highway	Bridges	67	80.10
	Segments	28	901.10
	Tunnels	7	17.86
	<b>Total</b>		<b>999.06</b>

Table 98: Malibu Coast Fault M7.0 EQ Transportation System Lifeline Inventory Replacement Values

System	Component	# Locations / Segments	Replacement Value (millions of dollars)
Potable Water	Distribution Lines	NA	28.58
	Facilities	NA	-
	Subtotal		28.58
Waste Water	Distribution Lines	NA	17.21
	Facilities	2	170.15
		<b>Total</b>	<b>244.51</b>

Table 99: Malibu Coast Fault M7.0 EQ Water Utility Lifeline Inventory Replacement Values

Note: Natural Gas, Electric Power, Communication, and Oil System data was not available (NA).

Occupancy Type	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	34	0.25	29	0.25	24	0.48	11	0.85	5	0.9
Commercial	637	4.60	500	4.37	549	10.86	272	20.98	107	18.5
Education	24	0.17	17	0.15	13	0.26	5	0.42	2	0.3
Government	10	0.07	8	0.07	8	0.16	5	0.36	2	0.3
Industrial	150	1.08	126	1.10	154	3.05	82	6.33	35	6.1
Other Residential	1,004	7.25	982	8.58	855	16.92	660	50.85	356	61.7
Religion	40	0.29	30	0.26	27	0.54	14	1.06	6	0.9
Single Family	11,944	86.28	9,749	85.21	3,422	67.72	249	19.15	63	10.9
<b>Total</b>	<b>13,844</b>		<b>11,441</b>		<b>5,053</b>		<b>1,298</b>		<b>577</b>	

Table 100: Malibu Coast Fault M7.0 EQ Expected Building Damage by Occupancy

### Damage by Building and Facility Type

Building Type	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	12,866	92.94	10648	93.06	3,788	74.98	289	22.29	82	14.28
Steel	145	1.05	130	1.14	218	4.31	137	10.55	55	9.61
Concrete	195	1.40	164	1.44	150	2.96	85	6.56	39	6.78
Precast	147	1.06	120	1.05	161	3.19	78	6.03	27	4.75
RM	416	3.01	207	1.81	234	4.64	116	8.96	32	5.54
URM	45	0.32	46	0.40	57	1.13	31	2.41	20	3.55
MH	30	0.21	127	1.11	444	8.79	561	43.21	320	55.48
<b>Total</b>	<b>13,844</b>		<b>11,441</b>		<b>5,053</b>		<b>1,298</b>		<b>577</b>	

Table 101: Malibu Coast Fault M7.0 EQ Expected Building Damage by Building Type

RM Reinforced Masonry  
URM Unreinforced Masonry  
MH Manufactured Housing

Classification	Total	Number of Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Schools	32	0	0	17

Table 102: Malibu Coast Fault M7.0 EQ Expected Damage to Essential Facilities - Schools

System	Component	Locations/ Segments	Number of Locations			
			With at Least Mod. Damage	With Complete Damage	With Functionality > 50%	
					After Day 1	After Day 7
Highway	Bridges	67	6	0	59	63
	Segments	28	0	0	28	28
	Tunnels	7	0	0	7	7

Table 103: Malibu Coast Fault M7.0 EQ Expected Damage to Transportation Systems

System	Total #	Number of Locations			
		With at Least Mod. Damage	With Complete Damage	With Functionality > 50%	
				After Day 1	After Day 7
Waste Water	2	2	0	0	1

Table 104: Malibu Coast Fault M7.0 EQ Expected Damage to Waste Water Utility Systems

System	Total Pipelines Length (kms)	Number of Leaks	Number of Breaks
Potable Water	1,322	562	141
Waste Water	793	282	71
Natural Gas	529	97	24

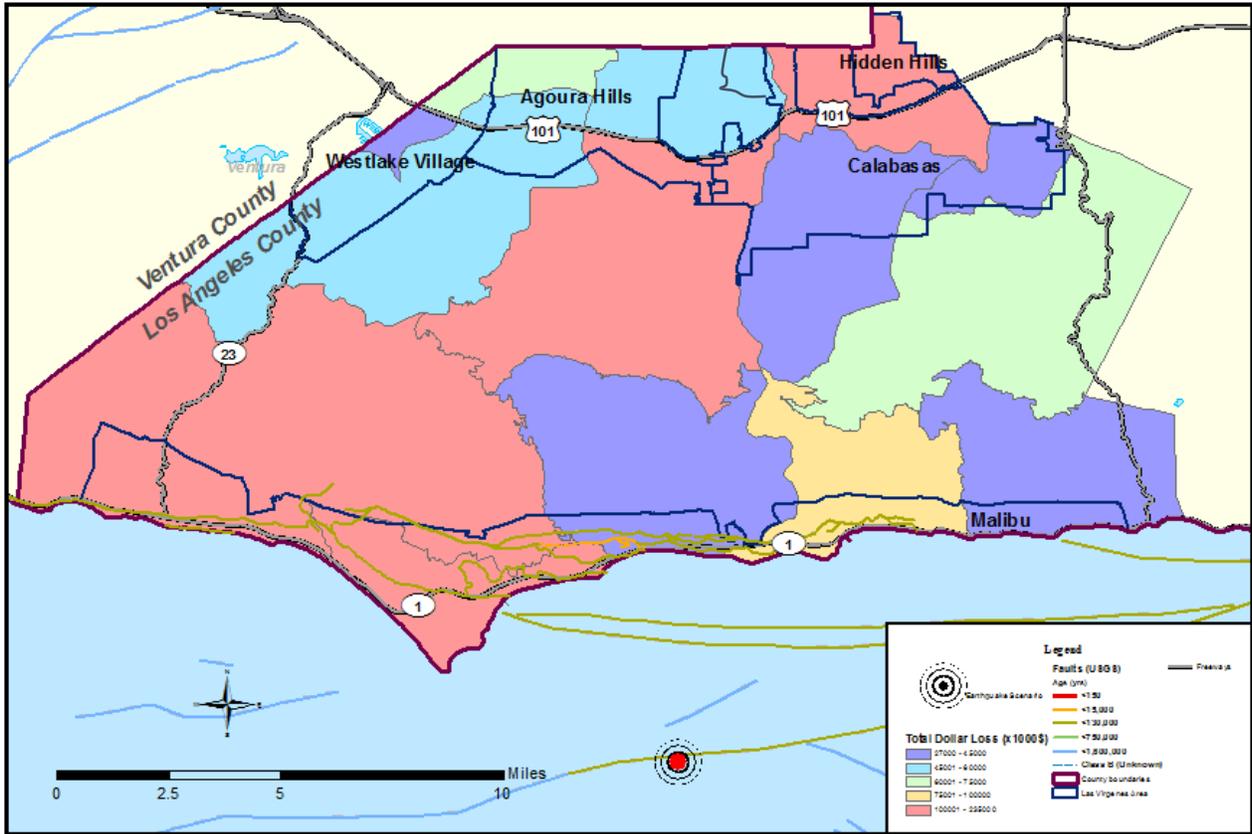
Table 105: Malibu Coast Fault M7.0 EQ Expected Utility System Pipeline Damage

System	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	29,844	13,044	6,109	0	0	0
Electric		5,778	3,417	1,318	240	8

Table 106: Malibu Coast Fault M7.0 EQ Expected Potable Water and Electric Power System Performance

**Economic Loss**

The total economic loss estimated for the earthquake is \$1,284,000,000 which includes building and lifeline related losses based on the region's available inventory.



Map 28: Malibu Coast M7.0 EQ Total \$ Loss Estimate

Losses are anticipated to be greatest in the western portion of Malibu as well as Hidden Hills and the southeastern area of Agoura Hills, and north and west portions of Calabasas. Additional details are provided in the following sections.

**Building - Related Losses**

Building losses are segmented into two categories: direct building losses and business interruption losses. Direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. Business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake. The total estimated building-related losses are \$1,215.64 million (19% of the estimated losses were related to the business interruption of the region). By far, the largest loss was sustained by the residential occupancies which made up over 45 % of the total loss.

The table below provides a summary of the losses associated with income and capital stock.

Category	Area	Single Family \$M	Other Residential \$M	Commercial \$M	Industrial \$M	Others \$M	Total \$M
Income Losses	Wage	0	1.67	45.87	0.95	1.66	50.15
	Capital-Related	0	0.73	55.42	0.56	0.40	57.11
	Rental	6.30	5.76	37.38	0.44	0.73	50.60
	Relocation	23.83	6.80	52.56	2.47	5.96	91.63
	<b>Subtotal</b>	<b>30.13</b>	<b>14.95</b>	<b>191.23</b>	<b>4.43</b>	<b>8.75</b>	<b>249.48</b>
Capital Stock	Losses						
	Structural	52.75	13.69	72.89	6.62	6.69	152.64
	Non-Structural	296.00	65.93	242.57	23.76	20.93	649.19
	Content	106.27	15.79	112.15	15.42	10.74	260.37
	Inventory	0.00	0.00	1.56	2.37	0.19	4.12
	<b>Subtotal</b>	<b>455.02</b>	<b>95.41</b>	<b>429.16</b>	<b>48.18</b>	<b>38.56</b>	1066.33
	<b>Total</b>	<b>485.15</b>	<b>110.36</b>	<b>620.39</b>	<b>52.60</b>	<b>47.30</b>	<b>1315.81</b>

Table 107: Malibu Coast Fault M7.0 EQ Building-Related Economic Loss Estimates

### *Transportation and Utility Lifeline Losses*

For the transportation and utility lifeline systems, HAZUS-MH computes the direct repair cost for each component only. There are no losses computed by HAZUS-MH for business interruption due to lifeline outages. The following table provides a detailed breakdown in the expected lifeline losses for selected categories.

System	Component	Inventory Value \$M	Economic Loss \$M	Loss Ratio (%)
Highway	Bridges	80.10	7.71	9.62
	Segments	901.08	0.00	0.00
	Tunnels	17.89	0.95	5.32
	<b>Total</b>	<b>999.07</b>	<b>8.66</b>	

Table 108: Malibu Coast Fault M7.0 EQ Transportation System Economic Losses

System	Component	Inventory Value \$M	Economic Loss \$M	Loss Ratio (%)
Potable Water	Distribution Lines	28.6	2.7	10.4
	Facilities			
	<b>Subtotal</b>	<b>28.6</b>	<b>2.7</b>	<b>10.4</b>
Waste Water	Distribution Lines	17.2	1.4	8.7
	Facilities	170.2	60.8	38.7
	<b>Subtotal</b>	<b>187.4</b>	<b>62.1</b>	<b>47.3</b>
Natural Gas	Distribution Lines	11.5	0.5	4.5
	Facilities			
	<b>Subtotal</b>	<b>11.5</b>	<b>0.5</b>	<b>4.5</b>
	<b>Total</b>	<b>227.4</b>	<b>65.3</b>	<b>62.1</b>

Table 109: Malibu Coast Fault M7.0 EQ Utility System Economic Losses

Note: Electric Power, Communication, and Oil System data was not available (NA).

### 15 Year Projected Impact

HAZUS-MH estimates the long-term economic impacts to the region for 15 years after the earthquake. The model quantifies this information in terms of income and employment changes within the region.

Year	Loss	Total	Percent
First Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<9>	-0.81%
Second Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<27>	-2.46%
Third Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<35>	-3.17%
Fourth Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<35>	-3.17%
Fifth Year	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<35>	-3.17%
Years 6 to 15	Employment Impact (# of people)	0	0.00%
	Income Impact (\$M)	<35>	-3.17%

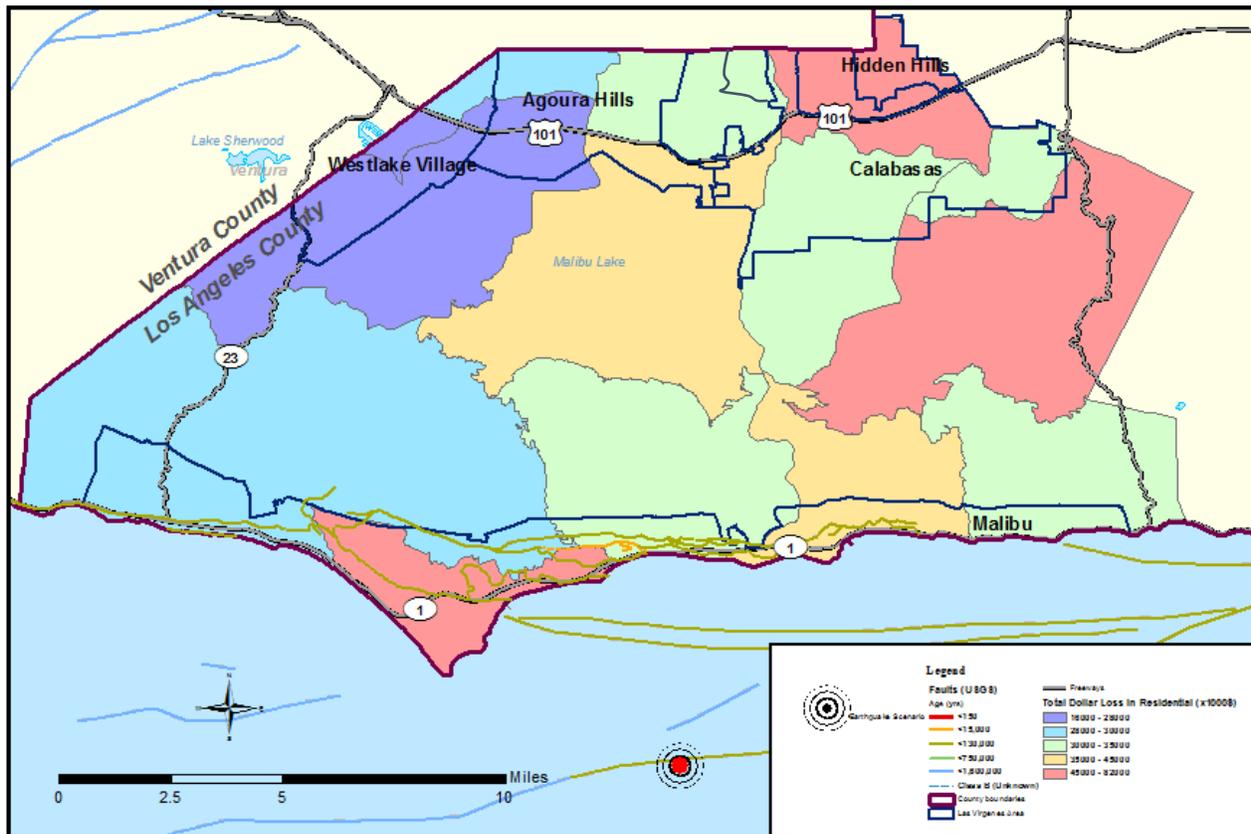
Table 110: Malibu Coast Fault M7.0 EQ Indirect Economic Impact

*Estimated Losses by City*

The following dollar loss estimates for residential, commercial, and industrial facilities were generated utilizing HAZUS-MH. Note: The total loss is not equal to the sum due to overlaps in structural and building losses.

City Name	Residential Total Loss [\$M]	Residential Structural Loss [\$M]	Residential Non-Structural Loss [\$M]	Residential Building Loss [\$M]	Residential Content Loss [\$M]
Agoura Hills (including Agoura)	81.40	8.33	49.68	58.02	16.78
Calabasas/Hidden Hills	169.61	18.83	103.15	121.99	35.94
Malibu	235.96	27.49	142.99	170.48	46.54
Westlake Village	108.56	11.80	66.13	77.93	22.84
<b>Totals</b>	<b>595.54</b>	<b>66.46</b>	<b>361.95</b>	<b>428.41</b>	<b>122.09</b>

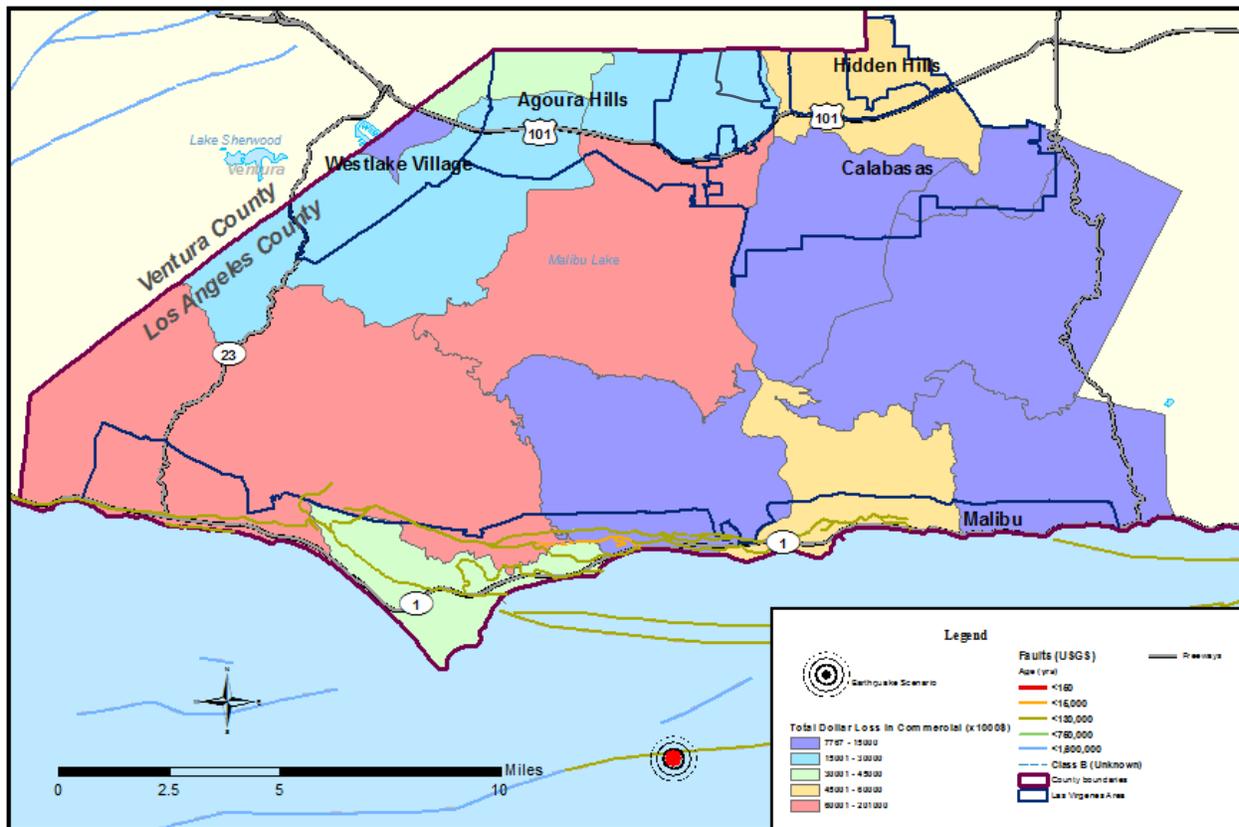
Table 111: Malibu Coast Fault M7.0 EQ Residential Loss \$ Exposure



Map 29: Malibu Coast Fault M7.0 EQ Residential \$ Loss Estimate

City Name	Commercial Total Loss [\$M]	Commercial Structural Loss [\$M]	Commercial Non-Structural Loss [\$M]	Commercial Building Loss [\$M]	Commercial Content Loss [\$M]
Agoura Hills (including Agoura)	106.62	12.66	38.97	51.63	18.40
Calabasas/Hidden Hills	94.60	10.28	35.39	45.68	16.56
Malibu	321.69	38.10	131.73	169.83	59.42
Westlake Village	97.42	11.80	36.48	48.38	17.75
<b>Totals</b>	<b>620.32</b>	<b>72.85</b>	<b>242.57</b>	<b>315.52</b>	<b>112.14</b>

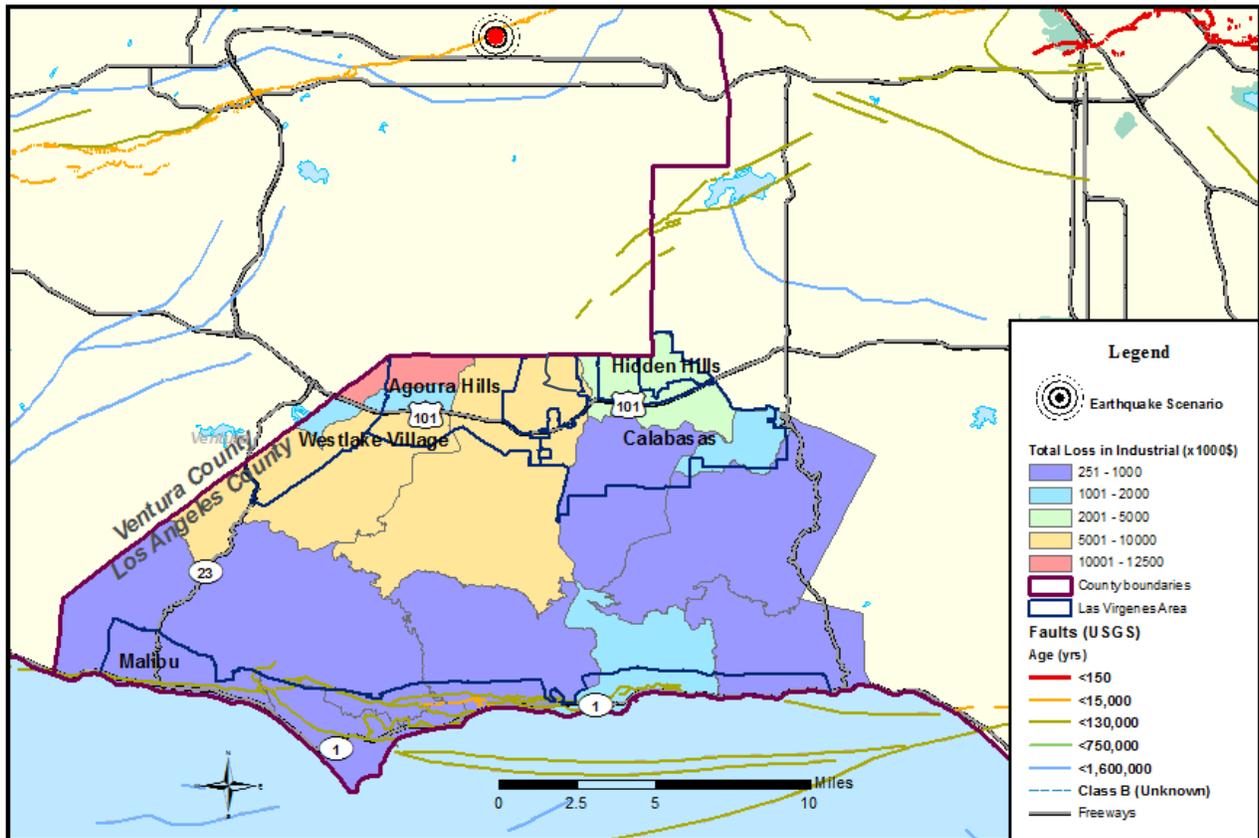
Table 112: Malibu Coast Fault M7.0 EQ Commercial \$ Loss



Map 30: Malibu Coast Fault M7.0 EQ Commercial \$ Loss Estimate

City Name	Industrial Total Loss [\$M]	Industrial Structural Loss [\$M]	Industrial Non-Structural Loss [\$M]	Industrial Building Loss [\$M]	Industrial Content Loss [\$M]
Agoura Hills (including Agoura)	16.02	2.06	7.14	9.20	4.76
Calabasas/Hidden Hills	7.69	0.97	3.57	4.55	2.16
Malibu	20.24	1.95	7.04	8.98	4.44
Westlake Village	8.66	1.73	5.95	7.69	4.00
<b>Totals</b>	<b>52.60</b>	<b>6.71</b>	<b>23.70</b>	<b>30.42</b>	<b>15.37</b>

Table 113: Malibu Coast Fault M7.0 EQ Industrial Loss \$ Exposure



Map 31: Malibu Coast Fault M7.0 EQ Industrial \$ Loss Estimate

### 50-year Flood Scenario

It is estimated that a 50-year Flood (riverine flooding) will result in damage to residential, commercial, and industrial properties. The table below depicts the estimated number of structures impacted.

City Name	Building Count Residential	Building Count Commercial	Building Count Industrial
Agoura Hills	152	3	0
Calabasas /Hidden Hills	89	0	0
Malibu	90	0	0
Westlake Village	510	0	0
<b>Totals</b>	<b>841</b>	<b>3</b>	<b>0</b>

Table 114: 50-year Flood General Building Stock Damage Count

HAZUS-MH provides estimates of dollar losses to residential, commercial, and industrial facilities. Note: The total of building loss and content loss is not equal to total loss due to other costs such as inventory loss, relocation expense, and income loss. The tables below show the economic losses for the general building stock by census block (full replacement value and depreciated replacement value).

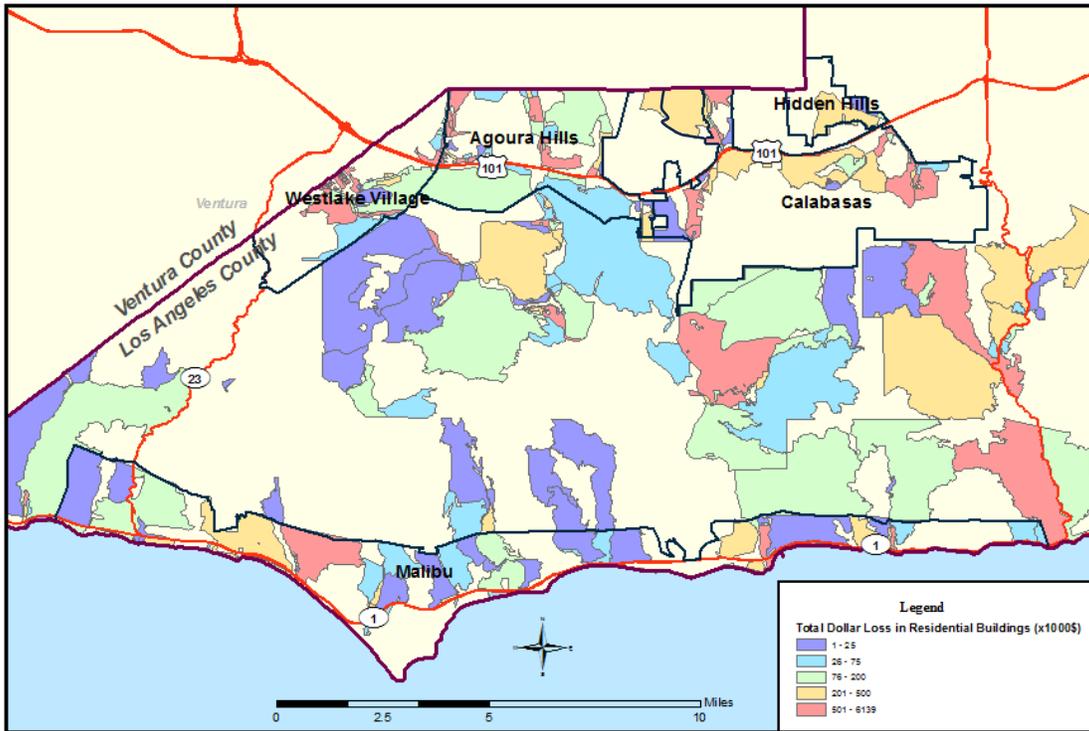
City Name	Residential Total Loss [\$M]	Residential Building Loss [\$M]	Residential Content Loss [\$M]	Commercial Total Loss [\$M]	Commercial Building Loss [\$M]	Commercial Content Loss [\$M]	Industrial Total Loss [\$M]	Industrial Building Loss [\$M]	Industrial Content Loss [\$M]
Agoura Hills	31.39	19.27	12.12	29.98	8.55	20.89	2.81	0.76	1.84
Calabasas/Hidden Hills	17.10	10.50	6.60	4.11	1.30	2.81	0.43	0.11	0.22
Malibu	17.53	10.82	6.82	8.01	2.81	5.20	1.95	0.65	1.19
Westlake Village	46.11	28.14	17.86	34.31	8.98	24.25	2.71	0.87	1.62
<b>Totals</b>	<b>112.14</b>	<b>68.73</b>	<b>43.40</b>	<b>76.42</b>	<b>21.65</b>	<b>53.15</b>	<b>7.90</b>	<b>2.38</b>	<b>4.87</b>

Table 115: 50-year Flood Direct Economic Loss for Full Replacement of Buildings and Contents

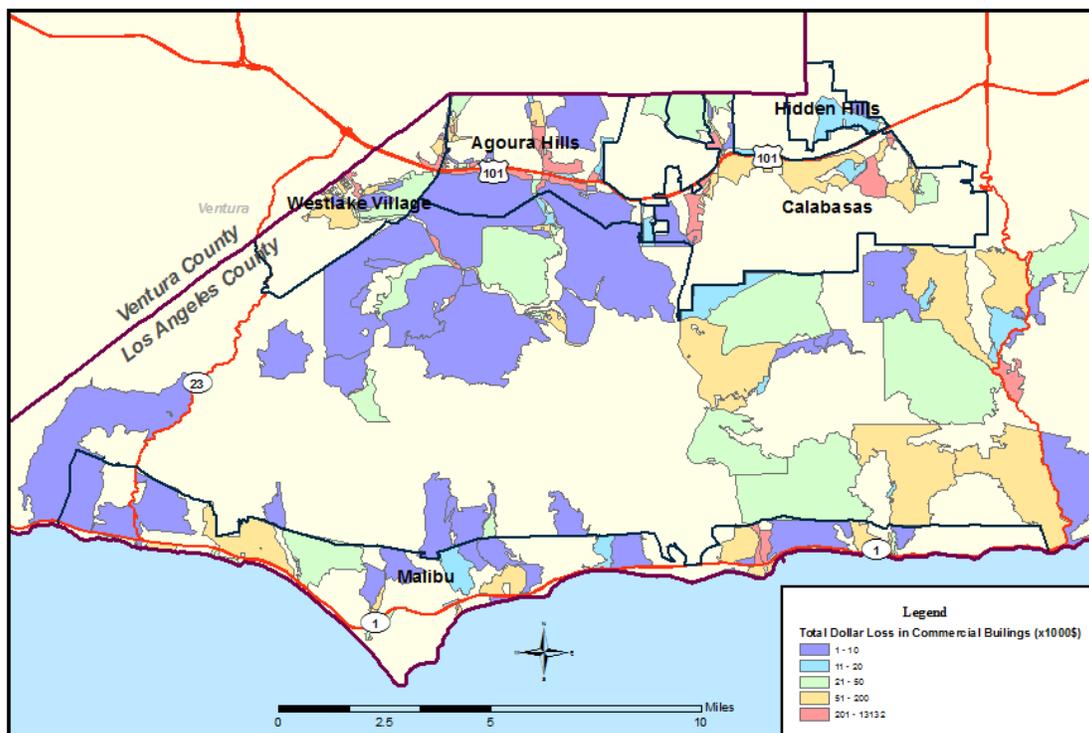
City Name	Residential Total Loss [\$M]	Residential Building Loss [\$M]	Residential Content Loss [\$M]	Commercial Total Loss [\$M]	Commercial Building Loss [\$M]	Commercial Content Loss [\$M]	Industrial Total Loss [\$M]	Industrial Building Loss [\$M]	Industrial Content Loss [\$M]
Agoura Hills	22.41	13.75	8.66	18.62	5.41	13.21	1.62	0.43	1.19
Calabasas/Hidden Hills	11.47	7.04	4.44	2.27	0.76	1.62	0.22	0.11	0.11
Malibu	11.58	7.14	4.44	4.44	1.52	2.92	1.08	0.32	0.76
Westlake Village	30.20	18.40	11.80	20.78	5.63	15.05	1.52	0.54	0.97
<b>Totals</b>	<b>75.66</b>	<b>46.33</b>	<b>29.33</b>	<b>46.11</b>	<b>13.31</b>	<b>32.80</b>	<b>4.44</b>	<b>1.41</b>	<b>3.03</b>

Table 116: 50-year Flood Direct Economic Loss for Depreciation Replacement Value of Bdgs and Contents

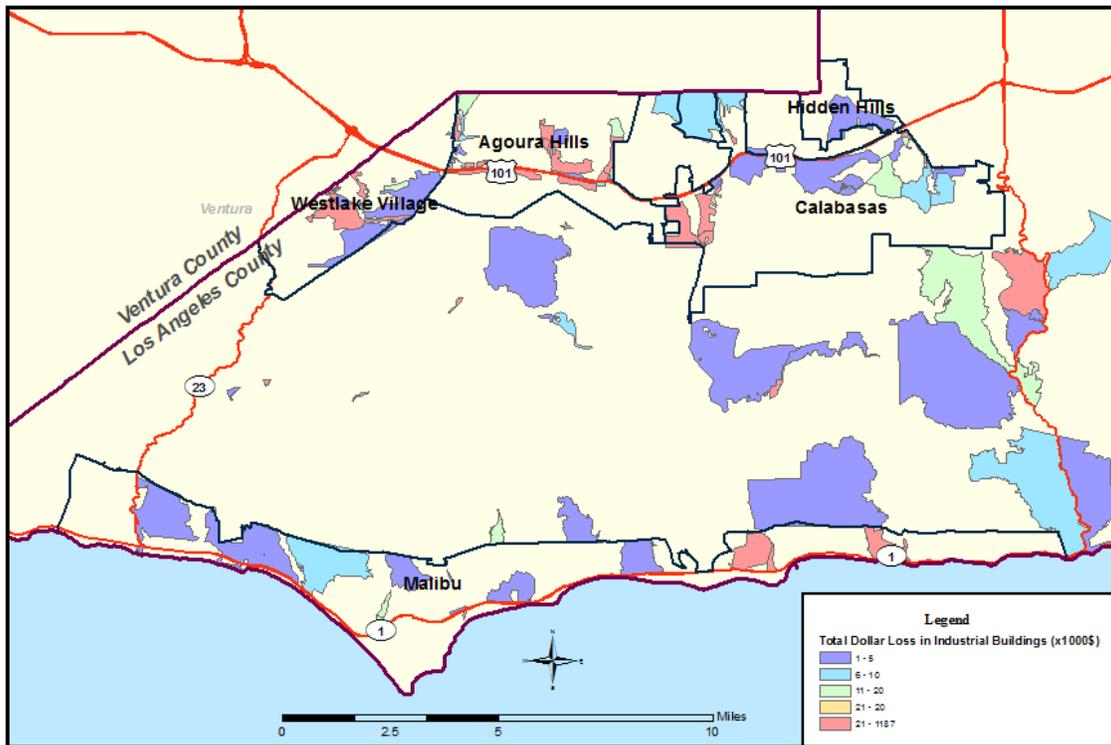
The maps below depict the 50-year Flood geographic distribution of losses for residential, commercial, and industrial facilities within the region.



Map 32: 50-year Flood Residential Building Dollar Loss Estimate



Map 33: 50-year Flood Commercial Building Dollar Loss Estimate



Map 34: 50-year Flood Industrial Building Dollar Loss Estimate

### 100-year Flood

It is estimated that a 100-year Flood (riverine flooding) will result in damage to residential, commercial, and industrial properties. The table below depicts the estimated number of structures impacted.

City Name	Building Count Residential	Building Count Commercial	Building Count Industrial
Agoura Hills	171	3	0
Calabasas /Hidden Hills	107	0	0
Malibu	96	0	0
Westlake Village	542	0	0
<b>Totals</b>	<b>916</b>	<b>3</b>	<b>0</b>

Table 117: 100-year Flood General Building Stock Damage Count

HAZUS-MH provides estimates of dollar losses to residential, commercial, and industrial facilities. Note: The total of building loss and content loss is not equal to total loss due to other costs such as inventory loss, relocation expense, and income loss.

The tables below show the economic losses for the general building stock by census block (full replacement value and depreciated replacement value).

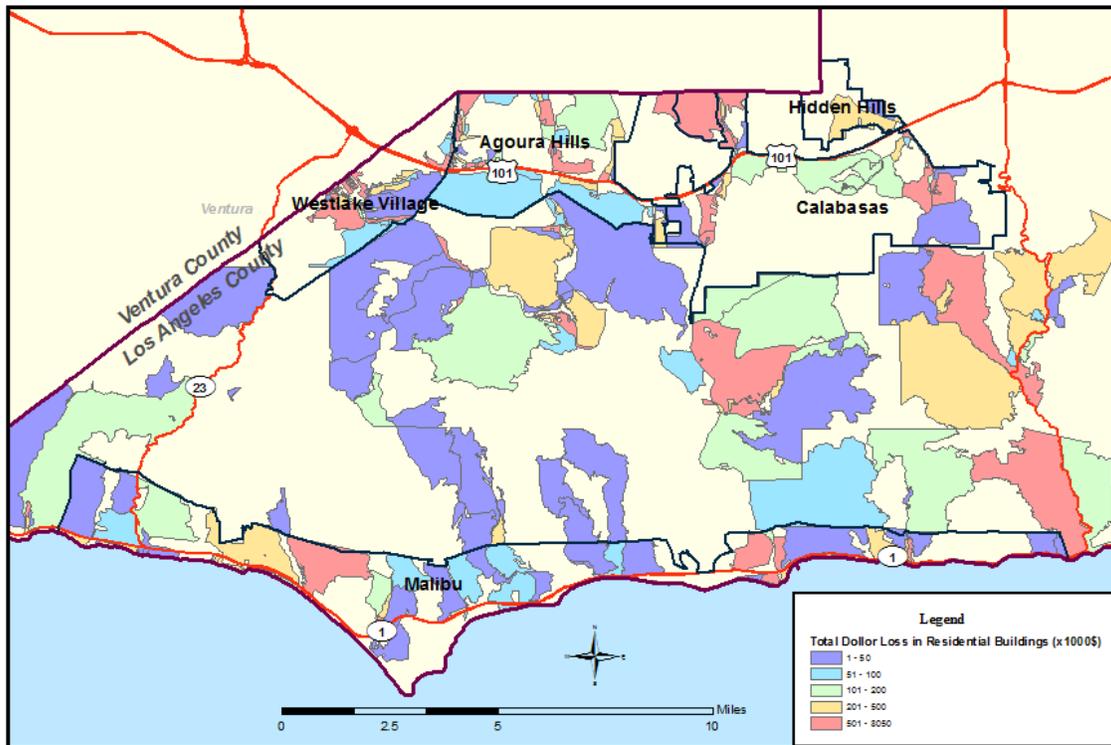
City Name	Residential Total Loss [M]	Residential Building Loss [M]	Residential Content Loss [M]	Commercial Total Loss [M]	Commercial Building Loss [M]	Commercial Content Loss [M]	Industrial Total Loss [M]	Industrial Building Loss [M]	Industrial Content Loss [M]
Agoura Hills	37.34	22.95	14.40	42.43	12.66	29.01	4.00	1.19	2.60
Calabasas/Hidden Hills	22.30	13.85	8.44	4.22	1.30	2.92	0.43	0.11	0.22
Malibu	21.43	13.21	8.33	10.17	3.25	6.71	2.27	0.76	1.41
Westlake Village	50.33	30.85	19.48	37.23	10.28	26.09	3.03	0.87	1.84
<b>Totals</b>	<b>131.40</b>	<b>80.86</b>	<b>50.66</b>	<b>94.06</b>	<b>27.49</b>	<b>64.73</b>	<b>9.74</b>	<b>2.92</b>	<b>6.06</b>

Table 118: 100-year Flood Direct Economic Loss for Full Replacement of Buildings and Contents

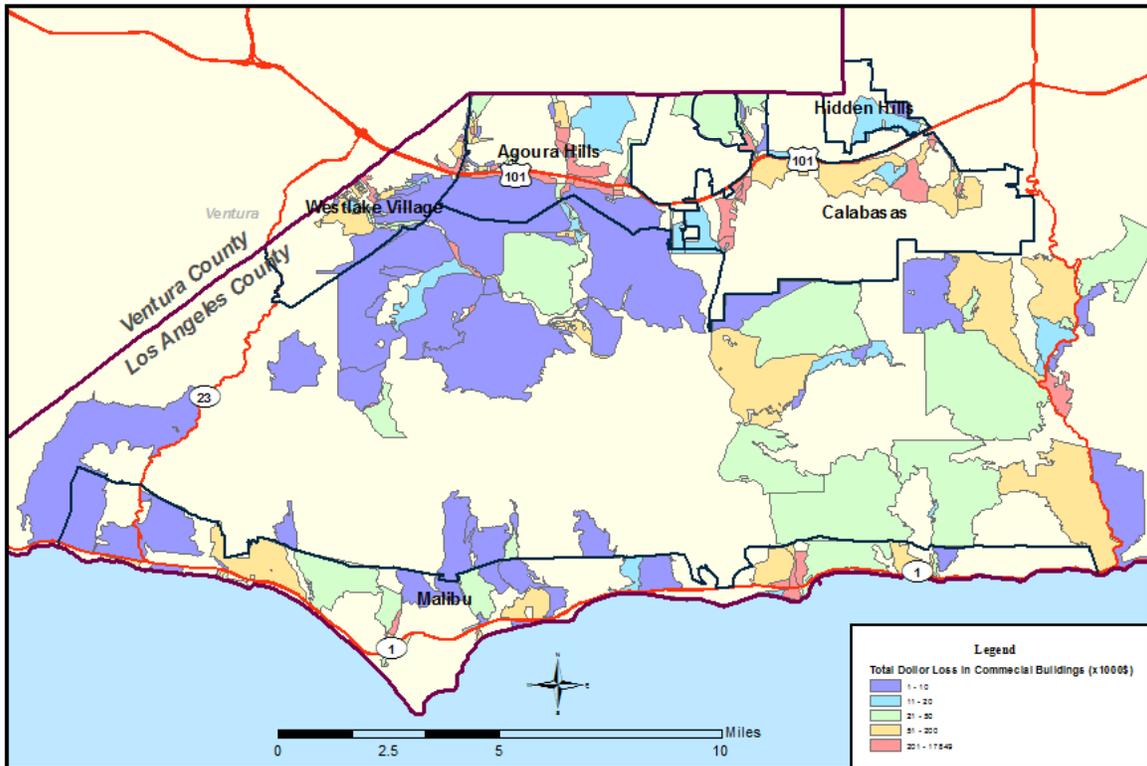
City Name	Residential Total Loss [M]	Residential Building Loss [M]	Residential Content Loss [M]	Commercial Total Loss [M]	Commercial Building Loss [M]	Commercial Content Loss [M]	Industrial Total Loss [M]	Industrial Building Loss [M]	Industrial Content Loss [M]
Agoura Hills	18.51	11.37	7.14	26.52	8.01	18.51	2.38	0.76	1.62
Calabasas/Hidden Hills	12.77	7.90	4.87	2.38	0.76	1.62	0.22	0.11	0.11
Malibu	12.45	7.69	4.76	5.63	1.84	3.79	1.19	0.43	0.76
Westlake Village	26.84	16.45	10.39	22.62	6.39	16.24	1.73	0.54	1.19
<b>Totals</b>	<b>70.57</b>	<b>43.40</b>	<b>27.17</b>	<b>57.15</b>	<b>16.99</b>	<b>40.16</b>	<b>5.52</b>	<b>1.84</b>	<b>3.68</b>

Table 119: 100-year Flood Direct Economic Loss for Depreciation Replacement Value of Bldgs and Contents

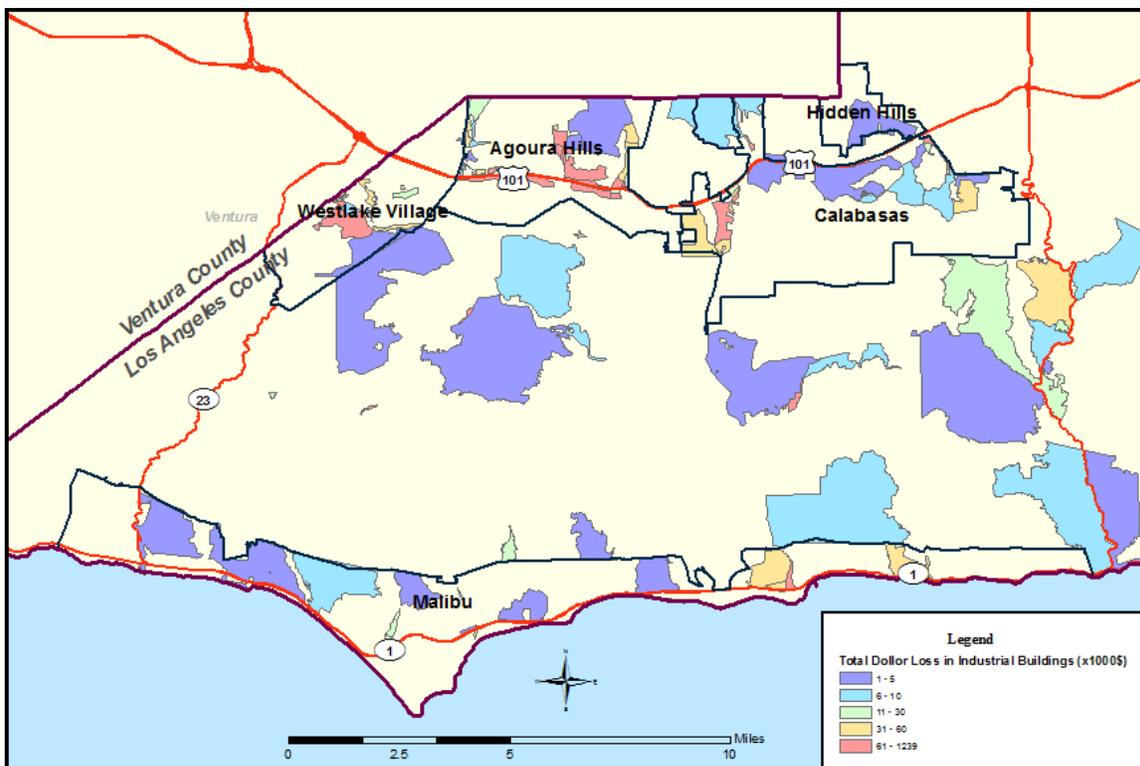
The maps below depict the 100-year Flood geographic distribution of losses for residential, commercial, and industrial facilities within the region.



Map 35: 100-year Flood Residential Building Dollar Loss Estimate



Map 36: 100-year Flood Commercial Building Dollar Loss Estimate



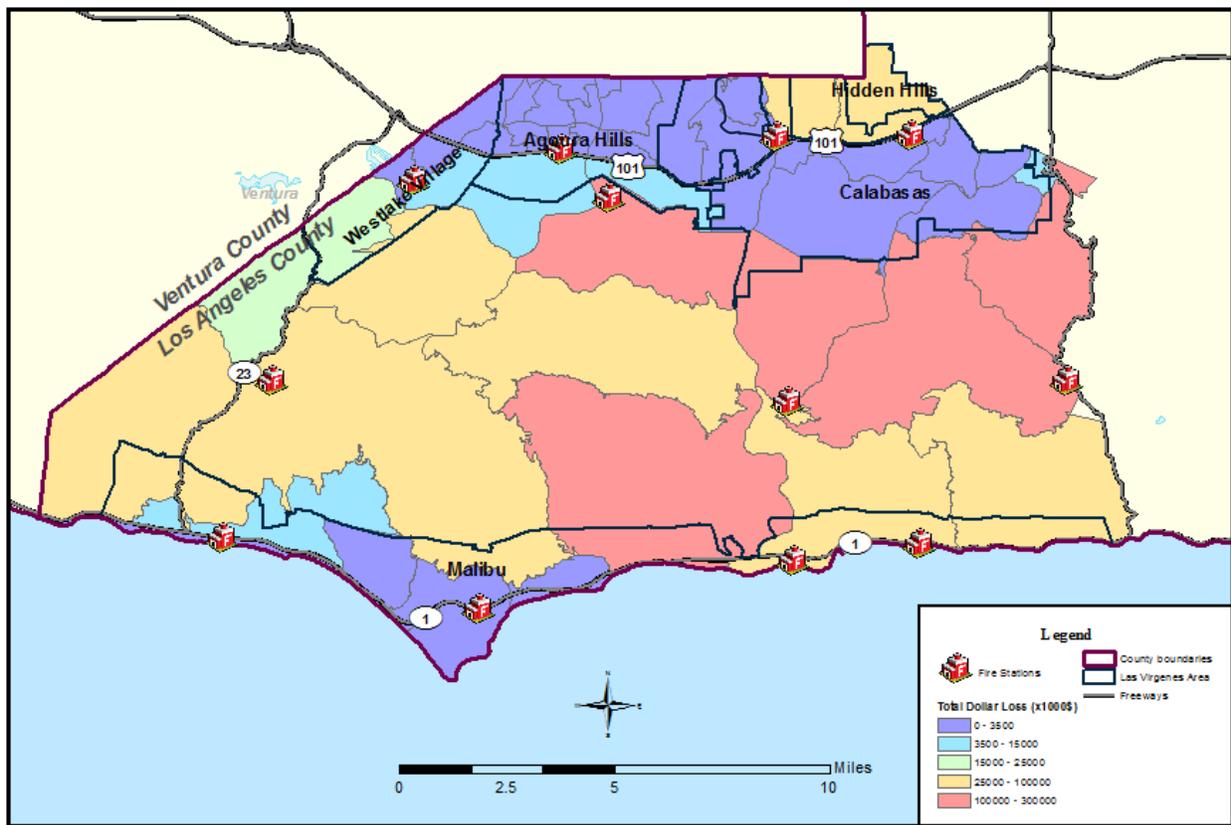
Map 37: 100-year Flood Industrial Building Dollar Loss Estimate

**Wildfire Loss Estimates**

If widespread wildfires were to occur, the total potential land improvement loss in urban interface areas (buildings, parking structures, infrastructure, etc.) for all cities in the Las Virgenes-Malibu Council of Governments area has been estimated at \$1,644,600,000. Note: HAZUS-MH data for wildfires is not available at this time.

City Name	Total Land Improvement Loss [\$M]
Agoura Hills	305.24
Calabasas /Hidden Hills	645.54
Malibu	603.11
Westlake Village	90.71
<b>Totals</b>	<b>1,644.60</b>

Table 120: 50-year General Building Stock Damage Count



Map 38: Wildfire \$ Loss Estimate

Areas of highest potential loss from wildfire (Red=\$100,000,000 to \$3,000,000,000) include the southern border of Calabasas and north/central Malibu. At high risk of loss (Orange=\$25,000,000 to \$1,000,000,000) are Hidden Hills and portions of Malibu. The southwest portion of Westlake Village is at moderate risk of loss (Green=\$15,000,000 to \$25,000,000). Potential losses for all other areas remain a concern but are reduced (Light Blue=\$3,500,000 to \$15,000,000 and Purple=\$0 to \$3,500,000).

### *Future Development Trends*

The summaries below provide brief descriptions of development trends in the Las Virgenes-Malibu Council of Governments area. While all cities within the LVMCOG enforce building code requirements and restrictions in hazard zones, development trends provide an indication of future risk – either from urban area growth in previously undeveloped land (resulting in increased risk from wildfire, landslide, flood, etc.), changes in the building inventory, or increased population densities. Additional information is provided in **Section 2: Community Profile** for each city under Land Use and Housing Characteristics and in **Section 5: Plan Maintenance and Monitoring**.

### *Agoura Hills Development Trends*

Residential neighborhoods are fully developed and there are limited opportunities for infill development. From 2016 to 2021, the total number of residential housing units increased slightly by approximately 1.63%.

### *General Plan 2021-2029 Draft*

Every eight years, the City of Agoura Hills General Plan Housing Element (Housing Element) is updated to incorporate and address the City’s Regional Housing Needs Assessment (RHNA) allocation. For this Sixth Cycle, the City’s RHNA allocation included a total of 318 units, including 199 lower income housing units. Updating the Housing Element triggers the need for additional General Plan Element updates. Specifically, the Community Conservation and Development, Community Safety, Infrastructure and Community Services, and Natural Resources Elements have been amended to ensure internal consistency and comply with state law.

To meet state housing mandates and as part of the 2022 General Plan Update (GPU), the City rezoned 20 properties with an Affordable Housing Overlay (AHO), allowing increased density and ministerial permit processing (permits involving no discretion) for affordable housing projects on those sites. To ensure that all housing projects meet the City’s desired architectural and zoning standards, two sets of standards were developed:

1. Affordable Housing Overlay standards, which ensures that all projects developing under the AHO meet objective zoning requirements
2. Objective Design Standards, which ensures that ALL multi-family and mixed-use projects’ design elements are evaluated based on the City’s objective design standards, which focus primarily on architectural detailing.

Agoura Hills contains multiple commercial zones and established business centers. The table on the following page provides a summary of Commercial, Residential, and Mixed-Use development projects in Agoura Hills (Source: City of Agoura Hills Planning Department).

*Commercial, Residential, and Mixed-Use Projects*

Status	Name	Project Description	Acres	Square Feet	No. of Units / Lots / Projects
Approved - Commercial	Eastwood Ranch Animal Shelter	New animal rescue facility and merge three lots	0.82	4,900 sf + 3,374 sf	Animal Rescue Facility
Approved - Commercial	Ladyface Vista LP	5 new office buildings with surface parking, encroach into the TPZ of 2 oak trees, subdivide parcel	3.23	Building A: 3526 sf Building B: 3643 sf Building C: 5767 sf Building D: 3733 sf Building E: 6310 sf	5 Office Buildings
Approved - Commercial	Shirvanian Family Investment (New ABC North)	Industrial park with 7 buildings	10	103,000 sf	7 Building Industrial Park
In-Review - Commercial	64North	Mixed Use Development with office, retail, restaurant, and multi-family residential units with subterranean garage	0.87	17,800 sf Office 15,914 sf Residential Subterranean Garage: 17,100 + 11,850 sf	15 Residential 4 Retail
In-Review - Commercial	Agoura Business Center North	Two new industrial buildings	1.65	18,000 sf.	Two-story Office Building
In-Review - Commercial	Agoura Business Center North 28721 Canwood Street	Two Industrial Buildings	7.7	Bldg C: 35,532 sf Bldg D: 36,545	Two New Industrial Buildings
In-Review - Commercial	Bori Restaurant	New commercial building for a restaurant	0.72	2,870 sf	Restaurant
In-Review - Commercial	Chesebro Senior Care	New senior care facility with 76 rooms/beds, merge lots, and change zone to remove OA overlay	1.78	46,126 sf	Residential
In-Review - Commercial	Korten Chesebro Office	New two-story office building	0.17	2,545 sf	Two-story Office Building

Status	Name	Project Description	Acres	Square Feet	No. of Units / Lots / Projects
<b>In-Review - Commercial</b>	West Village	Mixed Use Development with office, retail, restaurant, and multi-family residential units with subterranean garage	18.24	123,225 sf Total Building Area	5 Commercial Buildings 78 Residential
<b>In-Review - Residential</b>	Brian Campbell for Gateway Church 29646 Agoura Rd	New 60 duplex residences, church, and subdivide parcel into 5 lots.	109	Residential + 25,826 sf Church Facility	66 Duplex Units and Church Facility
<b>In-Review - Residential</b>	Dorothy Place 28000 Dorothy Dr	New 60-unit multi-family townhouse development.	8.23	295,772 sf	60 Unit Multi-Family Townhomes

Table 121: Agoura Hills Commercial, Residential, and Mixed Use Development Trends

### Calabasas Development Trends

Most developable areas within the City are already built out and the majority of undeveloped land will remain undeveloped due to environmental constraints and terrain limitations. In Calabasas, there has been a slight increase in the number of housing units since 2017 – particularly in 5 - 9 multi-family units and 10 - 19 multi-family units.

Although the City is mainly residential, there are a number of established commercial business parks and shopping centers. The table below provides a summary of pending and current development projects and initiatives in Calabasas (Source: City of Calabasas Projects, Plans & Reports in the City of Calabasas as of 12/30/2023 <https://www.cityofcalabasas.com/our-city/current-projects>).

Name	Location	Description	Number of Units	Size
Audi Calabasas Remodel and Addition	24650 Calabasas Road	Remodel and Addition to an Existing Audi Calabasas auto dealership	Auto Dealership Expansion	Approximately 111,531 square feet to the existing 28,966 square foot site
Barrett Medical Office and Surgery Center	24820 Calabasas Road	New Medical Office Building Construction	1	28,500 square foot 2-story building
Calabasas Community Center Improvements	27040 Malibu Hills Road	Internal and External Painting, Replacement of All Flooring, A/V & IT Upgrades, New Equipment and Supplies, and General Maintenance	1	30,000 square feet

Name	Location	Description	Number of Units	Size
City-Wide Green Street Project Phase I	Las Virgenes Road between Mont Calabasas Road and Terminus of Las Virgenes Road	Green street project that will begin north of Mont Calabasas Rd and end at the terminus of Las Virgenes Rd. This project will improve the west side of Las Virgenes Road by providing street parking and permeable pavement parking lots, construction of a multipurpose trail, implementing elements of environmentally friendly green projects through the construction of vegetated swales, stormwater treatment improvements, and mitigation of storm runoff overflow in the street. The project also includes safety improvements for pedestrians by constructing concrete sidewalk and mid-block crossings.	N/A	Las Virgenes Road between Mont Calabasas Road and Terminus of Las Virgenes Road
Clean Power Alliance	City-wide Program	Clean Power Alliance provides electricity procurement services for residents and businesses leveraging the combined purchasing power of member agencies to offer clean renewable energy at competitive rates.	N/A	N/A

Name	Location	Description	Number of Units	Size
The Commons Lane	4719 Commons Way	Construction of two, new mixed-use buildings. The project's new mixed-use buildings (referred to on the plans as Buildings A and B) contain 210,921 square feet of total new floor area with up to 119 residential units, including 12 affordable units, and up to 24,163 square feet of neighborhood-serving commercial uses. To accommodate the Project, the existing theater building (approximately 33,091 square feet) will be demolished, along with a portion of the existing surface parking lot and associated landscaping.	2	210,921 square feet
Craftsman's Corner Territory Annexation	North of Highway 101, between the Cities of Calabasas and Hidden Hills	A proposed annexation of approximately 145 acres of territory (including 85 parcels) to the City of Calabasas, and approximately 12 acres of territory (including four parcels) to the City of Hidden Hills. This area is presently part of the unincorporated territories of the County of Los Angeles.	N/A	145 acres
Housing Element Update & Related General Plan Element Updates	N/A	Updates to the Housing Element, Land Use Element, Circulation Element, and Safety Element	N/A	N/A
Kia Calabasas	24460 Calabasas Road	Construction of a New Retail Automobile Dealership for Kia Located on a Vacant Parcel Previously Occupied by Sperling Nursery.	1	47,944 square feet and an associated 2,117 square-foot car wash

Name	Location	Description	Number of Units	Size
Mulholland Gardens	24415 Mulholland Hwy	A Proposed 11-lot Subdivision Titled Mulholland Gardens on an Existing Undeveloped Parcel. The Project Site Contains Split Zoning that includes Rural Residential in the Scenic Overlay (RR-SC) and Hillside Mountainous (HM).	N/A This project is only for the subdivision and does not include residential development at this time.	176,170 square feet
Old Topanga Canyon Road / Mulholland Highway Improvement Project	Mulholland Highway from East Old Topanga Road to West Old Topanga, and Old Topanga Canyon Road and Palm Drive	Improvements on Mulholland Highway from Old Topanga Canyon Road West to Old Topanga Canyon Road East and Old and 200 feet road improvements on Old Topanga Canyon Road West. Improvements include shoulder widening, sidewalks, pavement rehabilitation, storm drain improvements, retaining wall, erosion control, new traffic signal and traffic signal modification, water facility relocation and Wild Walnut Park parking lot improvements.	N/A	Mulholland Highway from East Old Topanga Road to West Old Topanga, and Old Topanga Canyon Road and Palm Drive
The Park Apartments	24100 Park Sorrento	Construct a New Mixed-use Building including 1,600 square-foot Commercial Space and 107 Residential Units, 26.25% of which will be Designated Affordable (16 units designated for low income households, 5 units designated for very low income households).	1 including Commercial and 107 Residential Units	118,495 square feet
Wireless Telecommunications Facilities Information	City-wide	Upgrades to the Wireless Telecommunication Network	N/A	N/A

Table 122: Calabasas Development Trends

### Hidden Hills Development Trends

Hidden Hills is a fully developed master planned residential community with a small restricted commercial zone (a single real estate office). Any further development or home modifications must be approved by the Hidden Hills Community Association Architectural Committee. As a result, minimal or no new development is anticipated. A proposed annexation is in progress.

Name	Location	Description	Number of Units	Size
Craftsman’s Corner Territory Annexation	North of Highway 101, between the Cities of Calabasas and Hidden Hills	A proposed annexation of approximately 145 acres of territory (including 85 parcels) to the City of Calabasas, and approximately 12 acres of territory (including four parcels) to the City of Hidden Hills. This area is presently part of the unincorporated territories of the County of Los Angeles.	N/A	12 acres

Table 123: Hidden Hills Development Trends

### Malibu Development Trends

Malibu is a beachfront community with the majority of residents living along Pacific Coast Highway (PCH) or in small residential communities. A number of existing residences are interspersed throughout the Santa Monica Mountains along canyons and hillsides (one mile or more inland). From 2017 to 2021, the number of 1-unit, mobile home, and smaller multi-unit structures (2 to 4 units) as well as 10 to 19 unit properties decreased while the number of 5 to 9 multi-unit structures and larger 20+ units increased.

There are also numerous established retail locations along Pacific Coast Highway including the Malibu Civic Center area. The table below provides a summary of significant commercial, residential, and educational projects in the City of Malibu (Source: City of Malibu Planning Department).

Status	Name	Project Description	Acres	Square Feet	No. of Units / Lots / Projects
Approved - Residential	The Case Project	The Case Project, formerly known as the Crummer Site Subdivision, proposed project includes the development of five single-family residences on an irregularly shaped, approximately 24-acre vacant, bluff top parcel immediately adjacent to the City of Malibu Bluffs Park	24	Varies per Single Family Unit	5 residential plus 1.74 acres dedicated for recreational use

Status	Name	Project Description	Acres	Square Feet	No. of Units / Lots / Projects
<b>In Review - Commercial</b>	Malibu Inn Motel	New construction of a motel above a new subterranean parking garage, surface parking lot, grading, retaining walls, landscaping, and a new onsite wastewater treatment system	1.18	7,693 sf (51,352 sf lot)	2-story motel
<b>In Review - Commercial</b>	Nobu Ryokan Motel & Malibu Tidepool Health	Conversion of the existing non-conforming use (motel and adjacent private gym and pool) to a bed and breakfast inn, the sale of alcohol for onsite consumption, and a lot tie for the two lots to operate conjunctively and conversion of office space in the Tide Pool building into a new guest suite for the properties	0.97	41,817 sf	16 room hotel
<b>Approved - Commercial</b>	Sea View Hotel	Hotel development with associated amenities, including a spa, restaurant, private decks, and a rooftop deck with a pool	1.19	51,776 sf	39 room hotel
<b>Approved - Commercial</b>	La Paz Ranch Project	Two vacant parcels located in the Civic Center. The approved project involves reconfiguring the site into three parcels where Parcels A and B would be developed with a new multi-building commercial (retail, office, restaurant) complex and Parcel C would be dedicated to the City.	15.2	112,058 sf Commercial 20,000 sf Future City Hall	Commercial Office and Retail Future City Hall
<b>In Review - Educational Facilities</b>	Malibu Middle & High School Improvements	On December 17, 2021, the Santa Monica-Malibu Unified School District (SMMUSD) submitted the draft Malibu Middle and High School (MMHS) Specific Plan for reconstruction of the middle and high school facilities, restoration of the creek, etc.	52	154,904 sf	New Malibu high school building

Status	Name	Project Description	Acres	Square Feet	No. of Units / Lots / Projects
<b>Complete - Educational Facilities</b>	Santa Monica College – Malibu Campus Project	The Santa Monica Community College District proposed a Santa Monica College (SMC) Malibu Campus located at 23555 Civic Center Way in Malibu, in the former Los Angeles County Sheriff’s Station	2.94	128,500 sf	5 classrooms and labs, a multi-purpose community room that will convert into an Emergency Operations Center (EOC) for local emergencies, a computer lab; and administrative offices
<b>Approved - Commercial</b>	Whole Foods & The Park Shopping Center	The Whole Foods and the Park project (proposed project) includes the development of two vacant parcels for a new community shopping center in the Civic Center area of the City of Malibu	5.88	38,425 sf	Shopping Center

Table 124: City of Malibu Development Trends



Currently there are two new residential development projects in Westlake Village (Source: Westlake Village Planning Department).

Status	Name	Project Description	Acres	Square Feet	No. of Units / Lots / Projects
<b>In Review-Residential</b>	Linero Residential Project	A residential development project consisting of 693 rental units, of which 70 units would be restricted for rent to very low-income households	20	Approx. 235,095 sf (total property)	693 residential rental units
<b>Approved - Residential</b>	Holden Westlake Village Senior Living Community	The Holden Westlake Village Senior Living Community (formerly referred to as the Cedar Valley Senior Housing Project) is an assisted living and memory care development that will be a State licensed residential care facility	1.3	343 to 999 sf per unit	128 units, including 102 assisted living units and 26 memory care units. The project will include 15 deed restricted affordable housing units, including six low-income and nine moderate-income units.

Table 125: Westlake Village Development Trends

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## SECTION 4. HAZARD MITIGATION GOALS AND STRATEGIES

This section describes the framework that focuses the plan on developing successful mitigation strategies. The framework is made up of three parts: Mission, Goals, and Strategies.

### MISSION

The mission of the Las Virgenes-Malibu Council of Governments Hazard Mitigation Plan is to promote sound public policy and programs designed to protect the public, critical facilities, infrastructure, private and public property and the environment from natural and manmade hazards. The mission is achieved by developing and implementing the Hazard Mitigation Plan to guide the Region towards creating and maintaining a safer and more sustainable community.

### HAZARD MITIGATION PLAN GOALS

The Hazard Mitigation Plan goals describe the overall direction that Las Virgenes-Malibu Council of Governments agencies, organizations, and citizens can take to minimize the impacts of hazards. The plan goals help to guide the direction of future activities aimed at reducing risk and preventing loss from hazards. The goals are stepping-stones between the broad direction of the mission and the specific recommendations that are outlined in the strategies.

#### *To Protect Life, Property, Environment*

- Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property to be more resistant to hazards with attention to addressing the needs of the socially vulnerable community based on:
  - Socioeconomic Status
  - Household Composition and Disability
  - Minority Status & Language
  - Housing & Transportation
- Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.
- Encourage preventative measures for existing and new development in areas vulnerable to hazards.

#### *Public Awareness*

- Develop and implement education and outreach programs to increase public awareness of the risks associated with hazards.
- Develop and implement education and outreach programs to increase public awareness of the mitigation measures associated with hazards.
- Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

#### *Partnerships and Implementation*

- Strengthen communication and coordinate participation among and within public agencies, citizens, non-profit organizations, business, and industry to gain a vested interest in implementation.
- Encourage leadership within public and private sector organizations to prioritize and implement local and Regional hazard mitigation activities.

**Emergency Management**

- Establish policies to ensure implementation of mitigation projects for critical facilities, services, and infrastructure.
- Make recommendations for updating local ordinances, city guidelines, codes, and permitting processes and establish new ordinances that support mitigation.
- Strengthen emergency operations by increasing collaboration and coordination among departments, public agencies, non-profit organizations, business, and industry.
- Coordinate and integrate hazard mitigation activities (when appropriate) with emergency operations plans and procedures.

**Floodplain Management**

To support the Mission of the Hazard Mitigation Plan, the floodplain management program of each city consists of a combination of:

- Permitting Process and Inspections
- NFIP Participation, Monitoring, and Compliance
- General Plans

**Permitting Process and Inspections**

Each city’s Building & Safety Department is responsible for issuing permits and inspecting construction and development areas to ensure compliance to local codes including restrictions to reduce the threat of flood.

**Participation in the National Flood Insurance Program**

All the cities within the Las Virgenes-Malibu Council of Governments participates in the National Flood Insurance Program and conforms to the ongoing eligibility requirements as specified under 44 CFR §59.21. Copies of current FIRMs are provided in **Annex F: Flood Insurance Rate Maps**.

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	Tribal
065072C	AGOURA HILLS	LOS ANGELES		03/04/86	04/04/18	03/04/86	No
060749#	CALABASAS	LOS ANGELES		12/2/80	12/21/18	03/10/93	No
060125#	HIDDEN HILLS	LOS ANGELES	04/23/76	09/07/84	(NSFHA)	09/07/84	No
060745#	MALIBU	LOS ANGELES		09/26/08	04/21/21	10/1/92	No
060744C	WESTLAKE VILLAGE	LOS ANGELES		09/26/08	04/04/18	10/1/92	No

Table 126: FEMA Community Status Book Report: California

Source: <http://www.fema.gov/cis/CA.html>

Note: A Non-Special Flood Hazard Area (NSFHA) is an area that is in a moderate-to-low risk flood zone (Zones B, C, X Pre- and Post-FIRM). An NSFHA is not in any immediate danger from flooding caused by overflowing rivers or hard rains. However, it’s important to note that structures within a NSFHA are still at risk.

***NFIP Monitoring and Compliance***

Each city within the LVMCOG has a designated staff position responsible for ongoing monitoring and compliance to the requirements specified by under the NFIP. In addition, this person is responsible for managing NFIP and flood mitigation efforts within each jurisdiction and requesting flood map updates ((e.g., working with the city’s Emergency Manager/Coordinator and other stakeholders) and requesting flood map updates (as required).

***NFIP City Contacts***

The following contacts are responsible for NFIP monitoring and compliance:

<b>City</b>	<b>Contact for NFIP Monitoring and Compliance</b>
Agoura Hills	Public Works - Engineering 818-597-7329 <a href="https://www.agourahillscity.org/department/public-worksengineering">https://www.agourahillscity.org/department/public-worksengineering</a>
Calabasas	Engineering – Building and Safety 818-224-1670 <a href="https://www.cityofcalabasas.com/government/communitydevelopment/building-and-safety-division">https://www.cityofcalabasas.com/government/communitydevelopment/building-and-safety-division</a>
Hidden Hills	Public Works 818-888-9281 <a href="https://hiddenhillscity.org/">https://hiddenhillscity.org/</a>
Malibu	Public Works - Engineering 310-456-2489 x339 <a href="https://www.malibucity.org/806/Floodplain-Management">https://www.malibucity.org/806/Floodplain-Management</a>
Westlake Village	Public Works – Engineering Department 818-706-1613 <a href="https://www.wlv.org/192/Engineering">https://www.wlv.org/192/Engineering</a>

***General Plans – Flood Mitigation and Planning***

The Planning Department within each city is responsible for maintaining and updating the General Plan. Floodplain management requirements and incorporation of flood mitigation as well as NFIP requirements are included in the Safety Element sections of the General Plan (Note: the City of Westlake Village utilizes a separate Hazards section for flood hazard goals and policies). The following snapshots of each city’s General Plan provide examples of policies that relate directly to flood mitigation (outlined in blue).

Agoura Hills General Plan Safety Element (partial) – Flood Hazards

## Chapter 5 COMMUNITY SAFETY

The urban and natural environments of Agoura Hills contain a number of hazards that require special consideration and treatment in the land use planning process to protect the public’s safety. These hazards include flooding, unstable earth conditions, wildland and urban fires, crime, and hazardous materials. Protection from the risks of natural and man-made hazards, crime, and disease are essential in establishing a sense of well-being for residents and important considerations in attracting new businesses to the City that will provide quality jobs. Goals and policies in this chapter strive to reduce hazards, mitigate noise impacts, provide for emergency response strategies, and coordinate emergency response agencies.

### A. Flood Hazards (S)

In Agoura Hills, potential flood hazards may result from overflow of natural watercourses and man-made drainage systems due to excessive and unusual storm runoff. Agoura Hills does not have a significant flooding problem, as the City’s flood control facilities and storm drainage system generally have sufficient capacity to adequately protect developed areas from excessive storm runoff. However, heavy rains can result in flooding on City roadways Figure S-1 (Hazards) displays FEMA-recognized zones subject to flooding and other hazards within the community. The following goal and policies provide the City with guidance in reducing present and future flood hazards.



Flood control and storm water facilities

#### Goal S-1

**Protection from Flood Hazards. Residents, workers, and visitors that are protected from flood hazards.**

#### Policies

- S-1.1 **Coordination of Drainage Improvements.** Locate and improve deficiencies in the storm drain system to prevent local flooding problems in the City. *(Imp U-21)*
- S-1.2 **New Development.** Require new development to upgrade storm drains to handle the increased runoff generated from the development sites. *(Imp U-20, U-22)*
- S-1.3 **Facility Use or Storage of Hazardous Materials.** Require that all facilities storing, using, or otherwise involved with substantial quantities of on-site hazardous materials within flood zones comply with applicable standards of elevation, anchoring, and flood proofing, and that hazardous materials be stored in watertight containers. *(Imp S-1)*



CHAPTER 5: COMMUNITY SAFETY

- S-1.4 SEMS Plan.** Ensure that the City’s Standardized Emergency Management System (SEMS) Plan is evaluated annually and revised as required, that the current mitigation strategies addressing flood hazards are implemented, and that effective public outreach and education are included. *(Imp S-2)*
- S-1.5 Preservation of Flood Plains.** Preservation of flood plains as open space shall be considered, as feasible, as an alternative to channelization. *(Imp S-3)*
- S-1.6 Floodplain Requirements.** Regulate development within floodplains in accordance with the County, state and federal requirements, and maintain the City’s eligibility under the National Flood Insurance Program. *(Imp S-1)*
- S-1.7 Flood Mitigation Design.** Require that new development incorporates sufficient measures to mitigate flood hazards, including the design of on-site drainage systems linking with citywide storm drainage, grading of the site so that runoff does not impact adjacent properties or structures on the site, and elevation of any structures above any flooding elevation. *(Imp U-19, U-20, U-21, U-22, S-1)*

## Calabasas General Plan Safety Element (partial) – Flood Hazards

### VII.B Stormwater Management and Flooding

#### Objective

Minimize the potential for loss of life, physical injury, property damage, and social disruption resulting from flooding.

#### General Plan Approach

Flooding is the inundation of normally dry land because of a rise in the level of surface waters or the rapid accumulation of stormwater runoff; it becomes a hazard when the flow of water has the potential to damage property and threaten human life or health. Flood risks are greatest, and flood hazards most severe, in winter, when water bodies are usually full, and soils saturated. Flooding is primarily a natural process and, therefore, difficult to prevent. However, land use and development decisions have a significant effect on the frequency and severity of floods; in general, urbanization increases the risk of flooding by increasing stormwater runoff and, to a lesser extent, erosion. Flooding is often a regional problem that crosses multiple jurisdictional boundaries.

*A 100-year flood is calculated to be the level of flood water equaled or exceeded at least once in a 100-year period. The 100-year flood is more accurately referred to as the 1% flood, since it is the event that has a 1% chance of being equaled or exceeded in any single year.*

**Figure VII-3** depicts the Federal Emergency Management Agency flood zones in Calabasas using Federal Emergency Management Agency data from 2008 and 2016. A small portion of western Calabasas is within the 100-year floodplain; however, most of the City is not located within any designated flood zones.

Calabasas will facilitate efforts with local, state, and federal agencies, including special districts, to address flooding issues. Development will generally be discouraged in flood-prone areas and individual developers in the City will be required to mitigate their potential contributions to downstream flooding problems.

#### Policies

- VII-11** Incorporate adequate mitigation measures into proposed development projects to achieve an acceptable level of risk from potential flooding hazards. Mitigation measures should also address projected flooding impacts from climate change.
- VII-12** Strongly discourage development within flood hazard areas and encourage retention of natural drainage as the City's preferred management strategy, and as a higher priority than attempting to implement engineering solutions.
- VII-13** Ensure that new flood control and drainage facilities as well as improvements to existing facilities are consistent with the General Plan's environmental protection standards.





*Malibu General Plan Safety Element (partial) – Flood Hazards*

**S OBJECTIVE 1.2:** RISKS TO RESIDENTS AND BUSINESSES FROM DEVELOPMENT IN HAZARDOUS AREAS ARE MINIMIZED.

**S Policy 1.2.1:** The City shall require development to provide for analyses of site safety related to potential hazards of fault rupture, earthquake ground shaking, liquefaction, and rockfalls.

**S Policy 1.2.2:** The City shall require development to provide site safety analyses related to landsliding, debris flows, expansive soils, collapsible soils, erosion/sedimentation, and groundwater effects.

**S Policy 1.2.3:** The City shall require development to provide for safety from coastal storm flooding, coastal erosion, surfacing septic effluent, and tsunamis.

**S Policy 1.2.4:** The City shall require development to be consistent with minimum Federal Emergency Management Agency (FEMA) guidelines for flood plain management.

**S Implementation Measure 43:** Encourage area residents to participate in National Flood Insurance Program.

**S Implementation Measure 44:** Design coastal development, except supporting structure, to be above the wave uprush level for storms within the past 100 years, and above the 100-year flood plain.

*Westlake Village General Plan Hazards Chapter (partial) – Flood Hazard*

*Chapter IV Hazards*

**j. Flood Hazard**

Flood hazard areas within the City are limited to the Triunfo Canyon drainage of Triunfo Creek below Westlake Lake, the banks of the lake itself, the banks of the Las Virgenes Reservoir, and the creek along the north eastern border of the City with Agoura Hills that drains into Lake Lindero. A storm drain system has been constructed in the vicinity of the canyon to moderate the effects of storm runoff. The Federal Emergency Management Agency (FEMA) has prepared flood zone maps that define the physical limits of the flood hazard and the minimum floor elevations required for structures outside the hazard area (see Figures 11 and 11a, Chapter I).

The City has four areas that lie in flood hazard areas as identified by FEMA. The portions of Triunfo Creek and the northeastern border with Agoura Hills lie within the AE flood zone; while the banks of the Las Virgenes Reservoir and the shores of Westlake Lake lie within flood zone A. Both the A and AE flood zones are within the 100-year floodplain. Additionally, any development within the identified flood areas will be subject to the review of the flood hazards present, prior to approval.

Development on the shores of Westlake Lake has been set back several feet from the highest water level that could be expected to occur. This setback is recognized as a flood hazard area and is maintained as open space. The “spillover” design of the Westlake Dam ensures that flooding beyond the lake’s banks would not occur.

The Las Virgenes Reservoir has mitigation measures in the event of a major event that could cause the dam to overflow. A concrete spillway allows additional water above the reservoir’s capacity to exit the reservoir, travel along the hillside next to the dam, and drain into Three Springs Park. The water then flows to a storm drain system in the northeast corner of Three Springs Park that brings the water to Westlake Lake and farther into the Malibu Creek system. A brief storm event in 2017 caused the Las Virgenes Reservoir to use the concrete spillway for the first time. The Las Virgenes Municipal Water District inspected the site after the event subsided and determined that the spillway worked properly, and that there was no damage to the dam from the storm event or release of excess water down the spillway.

The flood hazard zones identified in **Figures 11 and 11a** (Chapter I) are rarely subject to flooding, but have caused flooding that resulted in damage to property in recent history.

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Both the areas identified in the flood hazard zones have been inundated during storm events; however, the flooding subsided after the storm events passed.

The majority of the City of Westlake Village lies in the Very High Fire Hazard Severity Zone (see Fire Hazards in the subsequent section), and as such wildfires are a very present threat to the area. If a wildfire occurs in the open space areas of the City, any new runoff from rainfall may cause additional flooding in the City. The majority of the open space areas where that runoff may occur are within watersheds that supply the Las Virgenes Reservoir, or Triunfo Creek (**Figure 12**, Chapter I). Additionally, run off from a flood event following a wildfire would be collected by the City's storm drain system and deposited into Westlake Lake, which in turn would spill over Westlake Dam into Triunfo Creek.

In the City's largest flood hazard area (**Figure 11**, Chapter I) covers the banks of Westlake Lake, the Westlake Dam spillway, and Triunfo Creek. Development around the lake in the affected area includes three of the City's residential neighborhoods and a retail shopping center. The spillway includes the development of a residential neighborhood and the Westlake Athletic Club. Finally, the area adjacent to Triunfo Creek is the Oak Forest Estates neighborhood where a significant portion of the northern part of the neighborhood lies within the hazard area. Previous flooding along Triunfo Creek has damaged homes in the Oak Forest Estates neighborhood, and it remains a concern of the City for the potential of additional flooding that may occur in the area.

In **Figure 11a** (Chapter I) the City's other flood hazard area with development is shown along the unnamed creek that feeds Lake Lindero along the City's boundary with Agoura Hills to the north. The creek has the potential to flood and impact the Westlake Renaissance neighborhood and the adjacent commercial properties to the south. The creek also passes under Thousand Oaks Boulevard, and flood activity can cause a closure of the boulevard until drainage to Lake Lindero is able to keep up to capacity.

Although the geography and development in Westlake Village is very unlikely to change in the foreseeable future, the U.S. Army Corps of Engineers and FEMA have collectively created interactive flood hazard maps and comprehensive flood hazard information. If the data regarding flood hazards for the City is updated by any relevant agencies, this document shall be updated in accordance with the most current information available. Residents and business owners of Westlake Village are encouraged to remain current

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*Chapter IV Hazards*

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with flood hazards outlined by FEMA and the U.S. Army Corps of Engineers, and in the event of a flood event, residents and business owners can contact the Los Angeles County Fire Department for emergency assistance.

Appendix C to this document shall supplement the information found in the this section of the General Plan in the form of the City’s Emergency Response Plan. The plan shall be updated regularly and be available to the public.

**k. Summary**

In summary, there are no geologic, seismic or flooding hazards that are expected to negatively affect or be affected by development within the City if the standard codes and procedures are adhered to.

**3. GOALS, POLICIES, AND PROGRAMS**

The following presents the goals, objectives, and policies for Geologic, Seismic and Flooding Hazards in the City of Westlake Village. At the end of each policy is a listed “I-” and number in parentheses that refers to a corresponding implementation program.

**Goal**            *It shall be the goal of the City of Westlake Village to:*  
Minimize hazards to public health, safety and welfare which may result from geologic conditions, seismic activity and flooding.

**Objective**      *It shall be the objective of the City of Westlake Village to:*  
1                  Provide for an efficient and safe evacuation of the community in the event of a major disaster.

**Policies**        *It shall be the policy of the City of Westlake Village to:*  
1.1                Maintain an effective Citywide Emergency Preparedness Plan (I-1 and I-2).  
1.2                Encourage community volunteers to assist police, fire and civil defense personnel during and after a major earthquake, fire or flood (I-3).

<b>Objective</b> <i>It shall be the objective of the City of Westlake Village to:</i> 2                  Ensure that construction and development activities within the community do not expose residents to avoidable natural hazards.
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*Chapter IV Hazards*

**Policies** *It shall be the policy of the City of Westlake Village to:*

2.1 Require the preparation of a detailed geologic and soils report to accompany each grading permit application in all hillside management areas (I-4).

2.2 Prohibit the placement of structures for human habitation within flood prone areas unless the flood hazard is eliminated by measures that do not impair the carrying capacity of the watercourse (I-5).

2.3 Enforce the provisions of the International Building Code, specifically Chapters 18 and 23 as they relate to earthquake-resistant design and excavation and grading (I-6).

**Objective** *It shall be the objective of the City of Westlake Village to:*

3 Minimize the impacts to the public in regard to potential flooding within the City.

**Policies** *It shall be the policy of the City of Westlake Village to:*

3.1 Discourage development within flood hazard areas and ensure any proposed development is extensively reviewed and mitigated (I-5).

3.2 Prohibit the construction of essential public facilities outside the flood hazard areas (I-5).

3.3 Coordinate with local emergency services to ensure that in the event of a flood, essential public facilities and infrastructure remain operational (I-1 and I-3).

**Implementation Programs**

I-1 Continue to update the Citywide Emergency Preparedness Plan as new information becomes available.

I-2 Periodically distribute an updated pamphlet that informs individual residents of their responsibilities for emergency preparedness.

I-3 Support training programs to train volunteers to assist police, fire protection, and civil defense personnel during and after a seismic, fire, or flooding event.

I-4 Continue to implement the provisions of the Hillside Management ordinance and coordinate with the Los Angeles County Building and Safety Department so all applicable grading and development standards are implemented.

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- |     |   |
|-----|---|
| I-5 | Coordinate with the Los Angeles County Flood Control District to ensure that potential flooding hazards associated with proposed new development are fully mitigated.   |
| I-6 | Coordinate with the Los Angeles County Building and Safety Department in the review of all development proposals, ensuring the International Building Code is enforced. |

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## HAZARD MITIGATION STRATEGIES

The Hazard Mitigation Plan identifies action items developed and submitted through data collection, research, and the public participation process. Mitigation plan activities may be considered for funding through Federal and State grant programs as well as other funds made available to the LVMCOG and each city. To help ensure activity implementation, each action item includes estimated timeframes and a list of coordinating organizations. Mitigation strategies were assigned a priority based on a combination of factors including urgency, importance, and benefit/cost. Constraints may apply to some of the action items. These constraints may be a lack of city staff, lack of funds, or vested property rights which might expose the Region to legal action as a result of adverse impacts on private property. The matrix on the following page provides a summary of the Hazard Mitigation strategies developed for the Las Virgenes-Malibu Region. See **Section 5 Plan Maintenance and Monitoring: Economic Analysis of Mitigation Projects** for further details regarding the method used to evaluate the feasibility of mitigation projects.

### *Hazard Mitigation Prioritization of Projects and Actions*

According to the Disaster Mitigation Act (DMA) 44 CFR 201.6(c)(3)(iii), local mitigation plans must contain a strategy (or action plan) whereby "Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs." A comprehensive cost-benefit calculation is not required as part of the Hazard Mitigation Plan (per FEMA Local Hazard Mitigation Plan Review Guide) however a detailed cost-benefit analysis may be needed later if an application for federal mitigation grant funding is made).

## ECONOMIC ANALYSIS OF MITIGATION PROJECTS

FEMA's approaches to identify the costs and benefits and costs associated with hazard mitigation strategies, measures, or projects include a Benefit/Cost Review and more detailed Benefit-Cost Analyses (BCA). Conducting an economic analysis for a mitigation activity can assist the cities in determining whether a project is worth undertaking now in order to avoid disaster-related damages later.

### *Benefit-Cost Review*

The Benefit-Cost Review process includes monetary as well as non-monetary costs and benefits associated with each action. Some projects can be extremely cost-effective but not as beneficial for the community at large. The Planning Group considered a wide variety of questions, such as:

- How many people will benefit from the action?
- How are the needs of the socially vulnerable addressed?
- How large an area is impacted?
- How critical are the facilities that benefit from the action (e.g., is it more beneficial to protect the fire station than the administrative building, even though it costs more)?
- Environmentally, does it make sense to do this project for the overall community?

## ***Benefit-Cost Analysis***

The Benefit-Cost analysis is used to determine if the cost of investing in a specific mitigation project, i.e., the “cost” will result in reduced damages in the future, i.e., the “benefits” and if the loss prevented justifies the expenditure of funds for the project. If the benefit is greater than the cost, then the project is cost effective; if the benefit is less than the cost, then the project is not cost effective.

The Benefit-Cost Analysis is essentially the same for each type of hazard mitigation project. The only differences are the types of data that are used (e.g., if the project is for earthquake, flood, wind, or fire mitigation). To determine the Benefit-Cost, the project cost is compared to the anticipated dollar loss that will be prevented by the mitigation project. For example, if the project cost is \$100,000 and the expected loss averted is \$1,000,000, then the benefit exceeds the cost and is therefore cost effective. The ratio of the benefit versus the cost is 10:1 (\$1,000,000 divided by \$100,000). Priority is given to those projects with the highest Benefit-Cost Ratio or those projects with the greatest benefit to the community.

## **Benefit-Cost Analysis Exemptions**

The following categories of mitigation measures are exempt from the FEMA policy on Benefit-Cost analysis:

- 5% Initiative Projects: States, which receive a Presidential declaration, are eligible to use up to 5% of available HMGP funding at their discretion.
- Tornado Initiative: States, which receive a Presidential declaration, are eligible to use up to an additional 5% of available HMGP funding at their discretion.
- Substantial Damage Waivers for acquisition of substantially damaged structures in 100-year floodplain.
- Mitigation planning related grants.

## ***Benefit-Cost Methodology***

For the LVMCOG HMP, mitigation projects were reviewed and prioritized by the HMP Planning Group which considered:

- The expected benefit to the community according to the following categories:
  - Protection of Life / Loss of Life Reduction
  - Protection of Property / Property Loss Reduction
  - Protection of the Environment / Environmental Loss Reduction
  - Protection of the Socially Vulnerable
  - Increase Public Awareness
  - Scope of Impact (i.e., the degree to which the project benefits the community or region)
- Costs: total estimated expense including ongoing maintenance requirements
- Constraints: the availability of resources, if funds were already budgeted or if additional budget funding was required, and the timeline for completion (if known)
- Other considerations included whether projects were already in progress or part of another effort (e.g., part of a County-wide program or existing city initiative)

**Benefit-Cost Review Approach for Previous Mitigation Projects**

DMA 2000 does not require Hazard Mitigation Plans to include BCA’s for specific projects.<sup>7</sup> Consequently previous mitigation projects utilized a Benefit-Cost Review approach.

The following tables provide examples of the Benefit-Cost Review factors considered:

<b>Benefit Factors</b>	<b>Evaluation Score</b>
Protection of Life/Loss of Life Reduction	High / Medium / Low / None
Protection of Property/Property Loss Reduction	High / Medium / Low / None
Protection of the Environment/Environmental Loss Reduction	High / Medium / Low / None
Increased Public Awareness	High / Medium / Low / None
Scope of Impact	High (benefits the entire city or region) Medium (benefits a large part of the city or region) Low (benefits a targeted or limited area) None

<b>Cost Factor</b>	<b>Evaluation Score</b>
More than \$500K regionally or \$50K locally	High
\$250K to \$499K regionally or \$25K to \$49.9K locally	Moderately High
\$100K to \$249K regionally or \$10K to \$24.9K locally	Medium
\$50K to \$99K regionally or \$5K to \$9.9K locally	Moderately Low
Less than \$50K regionally or \$5K locally	Low
In-house Time	None

<b>Constraint Factor</b>	<b>Evaluation Score</b>
Resources	No Resources Available Limited Resources Available Resources Allocated and Assigned
Funding	No Funds Available (Need to Obtain New Funding) Limited Funds Available Funds Allocated
Time	Rapid or Condensed Timeframe Moderate Timeframe No Time Constraints

<sup>7</sup> FEMA Publication 386-5, State and Local Mitigation Planning, Using Benefit-Cost Review in Mitigation Planning, May 2007

## The Benefit-Cost Model for New Mitigation Projects

For this Hazard Mitigation Plan update, new projects were evaluated using the latest Benefit-Cost Model methodology as outlined by FEMA (June 2019). This methodology incorporates more detailed analysis including the following:

### Benefits

- Avoided Physical Damages
  - Structural Damage to Buildings or Infrastructure
  - Contents Damage
  - Damage to Historic/Cultural Resources
  - Site Contamination
- Avoided Loss of Service/Function
  - Public/Non-profit Sector Buildings
  - Critical Facilities
  - Roads and Bridges
  - Utilities (electric power, potable water, and wastewater)
- Avoided Fatalities/Casualties (for hazards with little or no warning time)
  - Fatalities (\$6.9M each)
  - Hospitalized (\$2.3M each)
  - Treat & Release (\$61K each)
  - Self-treat (\$14K each)
- Avoided Displacement Costs
  - Facilities Rent / Furniture Rental
  - Moving Expenses
  - Temporary Utilities
- Avoided Emergency Management Costs (including debris removal and volunteer costs)
- Avoided NFIP Administrative Costs

- Other Benefits

Societal Benefits

Social Benefit	Value
Mental Stress & Anxiety	\$2,443/person
Lost Productivity	\$8,736/person

Environmental Benefits (minimum 0.75 BCR required)

Environmental Benefit	Value
Green Open Space	\$8,308/acre/year
Riparian	\$39,545/acre/year
Wetlands	\$6,010/acre/year
Forest	\$554/acre/year
Marine & Estuary	\$1,799/acre/year

**Costs**

Costs include:

- Construction Costs
- Any Other Project-related Costs such as Title Searches, Permits, etc.
- Maintenance Costs
- Any In-kind Contributions or Match from the Recipient or Sub-recipient

As indicated above FEMA BCA Toolkit automatically calculates the Benefits and Costs (based on the data input provided). Costs include ongoing maintenance and other factors. Consequently, BCA Cost calculations are higher than the initial implementation cost. Similarly, Benefits are accrued over the life of the project.

The tables below provide BCA summary tables of each City’s new mitigation projects.

***Agoura Hills New Mitigation Projects and Benefit-Cost Calculator Results***

Project Title	Benefits (B)	Costs (C)	BCR (B/C)	Using 3% Discount Rate (For BRIC and FMA only)		
				Benefits (B)	Costs (C)	BCR (B/C)
Culvert and Drain Improvements and Erosion Mitigation	\$353,713	\$262,058	1.35	\$659,454	\$393,277	1.68
<b>TOTAL</b>	<b>\$353,713</b>	<b>\$262,058</b>	<b>1.35</b>	<b>\$659,454</b>	<b>\$393,277</b>	<b>1.68</b>

Table 127: Agoura Hills New Mitigation Project BCA Results

***Calabasas New Mitigation Projects and Benefit-Cost Calculator Results***

The following BCA table depicts the projected Benefit Cost Ratios of new mitigation projects initiated by the City of Calabasas.

Project Title	Benefits (B)	Costs (C)	BCR (B/C)	Using 3% Discount Rate (For BRIC and FMA only)		
				Benefits (B)	Costs (C)	BCR (B/C)
Calabasas Green Streets Program	\$ 18,878,524	\$ 11,900,373	1.59	\$ 35,196,645	\$ 17,864,882	1.97
City of Calabasas - City-wide Weed Abatement Program	\$ 9,484,202	\$ 9,213,144	1.03	\$ 10,407,887	\$ 9,905,907	1.05
City of Calabasas - Las Virgenes Creek Restoration III	\$ 5,081,211	\$ 5,058,407	1.00	\$ 8,025,920	\$ 5,382,020	1.49
City of Calabasas - Mulholland Highway Phase I and II	\$ 7,592,453	\$ 6,259,041	1.21	\$ 14,155,178	\$ 6,915,137	2.05
City of Calabasas - Upgrade Data Warehouse Storage	\$ 2,050,099	\$ 255,010	8.04	\$ 2,289,854	\$ 278,985	8.21

Project Title	Benefits (B)	Costs (C)	BCR (B/C)	Using 3% Discount Rate (For BRIC and FMA only)		
				Benefits (B)	Costs (C)	BCR (B/C)
City of Calabasas - West Calabasas Road Improvements	\$ 3,732,335	\$ 3,675,764	1.02	\$ 6,958,471	\$ 4,061,071	1.71
Emergency Power for Critical Facilities	\$47,206,829	1,103,356	42.78	\$65,422,563	\$1,143,238	57.23
Las Virgenes Road Embankment and Shoulder Repair	\$7,278,859	\$576,459	12.63	\$13,570,521	\$874,684	15.51
McCoy Creek Mitigation / Restoration	\$1,368,433	\$1,190,237	1.15	\$2,551,272	\$1,786,688	1.43
<b>TOTAL</b>	<b>\$ 46,818,824</b>	<b>\$ 36,361,739</b>	<b>1.29</b>	<b>\$ 77,033,955</b>	<b>\$ 44,408,002</b>	<b>1.73</b>

Table 128: Calabasas New Mitigation Project BCA Results

*Hidden Hills New Mitigation Projects and Benefit-Cost Calculator Results*

Project Title	Benefits (B)	Costs (C)	BCR (B/C)	Using 3% Discount Rate (For BRIC and FMA only)		
				Benefits (B)	Costs (C)	BCR (B/C)
Hidden Hills Brush Clearance Program	\$1,870,037	\$88,991	21.01	\$1,942,660	\$90,660	21.43
<b>TOTAL</b>	<b>\$1,870,037</b>	<b>\$88,991</b>	<b>21.01</b>	<b>\$1,942,660</b>	<b>\$90,660</b>	<b>21.43</b>

Table 129: Hidden Hills New Mitigation Project BCA Results

*Malibu New Mitigation Projects and Benefit-Cost Calculator Results*

Project Title	Benefits (B)	Costs (C)	BCR (B/C)	Using 3% Discount Rate (For BRIC and FMA only)		
				Benefits (B)	Costs (C)	BCR (B/C)
FM Alert System	\$16,295,666	\$729,361	22.34	\$17,246,100	\$734,106	23.49
Broadband Improvements for Emergency Communications	\$109,702,118	\$8,440,149	13.00	\$204,525,689	\$10,825,953	18.89
<b>TOTAL</b>	<b>\$125,997,784</b>	<b>\$9,169,510</b>	<b>13.74</b>	<b>\$221,771,969</b>	<b>\$11,560,059</b>	<b>19.18</b>

Table 130: Malibu New Mitigation Project BCA Results

*Westlake Village New Mitigation Projects and Benefit-Cost Calculator Results*

Project Title	Benefits (B)	Costs (C)	BCR (B/C)	Using 3% Discount Rate (For BRIC and FMA only)		
				Benefits (B)	Costs (C)	BCR (B/C)
Home Hardening & Defensible Space Fire Prevention Grant Program	\$7,406,671	\$670,452	11.05	\$11,699,053	\$1,030,022	11.36
Mobile Emergency Operations Center	\$171,679	\$162,045	1.06	\$271,172	\$198,002	1.37
<b>TOTAL</b>	<b>\$7,578,350</b>	<b>\$832,497</b>	<b>9.10</b>	<b>\$11,970,225</b>	<b>\$1,228,024</b>	<b>9.75</b>

Table 131: Westlake Village New Mitigation Project BCA Results

**Prioritization Review**

As part of this Multi-Jurisdictional Hazard Mitigation Plan update, the Planning Group reviewed the previous project prioritization criteria in accordance with 44 CFR 201.6(d)(3). This review included considerations for changes since the previous approved HMP.

**Benefit Prioritization and Categorization**

Each of the mitigation projects were reviewed and prioritized by the HMP Planning Group and considered the expected benefit to the community versus the estimated cost. Other considerations included whether projects were already in progress or part of another effort, if funds were already budgeted or if additional budget funding was required, the availability of resources, ongoing maintenance requirements, and the timeline for completion (if known).

Benefits were evaluated based on five major categories:

1. Protection of Life / Loss of Life Reduction (including the socially vulnerable)
2. Protection of Property / Property Loss Reduction
3. Protection of the Environment / Environmental Loss Reduction
4. Increase Public Awareness
5. Scope of Impact

The prioritization review incorporated an assessment of lessons learned and changes in current conditions including:

- Financial Constraints and Funding Considerations
- Regulatory and Legal Requirements
- Political and Jurisdictional Changes
- Development Patterns
- Changes in Disaster Planning and Recovery Priorities (including Risk Assessments and priorities such as the needs of the socially vulnerable)
- Post-Disaster Conditions (as applicable)

Based on the review, the Planning Group determined that the previous prioritization criteria were still valid and consistent with the goals established for the HMP. Consequently, the benefits of each project were evaluated and assigned a value (High, Medium, Low, or None). Any changes in the mitigation project list (including project revisions or new projects) considered the following criteria as defined below:

<b>Priority 1</b>	High Priority: The project provides a high benefit with relatively low to moderate cost and/or requires minimal implementation effort. Funding and/or resources may already be assigned or are readily available.
<b>Priority 2</b>	Moderate Priority: The project provides a medium benefit. Resources, costs and/or funding may need to be allocated or obtained.
<b>Priority 3</b>	Low Priority: The project provides a benefit, but the estimated benefits may be limited in scope. Resources and/or funding must be allocated.

### Public Mitigation Planning Input

The public was invited to provide their input into the HMP and mitigation planning process (see **Section 19: Planning and Public Involvement**). Feedback was primarily obtained via a Community Disaster Preparedness and Risk Survey as well as through a Public Emergency Preparedness and Mitigation Workshop. During the HMP update process, the Hazard Mitigation Strategies and Projects were reviewed and the public’s suggestions related to hazard mitigation were integrated into the existing mitigation project strategies. These ideas included improvements to Public Awareness Programs, further development and use of CERT programs, and working with SCE to address concerns related to Energy Disruptions and Wildfire risk.

### Final Updated Mitigation Project List

Updates to the mitigation projects developed for this HMP are provided in the tables and project details provided on the following pages.

**Summary of Regional Mitigation Projects and Strategies**

The following matrix provides a summary of the Hazard Mitigation Projects implemented within the Las Virgenes-Malibu Region, the current status, and their impact on New Buildings, Existing Buildings, Infrastructure, and the Community. The hazards addressed focus on the high-risk hazards identified in the Risk Assessment (**Section 4: Risk Assessment**). The primary mitigation goals addressed by each project are listed (per Section 2: Hazard Mitigation Goals, p. 4-1), i.e., (1) Public Awareness; (2) Protect Life, Property, and the Environment; (3) Partnerships and Implementation; (4) Emergency Management. In addition, the issues addressed by each project are identified in terms of Mitigation, Preparedness, Response, and Recovery.

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery					
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆		✓	✓			Hazard Mitigation Information Campaigns Page 2-43	1	 Ongoing / Modified	<ul style="list-style-type: none"> <li>Provides the public an opportunity to provide ongoing input into the risks and projects as part of Disaster Preparedness and Mitigation events.</li> <li>Allows the public an opportunity to obtain information on disaster preparedness and personal/family mitigation.</li> </ul>	LVMCOG cities conduct public Disaster Preparedness events and/or information campaigns including efforts coinciding with National Disaster Preparedness Month in September. For example, in November 2023, the City of Malibu conducted a comprehensive public workshop that provided attendees with the opportunity to ask questions and provide input on Malibu's Coastal Vulnerability Assessment and projected impacts of sea level rise.
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆			✓	✓			Implement a Mitigation and Preparedness Monthly Campaign Page 2-44	1	 Ongoing / Modified	<ul style="list-style-type: none"> <li>Provides the public with information on disaster preparedness and mitigation in order to enhance community resiliency.</li> </ul>	LVMCOG cities promote Disaster Mitigation and Preparedness public bulletins and awareness programs delivered via city web pages, city TV, social media, and local news.
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆		✓	✓			Business Outreach Disaster Mitigation and Planning Program Page 2-45	1	 Ongoing / Modified	<ul style="list-style-type: none"> <li>Provides local business owners and business groups with an opportunity to obtain information on disaster preparedness and mitigation, furthering the economic sustainability of the community.</li> </ul>	LVMCOG cities work with local business groups (Chambers of Commerce, business associations, business parks, etc.) to encourage disaster mitigation and planning for local businesses.
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆	◆	✓				Continue to Implement, Revise, and Maintain the Las-Virgenes-Malibu Hazard Mitigation Plan Page 2-46	1	 Update Complete / Ongoing Maintenance	<ul style="list-style-type: none"> <li>Facilitates planning for future events.</li> <li>Enables better response and coordination by city personnel during and after a hazardous event.</li> </ul>	HMP update complete. Maintenance ongoing.

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓			Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response					
Regional Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆	✓				Critical Infrastructure Assessment Page 2-47	1	Ongoing / Modified	<ul style="list-style-type: none"> <li>May add requirements to new construction permits for critical infrastructure.</li> <li>Will enable response and coordination by city personnel during and after a hazardous event.</li> </ul>	Each city continually assesses the state of readiness of critical facilities within their jurisdictions. For example, the City of Agoura Hills identified key infrastructure to maintain continuity of operations and purchased a drone to conduct hazard assessments; the City of Calabasas participated in the SCAG Earthquake Preparedness Initiative; the City of Hidden Hills designated several sites as critical and provided for backup power generation; the City of Malibu provided the Sheriff's Dept. with a list of its critical infrastructure; and the City of Westlake Village provisioned two key sites with emergency power and supplies.
Regional Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆	✓	✓		Emergency Shelter Identification Page 2-49	1	Ongoing / Modified	<ul style="list-style-type: none"> <li>Provides for better response and coordination by city personnel during and after a hazardous event.</li> <li>Improves private sector (hotels and other) participation and awareness.</li> </ul>	Each city identified emergency shelter locations and works with the American Red Cross to establish shelters. The City of Malibu instituted a site that can be used as an evacuation shelter and to stage first responders	
Regional Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆	✓	✓	✓	Pre-Established Contracts Page 2-51	1	Ongoing / Modified	<ul style="list-style-type: none"> <li>Provides for better response and coordination by city personnel during and after a hazardous event.</li> </ul>	Each city has identified critical vendors and contractors and maintains current contact lists. For example: the City of Agoura Hills has agreements for Emergency Services assistance, construction, and debris removal; the City of Calabasas has contacts with local vendors and accounts with emergency supply and communications providers; the City of Hidden Hills has emergency vendor contracts and the Community Association work crew is available for urgent repairs; the City of Malibu has contracts for services such as debris removal, fuel, street repair, and other emergency items, and the City of Westlake Village has contracts for fuel, road repair, and supplies.	

City	Hazard	Specific Hazards Addressed in the HMP ●										Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery						
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆	◆	✓	✓	✓	✓	Hazard Awareness Public / Private Partnerships Page 2-52	1	 Ongoing / Modified	<ul style="list-style-type: none"> <li>Provides for better response and coordination by city personnel during and after a hazardous event.</li> <li>Improves public preparedness and mitigation education and hazard awareness.</li> </ul>	Individual cities have implemented public awareness/business partnership events, task force meetings, and CERT programs. In addition, in 2017 the City of Agoura Hills held a fire preparedness workshop for local businesses and residents; the City of Calabasas and City of Malibu are members of the Santa Monica Mountains Fire Safe Alliance; the City of Hidden Hills works with the Community Association and local school to promote awareness and preparedness; and the City of Westlake Village hosted emergency preparedness seminar, is in the process of creating local partnerships with homeowner associations and other community groups, and has conducted annual community events.	
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	<ul style="list-style-type: none"> <li>Wildfire</li> <li>Energy Disruption</li> <li>Windstorm</li> </ul>		●		●	●					◆	◆		✓				Tree Pruning Program and Fire Code Sections Page 2-54	1	 Ongoing / Modified	<ul style="list-style-type: none"> <li>May result in additional maintenance requirements for new commercial and residential development properties.</li> </ul>	All cities serviced by the Los Angeles County Fire Department and require tree pruning and brush clearance per LAC Fire Code and State Fire Code. Public information is distributed, e.g., "A Roadmap to Fire Safety" and annual brush clearance mailers.		
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆		✓	✓		Communications Hardening Page 2-55	2	 Ongoing	<ul style="list-style-type: none"> <li>Provides for better response and coordination by city personnel during and after a hazardous event.</li> </ul>	The cities implemented Finalsite Connect Inc.'s Connect-CTY system (many residents participate), the Operational Area Response and Recovery System (OARRS), County-wide Integrated Radio System (CWIRS), and Sheriff's Department NIXLE system. Individual cities also implemented social media, public Wi-Fi, Amateur Radio groups, satellite telephones, radio repeaters, and back-up power generation.		
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards (except Climate Change and Pandemic)	●	●		●	●	●	●	●	●	◆	◆	◆	◆		✓	✓	US 101 Freeway Corridor Improvement Study Page 2-57	2	 Complete / Monitoring and Mitigation Projects Scheduled	<ul style="list-style-type: none"> <li>May add infrastructure upgrades to local land use planning and zoning requirements for new commercial development.</li> <li>Will enable better response times for local emergency services personnel by improving local access routes.</li> </ul>	The US 101 Freeway Corridor Study, Kanan Road Interchange project, and Reyes Adobe Interchange project previously completed. The City of Agoura Hills has completed all design work necessary to begin the Chesebro Interchange improvement project. The Chesebro Interchange project construction scheduled to start in Fiscal Year 2017/2018 and will be completed by FY 2018/2019. The Lindero Canyon Interchange project construction scheduled to start September 2018.		

City	Hazard	Specific Hazards Addressed in the HMP ●										Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery						
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆	◆	✓	✓	✓		Emergency Preparedness Public Awareness Campaign Page 2-58	2	 Ongoing	<ul style="list-style-type: none"> <li>Improves public preparedness, mitigation education and hazard awareness.</li> </ul>	All cities implemented the Ready Set Go Wildfire Action Plan, are part of the CA Fire Alliance, and participate in the annual LA County Shake Out Earthquake Exercise. Individual city programs include local television programming, web site educational information, ongoing training, and education events. The City of Calabasas has also implemented a "Map Your Neighborhood Program".	
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards (except Pandemic)	●	●	●	●	●	●		●		◆		◆	✓				Risk Assessment Project Page 2-59	2	 Ongoing	<ul style="list-style-type: none"> <li>Enables better land use planning, building code, and zoning requirements.</li> </ul>	All cities continuously monitor their risk exposure, update information as needed, add to their disaster mitigation goals, policies, and strategies in General Plans (as applicable) and continue to improve their GIS capabilities. In addition, the City of Agoura Hills completed a comprehensive Risk Assessment in 2015 and upgraded its GIS capabilities; the City of Calabasas developed a listing of local hazards including electrical and natural gas utility, water tanks, and flood risks; the City of Hidden Hills is working with SCE to implement underground utility lines; the City of Malibu has conducted a risk assessment on aging power and communications infrastructure in the city; and the City of Westlake Village has mapped their fire hazard areas as well as updated their GIS flood maps.		
<b>Regional</b> Calabasas Hidden Hills Westlake Village	<ul style="list-style-type: none"> <li>Earthquake</li> <li>Wildfire</li> <li>Windstorm</li> </ul>	●	●			●							◆		◆	✓		Rehabilitation of Residential Properties Page 2-62	2	 Ongoing / Modified	<ul style="list-style-type: none"> <li>Mitigates private residential property loss.</li> </ul>	Cities implemented home renovation projects or programs (as applicable) to mitigate home property risk. For example, the City of Calabasas and City of Westlake Village have Community Development Block Grant programs for low and moderate income residents for improvements and retrofitting their properties; the City of Hidden Hills has implemented a wood shake shingle roof replacement program and is exploring funding sources.  Note: the City of Agoura Hills home rehabilitation outreach program was discontinued due to lack of funding and the City of Malibu does not have a home rehabilitation program.		
<b>Regional</b> Agoura Hills Calabasas Hidden Hills Malibu Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆		◆	✓	✓		Advanced Community Training Page 2-63	3	 Ongoing / Modified	<ul style="list-style-type: none"> <li>Improves public preparedness and mitigation education and hazard awareness.</li> </ul>	Each city offers CERT classes on an ongoing basis throughout the year. In addition, city staff are provided ongoing training on disaster response.		

Summary of City Specific Mitigation Projects and Strategies

Agoura Hills

City	Hazard	Specific Hazards Addressed in the HMP ●								Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response					
Agoura Hills	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	◆	◆	◆	✓	✓	✓			Advanced Emergency Training Page 2-65	1	Ongoing	<ul style="list-style-type: none"> <li>Improves Public and Staff preparedness by implementing advanced Emergency Training through existing and/or new programs.</li> </ul>	The City of Agoura Hills is utilizing its CERT program to provide advanced emergency training to volunteers and is promoting advanced emergency management training including FEMA courses to staff.
Agoura Hills	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.) (except Pandemic)	●	●	●	●	●	●			◆	◆	◆	◆	✓	✓	✓		Agoura Road Widening Page 2-66	1	Ongoing / Roadway Complete	<ul style="list-style-type: none"> <li>Improves multi-modal access, an emergency bi-pass, and improves operational capacity.</li> </ul>	Roadway Complete, Environmental Mitigation ongoing until Fall 2018
Agoura Hills	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.) (except Pandemic)	●	●	●	●	●	●			◆	◆	◆	✓	✓	✓			Annual Street Pavement Rehabilitation Project Page 2-67	1	Ongoing / Under Design	<ul style="list-style-type: none"> <li>Maintains critical infrastructure - Reduces the potential for loss of life, injury, and economic damage to Agoura Hills residents and businesses by keeping the public roads in a state of good repair.</li> </ul>	Entails the removal and reconstruction of asphalt, and base, and replacing curb ramps to current ADA Standards.
Agoura Hills	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.) (except Pandemic)	●	●	●	●	●	●					◆	◆	✓	✓	✓		Fairview Road Improvement Project Page 2-67	1	Complete	<ul style="list-style-type: none"> <li>Maintains critical infrastructure for emergency egress on Fairview Road.</li> </ul>	The City of Agoura Hills is in the process of obtaining road improvement funding and approvals for Fairview Road.

City	Hazard	Specific Hazards Addressed in the HMP ●										Mitigation Goal ◆			Issues Addressed ✓			Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments		
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response						Recovery	
Agoura Hills	<ul style="list-style-type: none"> <li>Earthquake</li> <li>Wildfire</li> </ul>	●	●											◆	◆	✓		✓	✓	Roadside Bridge Widening Page 2-68	2	 Ongoing / Completing Design and Permitting	<ul style="list-style-type: none"> <li>Reduces the potential for loss of life, injury, and economic damage to Agoura Hills residents and businesses from earthquake, wildfire, landslides, and the impacts of these hazards. Increases the City's ability to serve the community during disaster response and recovery by mitigating risks to key infrastructure</li> </ul>	In the design and permitting process. The project will result in the widening of the bridge to eliminate bottlenecks. Will also involve the installation of a pedestrian sidewalk. Scheduled for August 2018 to August 2019.
Agoura Hills	<ul style="list-style-type: none"> <li>Earthquake</li> <li>Wildfire</li> </ul>	●	●										◆	◆	◆	✓		✓	✓	Palo Camado Bridge Widening Page 2-68	3	 Ongoing / Completing Design and Permitting	<ul style="list-style-type: none"> <li>Reduces the potential for loss of life, injury, and economic damage to Agoura Hills residents and businesses from earthquake, wildfire, landslides, and the impacts of these hazards. Increases the City's ability to serve the community during disaster response and recovery by mitigating risks to key infrastructure.</li> </ul>	In the process of completing the design and permitting process. The project will widen the bridge to increase capacity. It will also result in the installation of traffic signals and sidewalks as well as a seismic retrofit.
Agoura Hills	<ul style="list-style-type: none"> <li>Landslide / Debris Flow</li> <li>Flood / Severe Winter Storm</li> </ul>						●	●					◆	◆	✓	✓				Culvert and Drain Improvements and Erosion Mitigation Page 2-69	2	 New / Ongoing	<ul style="list-style-type: none"> <li>Mitigates the risk of a future drain failure and mitigates the impact of potential flooding / landslide.</li> </ul>	In the process of replacing damaged drains and erosion, while enhancing the capability of culverts /drain inlets to today's building standards.

Calabasas

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆			Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response					
Calabasas	Wildfire		●								◆	◆	◆	✓				Fire Code Update Page 2-71	1	Complete	<ul style="list-style-type: none"> <li>May add requirements to new construction permits.</li> <li>Will reduce risk and mitigate the impact of fire on new construction.</li> </ul>	The revised Los Angeles County Fire Code adopted by the City. Calabasas Building and Safety Staff changes to the fire code pending the next triennial cycle of the LA County Fire Code for review.
Calabasas	Wildfire		●								◆	◆	◆	✓				Incentive Based Lot Mergers Page 2-71	2	Complete	<ul style="list-style-type: none"> <li>Will mitigate future fire losses by ensuring that adequate open space is maintained between new construction projects.</li> </ul>	The General Plan update incentivizing small lot mergers was completed and adopted by the City Council in 2008. The 2010 Development Code updates reflect such policies. No additional incentives are required at this time.
Calabasas	Flooding												◆	◆	✓	✓		Green Streets Program Page 2-72	2	New / Ongoing	<ul style="list-style-type: none"> <li>Will reduce risk and mitigate the impact of future flooding.</li> </ul>	Create landscaped catch-basins within the right of way to capture, treat and infiltrate storm water runoff. Designed to catch rainwater at its source, the improvements work to avoid flooding and retain water resources for future use rather than allowing run-off into storm drains and ultimately the ocean.
Calabasas	<ul style="list-style-type: none"> <li>Flooding</li> <li>Landslide</li> <li>Debris Flow</li> <li>Mudslide</li> </ul>												◆	◆	✓	✓		Mulholland Highway – Phase I & II Page 2-73	2	New / Under Design	<ul style="list-style-type: none"> <li>Will mitigate the impact of future flooding and winter storm, as well as mitigating the risk of future slope failure.</li> </ul>	In the process of constructing retaining wall, storm drain and pedestrian sidewalk improvements to increase safety for pedestrians and retain slope from failure during heavy water events.
Calabasas	All Hazards (except Pandemic)	●	●	●	●	●	●	●	●	●	◆			✓				West Calabasas Road Improvements Page 2-74	2	New / Under Design	<ul style="list-style-type: none"> <li>Maintains critical infrastructure - Reduces the potential for loss of life, injury, and economic damage to Calabasas residents and businesses by keeping the public roads in a state of good repair.</li> </ul>	Seek areas to install multi-modal improvements improving traffic safety for all users. Includes road improvements for greater traffic flow and safety (i.e., left turn lane, bypass lane, protected bike and pedestrian improvements), as well as slope stabilization.
Calabasas	Wildfire		●								◆	◆	◆	✓				Citywide Weed Abatement Program Page 2-74	1	New / Ongoing	<ul style="list-style-type: none"> <li>Mitigates the impact of a future wildfire by ensuring that structures are clear of weeds, grass, and dead plants</li> </ul>	Aims to clear weeds, grass and dead plants to 200 feet from structures in city parks, public roadways and designated areas within Calabasas' four landscape Maintenance and Lighting Districts.

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery					
Calabasas	Flooding							●					◆	◆					Las Virgenes Creek Restoration III Page 2-75	2	New / Under Design	<ul style="list-style-type: none"> <li>Mitigates the risk of future flooding by repairing and maintaining storm drain outlets.</li> </ul>	In the process of designing infrastructure improvements including storm drain repair and maintenance, as well as monitoring of creek/water cleanliness.
Calabasas	All Hazards	●	●	●	●	●	●	●	●	●			◆	◆	✓	✓	✓	Upgrade Data Warehouse Storage Page 2-76	1	New / Ongoing	<ul style="list-style-type: none"> <li>Mitigates the impact of various disasters on Calabasas' data warehouse by enabling a cloud based solution.</li> </ul>	Completed the setup of a cloud-based DR site for the city data infostructure, enabling users to still access the data in the event that the on-prem data servers are not available.	
Calabasas	<ul style="list-style-type: none"> <li>Landslide / Debris Flow</li> <li>Flood / Winter Storm</li> </ul>						●	●					◆	◆	✓	✓		Las Virgenes Road Embankment and Shoulder Repair Page 2-76	2	New	<ul style="list-style-type: none"> <li>Mitigates the potential for future slope failures and protects the road surface from being undermined by future slope distrest.</li> </ul>	In the process of designing and constructing slope and shoulder stabilization and installation of RSP to prevent future slope washout.	
Calabasas	<ul style="list-style-type: none"> <li>Landslide / Debris Flow</li> <li>Flood / Winter Storm</li> </ul>						●	●					◆	◆	✓	✓		McCoy Creek Mitigation/Restoration Page 2-77	2	New	<ul style="list-style-type: none"> <li>Mitigates the potential for future slope failures and protects the road surface from being undermined by future slope distrest.</li> </ul>	In the process of designing and constructing streambank stabilization and embankment reconstruction: section of parking lot pavement and AC dike repair.	
Calabasas	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆	✓	✓			Emergency Power for Critical Facilities Page 2-78	1	New	<ul style="list-style-type: none"> <li>Mitigates the risk of future energy disruption and power outage by providing continuous power to critical facilities.</li> </ul>	In the process of identifying critical facilities in need of redundant power and working on the RFP process for qualified contractors.	

Hidden Hills

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery					
Hidden Hills	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	●	◆	◆	✓					Update the City of Hidden Hills General Plan and Local Ordinances Page 2-79	1	Ongoing	<ul style="list-style-type: none"> <li>May add requirements to new construction permits.</li> <li>Will reduce risk and mitigate the impact of disasters on new construction and remodeled properties.</li> </ul>	The General Plan and existing codes are regularly reviewed and modified (if necessary). The General Plan continues to incorporate elements to mitigate seismic, fire, landslide and flooding events.	
Hidden Hills	Landslide / Debris Flow						●				◆	◆	✓				Comprehensive Hills Slope Management Program Page 2-79	1	Ongoing	<ul style="list-style-type: none"> <li>Will prevent future development on potentially unstable hillsides.</li> <li>May add requirements to new construction permits.</li> <li>Will reduce risk and mitigate the impact of landslides on new construction.</li> </ul>	Geological evaluations are required for all proposed hillside developments. Landslides are identified, mapped, and mitigated. In addition, the City has adopted a ridgeline protection ordinance to help preserve scenic corridors.		
Hidden Hills	Wildfire		●								◆		✓				Wood Shake Shingle Roof Replacement Program Page 2-80	2	Ongoing	<ul style="list-style-type: none"> <li>Will provide incentives to replace older wood shake shingle roofs by residents.</li> </ul>	The City is looking into a program to help offset the cost of replacing remaining wood shake roofs in the City. All new construction bans the installation of wood shake shingles.		
Hidden Hills	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	◆	◆		✓	✓	✓		Emergency Satellite Communications Page 2-80	2	Complete / Maintenance Ongoing	<ul style="list-style-type: none"> <li>Provides for better response and coordination by city personnel during and after a hazardous event.</li> </ul>	The City has satellite phone and internet ability and two-way radio communications equipment. Two-way radio batteries were recently replaced.		
Hidden Hills	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	◆	◆		✓	✓			Advanced Emergency Training Page 2-81	2	Ongoing	<ul style="list-style-type: none"> <li>Improves public preparedness and mitigation education and hazard awareness.</li> </ul>	<p>CERT classes offered throughout the year.</p> <ul style="list-style-type: none"> <li>The CERT team has continuing training in disaster response, first aid and evacuation shelter setup</li> <li>The CERT first aid medical equipment trailer has been checked and updated.</li> <li>City staff and CERT team members have been trained in active shooter response.</li> </ul>		

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery					
Hidden Hills	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	●	◆	◆	◆		✓	✓		Communications Improvements Page 2-81	2	Ongoing	<ul style="list-style-type: none"> <li>Will continue to improve cellular telephone reception in areas of the City that are currently underserved.</li> </ul>	Cellular telephone and radio coverage is regularly evaluated. In addition, the City of Hidden Hills is now authorized to send out emergency messages to cell phones (IPAWS Wide Area Alerts). Additionally, a fiber optic plan is being worked on by the community to provide high speed Internet and help provide WiFi cell service.	
Hidden Hills	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	◆	◆	◆		✓	✓		Community Evacuation Routes, Planning, and Training Page 2-82	2	Complete	<ul style="list-style-type: none"> <li>Improves public safety in the event that a mass evacuation is required.</li> </ul>	Ingress and egress to the City has been improved with addition of contractor parking areas at the gates. In addition: <ul style="list-style-type: none"> <li>The City will allow school buses, for Round Meadow Elementary School, through the gates to bring students to reunification sites if Mureau Road is closed.</li> <li>The City is actively working on a revision of traffic flow at the Long Valley gate, adding a turn lane and providing contractor parking areas to keep traffic flowing into and out of Hidden Hills. This roadway update will also aid traffic flow onto the Northbound 101 freeway onramp.</li> <li>The City conducted a public workshop for Wildfire evacuation for residents and large animals. Training was offered to the residents on horse trailer loading and unloading. Also offered was a CHP sponsored horse trailer inspection day.</li> </ul>		
Hidden Hills	Flood						●			◆				✓			Storm Drain Management Page 2-83	2	Ongoing	<ul style="list-style-type: none"> <li>Will ensure that storm drains are free from debris to prevent flooding.</li> </ul>	Continue to maintain the storm drain system to ensure that drains are free from debris to prevent flooding. While the storm drains are managed by Los Angeles County, the City does work to ensure the free flow of water to prevent street flooding.		
Hidden Hills	Energy Disruption				●							◆		✓	✓	✓	Backup Power for the City's Critical Sites Page 2-83	2	Complete / Maintenance Ongoing	<ul style="list-style-type: none"> <li>Maintain backup power systems for City Hall and the Community Center.</li> </ul>	Backup power generation systems for City and the Community Center are maintained on an annual basis.		

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery					
Hidden Hills	Wildfire Energy Disruption Windstorm		●		●	●						◆	◆	◆	✓				Underground Utility Line Implementation Page 2-84	2	 Ongoing	<ul style="list-style-type: none"> <li>Reduce the risk of power failure by replacing overhead power lines with underground lines to mitigate the risk of power failure and wildfires during periods of high winds.</li> </ul>	Continuing to work with SCE to plan, approve permits, inspect, and install underground power systems.
Hidden Hills	Wildfire		●									◆		◆	✓	✓		Brush Clearance Program Page 2-84	1	 New / Ongoing	<ul style="list-style-type: none"> <li>Reduces the risk of a wildfire and its impact to nearby homes.</li> </ul>	Expanded brush clearance using goats around the community's perimeter that interfaces with open space.	

Malibu

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆			Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response					
Malibu	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	●	◆	◆			✓	✓		Bluffs Park Improvement Project Page 2-85	1	 In Progress	<ul style="list-style-type: none"> <li>Improves public safety in the event that a mass emergency shelter is required.</li> </ul>	Working to upgrade critical infrastructure roofing to improve reliability for emergency shelter.
Malibu	Flood						●				◆			✓				Catch Basin and Culvert Upgrades Page 2-86	1	 Complete	<ul style="list-style-type: none"> <li>Will reduce risk and mitigate the impact of flood and landslides on new and existing construction.</li> </ul>	Completed upgrade to City catch basins and culverts to increase capacity.
Malibu	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	◆	◆			✓	✓		Excavation and Emergency Shelter at Zuma Beach Page 2-86	1	 Complete	<ul style="list-style-type: none"> <li>Improves public safety in the event that a mass evacuation is required.</li> </ul>	Completed coordination with LA County Beaches to develop the Zuma Beach parking lot as an emergency shelter location and secure access.	
Malibu	<ul style="list-style-type: none"> <li>Landslide</li> <li>Flood</li> </ul>						●	●			◆	◆	✓	✓			Las Flores Road Canyon Improvements Page 2-88	1	 In Progress	<ul style="list-style-type: none"> <li>Will reduce risk and mitigate the impact of flood on new and existing construction in the Las Flores Creek area.</li> <li>Improves public safety in the event that a mass evacuation is required.</li> </ul>	Working to improve pavement and drainage to reduce flooding and erosion as well as maintain evacuation route reliability.	
Malibu	<ul style="list-style-type: none"> <li>Wildfire</li> <li>Windstorm</li> </ul>		●			●					◆			✓			Tree Removal in City Right-of-Way Page 2-88	1	 Ongoing	<ul style="list-style-type: none"> <li>Reduces the risk of wildfire.</li> <li>Maintains critical infrastructure.</li> </ul>	Continue to identify and remove trees to maintain a safe distance from power poles and reduce fire risk (as part of the Annual Street Maintenance).	
Malibu	All Hazards (except Pandemic)	●	●	●	●	●	●		●		◆	◆	✓	✓			City of Malibu GIS Upgrade Page 2-89	1	 Complete	<ul style="list-style-type: none"> <li>Will reduce risk and mitigate the impact of hazards on new construction by improving local land use planning.</li> </ul>	Completed GIS upgrades to incorporate more information regarding trails, geological sensitive areas, tsunami maps, etc.	

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments	
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery						
Malibu	Flood							●			◆	◆	◆	◆	✓					Flood Actions Page 2-90  FEMA MAP Program Participation Letter Pages 2-91 to 2-92	1	Complete / Ongoing	<ul style="list-style-type: none"> <li>May add requirements to land use planning and new construction permits.</li> <li>Will reduce risk and mitigate the impact of flood on new construction.</li> </ul>	Included mitigation goals in the City of Malibu General Plan (see Mitigation Plan strategy). In addition, Flood Warning and Preparedness information is made available via the City of Malibu web site (Emergency Preparedness Library). Finally, the City of Malibu is a participant in the 2012 FEMA California Coastal Analysis and Mapping Project/Open Pacific Coast Study (CCAMP). These efforts will address gaps in required engineering and mapping for high flood risk areas impacted by coastal flooding, levee systems, and other flood hazards (e.g., lakes, rivers, and ponds). Revised flood maps have been developed and City has adjusted flood zones along the coast.
Malibu	Flood							●			◆			✓						Malibu Flood Mitigation Plan Page 2-93	1	Complete / Ongoing	<ul style="list-style-type: none"> <li>May add requirements to land use planning and new construction permits.</li> <li>Will reduce risk and mitigate the impact of flood on new construction.</li> </ul>	Flood specific goals included in the City of Malibu General Plan. Ongoing updates to mitigation goals and the General Plan are performed (as required).
Malibu	Flood							●			◆			✓	✓					Annual Street Pavement Project Page 2-94	2	Ongoing	<ul style="list-style-type: none"> <li>Maintains critical transportation infrastructure.</li> </ul>	Rehabilitation work is performed annually. Projects have included Broad Beach Road, Malibu Canyon Road, Civic Center Way, and Cross Creek Road. The City continues to perform annual road rehabilitation projects as necessary.
Malibu	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆		✓	✓					FM Alert System Page 2-94	2	New	<ul style="list-style-type: none"> <li>Maintain and improve critical communication methods during a disaster.</li> </ul>	In the process of securing funding for the license and infrastructure, as well as funding for 2,000 residential receivers to implement an FM Alert System.
Malibu	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆		✓	✓					Broadband Improvements for Emergency Communications Page 2-95	2	New	<ul style="list-style-type: none"> <li>Maintain and improve critical communication methods during a disaster.</li> </ul>	The City of Malibu is looking to install conduits around the city and improve Broadband Capabilities.

Westlake Village

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery					
Westlake Village	All Hazards	●	●	●	●	●	●	●	●	●	◆	◆	◆		✓	✓		Communications Improvements Page 2-97	1	 Ongoing	<ul style="list-style-type: none"> <li>May add requirements to new construction permits for communications infrastructure.</li> <li>Will provide for better response and coordination by city personnel during and after a hazardous event.</li> </ul>	Westlake Village continues to work with wireless phone carriers to improve mobile phone reception in the areas of the city that are not adequately covered by wireless networks. The County-wide Integrated Radio System (CWIRS) was deployed. Furthermore, the City installed a satellite-based computer network that allows the EOC to connect to the Internet in the event of a disruption to the landline computer network. The system is regularly tested during power outages and the EOC is able to remain connected to the Internet.	
Westlake Village	All Hazards (except Pandemic)	●	●	●	●	●	●	●	●		◆	◆		✓	✓		City of Westlake Village GIS Upgrade Page 2-98	1	 Complete / Ongoing	<ul style="list-style-type: none"> <li>Will reduce risk and mitigate the impact of hazards on new construction by improving local land use planning.</li> </ul>	The Geographic Information System was updated and higher resolution maps were created of the Westlake Reservoir, the FEMA floodplain, and the fire hazard areas. A fire hazard severity map was created. Training of personnel on the GIS was conducted and will continue to be performed on an ongoing basis.		
Westlake Village	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●		◆	◆		✓	✓		Emergency Power Generation Page 2-99	1	 Complete / Maintenance Ongoing	<ul style="list-style-type: none"> <li>Improves internal capabilities at critical City facilities.</li> </ul>	Generators were purchased for the EOC and the Community Room. The City must conduct a study to determine the feasibility of rewiring City Hall and the Community Rooms to provide entire facility rather than only select rooms with backup power in the event of an outage. Study must also be conducted to assess the practicality of replacing the City's diesel fuel generators with battery storage units.  The city of Westlake Village also entered an MOU with the Clean Power Alliance of Southern California (CPA) in October 2022 for the design, installation, and operation of a solar plus storage system with emergency power generation capability through the power ready program. The project is currently scoped to include replacement of the Civic Center roof, installation of solar panel arrays on the new roof, and installation of a battery that is large enough to provide adequate backup power generation during an emergency, inclusive of operating the cooling center at the community rooms at the Civic Center. The project is anticipated to be completed in 2025.		

City	Hazard	Specific Hazards Addressed in the HMP ●											Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery							
Westlake Village	Wildfire		●							◆	◆			✓					Smoke Detector Installation Page 2-100	1	 Complete / Ongoing	<ul style="list-style-type: none"> <li>Will encourage residents with existing structures built prior to 1986 to install smoke detectors. This will mitigate the impact of fire on existing buildings.</li> </ul>	A program to educate the public about the importance of installing smoke detectors and replacing batteries periodically was instituted. Information was disseminated to the public through articles in a series of city newsletters.		
Westlake Village	<ul style="list-style-type: none"> <li>Wildfire</li> <li>Windstorm</li> </ul>		●			●					◆	◆		✓				Tree Census Page 2-101	1	 Complete / Ongoing	<ul style="list-style-type: none"> <li>May result in additional tree clearing or maintenance requirements for new commercial and residential development properties.</li> </ul>	The City's Public Works personnel identified and inspected every tree on public property in the City. Trees determined to be hazardous were cut down. The City continues to assess trees annually, and trees are cycled in the program and trimmed at an average of every 3 years. In addition, a GIS tree mapping program has developed. A Heritage Tree Ordinance was also adopted in 2018 (updated in 2022/2023) to identify trees in the city with particular significance to be monitored more closely.			
Westlake Village	Flood												◆	◆	✓	✓		Annual Street Resurfacing Program Page 2-102	2	 Ongoing	<ul style="list-style-type: none"> <li>Maintains critical transportation infrastructure.</li> </ul>	<p>Ongoing effort. In 2016/17 completed asphalt overlay work on the following streets: Three Springs Drive, Fallview Rd., Timbridge Ct., Snowpeak Dr., Torchwood Pl., Yellowwood Dr., Aspen View Ct., Woodburn Ave., Carrie Pl., South Shore Pla., Sandpiper Ct., Royal Glen Rd., Lyndbrook Ct., Trowbridge Ct., Tynebourne Ct., Langspur Ct., Beacroft Ct., Bedforhurst Ct., Village School Rd., Shropshire Dr., Dunraven Ct., Bain Ct., Hardfired Ct., Havington Ct., Orchard View Ct.</p> <p>In 2017/2018 completed asphalt overlay work on the following streets: Kristen Lee Dr., Denver Springs Dr., Wellbrook Dr., Montview Ct., Grand Oaks Dr., Village Center Rd., and Greengate Ct.</p> <p>Completed 2016/17 slurry seal work on the following streets: Lindero Canyon Road, Oak Crest Drive and Park Terrace</p> <p>Completed slurry work in 2017/18 Three Springs neighborhood, First Neighborhood, Triunfo Canyon Rd, La Tienda Rd, and Russell Ranch Rd.</p> <p>For the past several years, Westlake Village has partnered with the City of Agoura Hills leading to reduced overall contract costs for both cities.</p>			

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery					
Westlake Village	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	●	◆	◆	◆	◆	✓	✓			Advanced Emergency Training Page 2-103	2	Ongoing	<ul style="list-style-type: none"> <li>Improves public preparedness and mitigation education and hazard awareness.</li> </ul>	Advanced training is provided to CERT members every year and will continue to be provided. The COG offers 2 to 3 CERT classes every year. The City of Malibu hosted shelter training to which Westlake sent representatives. Westlake Village offers many different trainings to the CERT team and rotates topics to keep the team engaged and prepared.
Westlake Village	All Hazards (includes impacts related to Climate Change, i.e., increased flood, wildfire, etc.)	●	●	●	●	●	●	●	●	◆	◆	◆	◆	✓	✓	✓			Public Emergency Preparedness Page 2-104	2	Ongoing	<ul style="list-style-type: none"> <li>Improves public preparedness and mitigation education and hazard awareness.</li> </ul>	Emergency Preparedness Plan (for residents) updated and is available through the City's website. Also, Los Angeles County established the California Fire Alliance which includes an information campaign aimed at educating the public about wildfire safety. In addition, the Los Angeles County Fire Department developed the Ready Set Go Wildfire Action Plan to inform residents of actions they can take to keep them safe from wildfires. Finally, Westlake Village and Agoura Hills hosted a joint emergency preparedness event in August 2010 aimed at educating the public. In coordination with the LA County Sheriff, Westlake Village held an Emergency Preparedness event in November 2022. Further public preparedness efforts ongoing.
Westlake Village	Flood						●				◆	◆	◆	✓					Triunfo Creek Bridge Resurfacing Page 2-105	2	Completed	<ul style="list-style-type: none"> <li>Resurfaced bridge deck for maintenance to reduce the risk of flood.</li> </ul>	Completed in 2017. LA County designed and executed the construction contract.
Westlake Village	All Hazards	●	●	●	●	●	●	●	●	◆	◆	◆	◆	✓	✓				Mobile EOC Page 2-105	2	New	<ul style="list-style-type: none"> <li>Aims to enhance disaster response capabilities by providing a flexible and mobile platform for city staff to deploy to an Incident Command System (ICS) while functioning as an EOC.</li> </ul>	The City of Westlake Village would like to purchase a vehicle to serve as a mobile Emergency Operations Center. A mobile EOC would allow city staff to deploy to an ICS while operating as an EOC. This vehicle would be equipped with lights, speakers, radio repeaters, and more in order to help inform residents of ways to mitigate disasters while they occur.

City	Hazard	Specific Hazards Addressed in the HMP ●									Mitigation Goal ◆				Issues Addressed ✓				Project Name / Strategy	Priority	Status	Impact on Buildings, Infrastructure, and the Community	Comments
		Earthquake	Wildfire	Climate Change - Drought	Energy Disruption	Windstorm	Landslide / Debris Flow	Flood / Severe Winter Storm	Pandemic	Terrorism / Mass Casualty Incident	Public Awareness	Protect Life, Property and the Environment	Partnerships and Implementation	Emergency Management	Mitigation	Preparedness	Response	Recovery					
Westlake Village	Wildfire		●								◆		◆		✓	✓		Home Hardening & Defensible Space Fire Program Page 2-106	1	 New / Ongoing	<ul style="list-style-type: none"> <li>Mitigates the impact of wildfires by enhancing the resilience of homes in a Very High Fire Severity Zone.</li> </ul>	The City of Westlake Village would like to establish a grant program that provides funding for homeowners that will be used for home hardening. This includes vent and chimney coverings, gutter maintenance, and creation of defensible zones per Cal Fire's specifications. Bolstering home hardening and defensible spaces will mitigate damage caused by wildfires. This program would protect residents and homes in Westlake Village, most of which is in a Very High Fire Severity Zone. (The City would need to pursue grant funding for this project.	

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### Strategy Organization

The Mitigation Strategies presented provide a listing of activities that the Region (normally through individual city departments) and citizens can implement to reduce risk. They reflect ongoing activities and future actions to be taken in order to reduce the loss of property and life. All of the projects listed were evaluated in terms of the benefit versus cost and were found to be beneficial (see Section 5: Plan Maintenance and Monitoring, Economic Analysis of Mitigation Projects for an explanation of the evaluation process utilized).

The strategies are organized within the following matrix. Data collection, research and stakeholder participation were used to develop the hazard mitigation strategies listed. The following categories of information are provided for each strategy:

Hazard	The type of hazard that the strategy addresses. Multi-Hazard mitigation strategies provide strategies that can be applied to multiple or all hazards.		
Project Name	Name of the mitigation project strategy.		
Status	Project status, e.g., Complete, Partially Complete, Ongoing, Removed (Cancelled), Discontinued, etc.		
Strategy	Strategy description.		
Action Items	Actions that will be completed to implement (or continue) the strategy.		
Coordinating Department	The department with regulatory responsibility to address the named hazard, or that is willing and able to organize resources, find appropriate funding, or oversee implementation, monitoring, and evaluation. Participating departments are listed with the main department responsible in BOLD.		
Timeline/Completion Date/Priority	The estimated timeframe for implementation along with a general implementation priority.		
Total Cost / Benefit Cost Ratio (for new projects)	Estimated cost of the project. BCR for new mitigation projects		
Funding Source(s)	Where the funding will be obtained.		
Constraints	Constraints may apply. These constraints may include a lack of staff, lack of funds, or vested property rights which might expose the Region to legal action as a result of adverse impacts on private property.		
Implementation Description	A brief description of activities associated with the project.		
Plan Goals Addressed The plan goals addressed by each project are divided into four categories (see check boxes below) and are included as a method to monitor and evaluate mitigation plan progress.			
	Public Awareness		Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

Detailed mitigation strategies for the Las Virgenes-Malibu Council of Governments are provided in the following sections. The mitigation strategies provide detailed action items that support the strategy. Common mitigation strategies that pertain to the entire Las Virgenes-Malibu Region are listed under “Regional Mitigation Strategies”. Mitigation strategies that focus on one jurisdiction are contained in separate sections for each city. City specific mitigation strategies were submitted from various departments within each city. Mitigation strategies were reviewed and approved by the Steering Committee and Planning Group.

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## HAZARD MITIGATION STRATEGY PROJECTS

The following Hazard Mitigation Strategies were included in the original Hazard Mitigation Plan. An update on the status of each project from the previous Hazard Mitigation Plan is provided in the following tables for regional and city specific projects. Also, additional information related to mitigation activities since the previous HMP are included (as applicable) under specific projects or as new projects.

### *Regional Mitigation Projects*

#### Hazard Mitigation Information Campaigns

Category	Description		
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village		
Hazard	All Hazards		
Project Name	<b>Hazard Mitigation Information Campaigns</b>		
Status	Ongoing / Modified		
Strategy	Conduct Hazard Mitigation and Disaster Preparedness Events and/or Information Campaigns to coincide with National Disaster Preparedness Month in September		
Action Items	<ul style="list-style-type: none"> <li>Schedule workshop and information campaign</li> <li>Develop program</li> <li>Advertise the workshop or information campaign (city web page, city TV, and local news)</li> <li>Conduct the workshop or information campaign</li> </ul>		
Coordinating Department	LVMCOG, Public Safety, Emergency Management, Emergency Services		
Timeline/Completion Date/Priority	Annual / Priority 1		
Total Cost	None, in-house staff time		
Funding Source(s)	N/A		
Constraints	Time / Resources		
Implementation Description	Conduct public information efforts to review Disaster Preparedness and Mitigation to promote public participation and awareness. Workshop topics: <ul style="list-style-type: none"> <li>Earthquake Mitigation and Preparedness</li> <li>Wildfire / Fire Mitigation and Preparedness</li> <li>Climate Change Mitigation and Preparedness</li> <li>Drought Mitigation and Preparedness</li> <li>Landslide Mitigation and Preparedness (including Debris Flow)</li> <li>Severe Wind/Wind Storm Mitigation and Preparedness</li> <li>Severe Heat Mitigation and Preparedness</li> <li>Severe Cold Mitigation and Preparedness</li> <li>Flood and Winter Storm Mitigation and Preparedness</li> <li>Terrorism Mitigation and Preparedness</li> <li>Cyber Security Mitigation and Preparedness</li> </ul>		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation		Emergency Management

## Implement Mitigation and Preparedness Campaigns

Category	Description		
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village		
Hazard	All Hazards		
Project Name	<b>Implement Mitigation and Preparedness Campaigns</b>		
Status	Ongoing / Modified		
Strategy	Implement Ongoing Information Campaign to Promote Disaster Mitigation and Preparedness		
Action Items	<p><b>All LVMCOG Cities</b></p> <ul style="list-style-type: none"> <li>Develop informational pages, announcements, and supporting materials</li> <li>Obtain electronic and/or hard copy mitigation and preparedness handouts (sources include Ready.gov, NOAA, USGS, and the American Red Cross)</li> <li>Include information in city web pages and city broadcast announcements</li> <li>Investigate other opportunities to reach the public such as radio interviews and press releases</li> <li>CERT Training</li> <li>Participant in the County of Los Angeles Genasys Protect (Zonehaven Aware) notification project which establish designated evacuation zone area names to assist with regional evacuation notifications. A public awareness campaign was also performed to apprise all residents in the COG cities of the information platform.</li> <li>Implementation of mass notification systems</li> </ul> <p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>Promotion of the City’s AH Alert (CodeRed) mass notification system. Promotion include sign up masses, and social media reminder notifications</li> <li>At the conclusion of COVID, worked with Los Angeles County Fire to restart community CERT training classes. First training held on July 11, 2023 in Agoura Hills.</li> <li>City participated in the 2022 County of Los Angeles Fire Departments distribution of NOAA Weather Radios. Radios provide to LA County residents to keep them apprise of weather and other emergency notifications.</li> <li>2018 hosted post Woolsey Wildfire workshop with LA County Fire to answer questions, and educate residents on continued fire safety and proper equestrian evacuation</li> <li>Conducted community Wildfire/Earthquake preparedness door-to-door walk with Mayor and City CERT members</li> <li>Hosted American Red Cross Shelter Management Training for applicable City EOC staff, City CERT volunteers and neighboring City employees in March 2022, July 2022, and March 2023.</li> <li>In 2022, the City updated its emergency services webpage to include a section on Home Hardening. Information and resources area available on home hardening technologies and educational pieces to assist the public with home hardening.</li> <li>In 2023, the City implemented a Home Hardening Grant program, whereby one time grants in the amount of \$1000 are available to eligible Agoura Hills property owners to use toward home hardening residential homes.</li> </ul>		
Coordinating Department	LVMCOG, Public Safety, Emergency Management, Emergency Services		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	None, in-house staff time		
Funding Source(s)	N/A		
Constraints	Time / Resources		
Implementation Description	Provide disaster mitigation and preparedness bulletins via city web pages, city TV, local news, and/or other media.		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

### Business Outreach Disaster Mitigation and Planning Program

Category	Description		
City	LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Westlake Village		
Hazard	All Hazards		
Project Name	<b>Business Outreach Disaster Mitigation and Planning Program</b>		
Status	Ongoing / Modified		
Strategy	Work with local business groups (Chambers of Commerce, business associations, business parks, etc.) to encourage disaster mitigation and planning for local businesses.		
Action Items	<ul style="list-style-type: none"> <li>Meet with local business groups and/or make information available to increase awareness of the Hazard Mitigation Plan, mitigation programs, and planning information.</li> <li>Make available and distribute disaster mitigation and preparedness information (information sources include Ready.gov and the American Red Cross).</li> <li>Communicate to local businesses via city provided information resources (i.e., web pages, notification and alert resources, publications, etc.).</li> </ul>		
Coordinating Department	Public Safety, Emergency Management, Emergency Services		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	None, in-house staff time		
Funding Source(s)	N/A		
Constraints	Time / Resources		
Implementation Description	<ul style="list-style-type: none"> <li>Identify local business groups</li> <li>Westlake Village partners with the local chamber of commerce for a “Business Census” that identifies all businesses in Westlake Village. The last census was completed in 2017. The new version of this document will be available within the next year.</li> <li>Make information available to local business groups. Topics may include:                             <ul style="list-style-type: none"> <li>Business Hazard Mitigation Programs</li> <li>Earthquake Mitigation and Preparedness for the workplace</li> <li>Wildfire / Fire Mitigation and Preparedness for the workplace</li> <li>Climate Change / Severe Heat / Severe Cold / Drought Mitigation and Preparedness for the workplace</li> <li>Landslide and Debris Flow Mitigation and Preparedness for the workplace</li> <li>Severe Wind/Wind Storm Mitigation and Preparedness for the workplace</li> <li>Flood and Severe Winter Storm Mitigation and Preparedness for the workplace</li> <li>Terrorism and Mass Casualty Event Mitigation and Preparedness for the workplace</li> <li>Cybersecurity preparedness for the workplace</li> </ul> </li> <li>Work with the Los Angeles County Sheriff to establish programs increase community involvement and vigilance. For example, the City of Westlake Village has established a Business Watch Program to disseminate information and encourage participation.</li> <li>Agoura Hills AH Alert (CodeRed) mass notification system is available for businesses to register and use. Currently, there are 614 business users in the system. NOTE: Additional Agoura Hills business outreach programs are pending.</li> </ul>		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation		Emergency Management

**Continue to Implement, Revise and Maintain the Las-Virgenes-Malibu Multi-Jurisdiction Hazard Mitigation Plan**

Category	Description		
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village		
Hazard	All Hazards		
Project Name	<b>Continue to Implement, Revise and Maintain the Las-Virgenes-Malibu Multi-Jurisdiction Hazard Mitigation Plan</b>		
Status	Complete for 2018 / Maintenance Ongoing		
Strategy	The LVMCOG will continue to coordinate with the cities of Agoura Hills, Calabasas, Hidden Hills, Malibu and Westlake Village to update as needed the Multi-Jurisdictional Hazard Mitigation Plan.		
Action Items (recurring)	<ul style="list-style-type: none"> <li>Conduct an annual review of the plan.</li> <li>Implement and monitor all mitigation strategies within the stated time periods.</li> <li>Plan action items will continue to address at least one, if not all, plan goals: Public Awareness, Partnership and Implementation, Protect Life, Property, and the Environment, and Emergency Management.</li> </ul> <p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>The current 2018 COG HMP is available for review on the City’s website.</li> </ul>		
Coordinating Department	Las Virgenes-Malibu Council of Governments (LVMCOG)		
Timeline/Completion Date/Priority	Ongoing / Review Annually Priority 1		
Total Cost	Plan Maintenance at \$10K to \$15K per Year		
Funding Source(s)	Hazard Mitigation Grant and COG		
Constraints	Time and Resources		
Implementation Description	The Multi-Jurisdiction Hazard Mitigation Plan was updated in 2011, 2013, and 2018 as part of the strategy.		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Critical Infrastructure Assessment

Category	Description
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village
Hazard	All Hazards
Project Name	<b>Critical Infrastructure Assessment</b>
Status	Ongoing/Modified
Strategy	Conduct assessments of long term support for critical infrastructure.
Action Items	<ol style="list-style-type: none"> <li>1. Continue to monitor the infrastructure that is most crucial to the city during an emergency event</li> <li>2. Develop and implement strategies to ensure that the key infrastructure required by the city are available during a disaster</li> </ol>
Coordinating Department	Building and Safety
Timeline/Completion Date/Priority	Ongoing / Priority 1
Total Cost	None, in-house staff time
Funding Source(s)	N/A
Constraints	Time
Implementation Description	<p><b>All Cities</b></p> <ul style="list-style-type: none"> <li>• Each city continually assesses the state of emergency readiness of its critical facilities.</li> </ul> <p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>• The following sites have been identified as critical: City Hall, EOC, Recreation &amp; Event Center, City Yard as critical facilities. Two facilities have functional emergency power generators.</li> <li>• City Hall is stocked with emergency food for 32 staff and 25 volunteers for 3 days.</li> <li>• The City currently has cameras installed at major intersections that can be used for road assessments.</li> <li>• Additionally, the City has purchased a drone that can be used for hazard structure assessments.</li> <li>• The City has installed nine (9) Beacon Boxes in several locations in the City to assist outside public safety agencies responding to the city for an emergency event, whereby important community information is available.</li> <li>• Expansion of the Chesebro Interchange which include additional lanes, and left turn lanes and other improvements. Additional traffic lanes would provide assistance with egress from the northeast section of the City and equestrian community.</li> <li>• Installed removal traffic bollards on on Lewis Road, to provide another evacuation egress area for the northeast section of the City in the Old Agoura area to the US 101.</li> <li>• City assisted and worked with LACO in expediting replacement of bridge in unincorporated Agoura (Chesebro Rd) burnt by Woolsey Fire to accommodate two lanes of traffic to assist with better egress from the equestrian area</li> </ul> <p><b>Calabasas</b></p> <ul style="list-style-type: none"> <li>• The City of Calabasas participated in the SCAG Earthquake Preparedness Initiative as a member of the Ventura County Cohort. Rapid assessment forms to be used post-seismic event were pre-prepared for individual structures selected using the following criteria: high occupancy, community lifeline, history of damage, geotechnical conditions, critical infrastructure, major transportation routes and vulnerable populations. Staff continues to refine the draft assessment and will conduct future training for field inspectors.</li> <li>• The following sites have been identified as critical: City Hall, EOC, Tennis and Swim Center, Senior Center, Founders Hall, Calabasas Community Center, De Anza Park, Creekside preschool and the City Yard as critical facilities. The City has a functional emergency power generator at City Hall.</li> <li>• City Hall is stocked with emergency food and water for 30 staff and 10 volunteers for 3 days.</li> <li>• The City currently has portable message signs that can be installed at major intersections that can be used for traffic control.</li> </ul>

Category	Description		
Project Name	<b>Critical Infrastructure Assessment (continued)</b>		
Implementation Description	<p><b>Hidden Hills</b></p> <ul style="list-style-type: none"> <li>• The Hidden Hills City Hall and Community Center have been designated as critical.</li> <li>• Back-up generator power is available at City Hall and the Community Center.</li> <li>• Emergency food and water stored at City Hall.</li> </ul> <p><b>Malibu</b></p> <ul style="list-style-type: none"> <li>• Back-up generator power is available at City Hall</li> <li>• Emergency food, water and shelter supplies are available at City Hall</li> </ul> <p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>• The Westlake Village Civic Center (City Hall, Community Rooms, and Library) have been identified as critical infrastructure. Additional backup critical facilities include Berniece Bennett Park storage room.</li> <li>• The City maintains contract staff for regular assessment of critical infrastructure and on-call availability during emergencies.</li> <li>• Bridges spanning the 101 freeway, waterways, and wash basins are also identified and inspected.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Emergency Shelter Identification

Category	Description
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village
Hazard	All Hazards
Project Name	<b>Emergency Shelter Identification</b>
Status	Ongoing/Modified
Strategy	Identify buildings, areas, locations, etc. within the community that can be used as Emergency Shelters in case of a hazard event.
Action Items	<ol style="list-style-type: none"> <li>1. Build relationships with local hotels</li> <li>2. Educate the hotels on hazards and procedures</li> <li>3. Identify emergency shelters and provide detailed instructions on how to set up when activated as an emergency shelter</li> <li>4. Conduct at minimum, yearly drills at the emergency shelters</li> </ol>
Coordinating Department	Building and Safety
Timeline/Completion Date/Priority	Ongoing / Priority 1
Total Cost	In-house staff time / Other Costs TBD
Funding Source(s)	General Funds / In-house staff time
Constraints	Time
Implementation Description	<p><b>All Cities</b></p> <ul style="list-style-type: none"> <li>• All cities work with the American Red Cross to establish shelter sites and follow the ARC schedule of locations.</li> <li>• All cities continuously evaluate potential shelter sites.</li> </ul> <p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>• Designated Agoura High School and Willow School as emergency shelters.</li> <li>• City established lodging agreements with the local hotels to accommodate City EOC workers to guarantee lodging accommodations in the event EOC employees are unable to return home from their designated shift.</li> </ul> <p><b>Calabasas</b></p> <ul style="list-style-type: none"> <li>• Identified several school locations for possible use as emergency shelters: AE Wright Middle School, AC Stelle Middle School, Viewpoint School, and Calabasas High School. Also identified Founders Hall, the Senior Center, and the Calabasas Community Center as possible shelter locations.</li> </ul> <p><b>Hidden Hills</b></p> <ul style="list-style-type: none"> <li>• The City will be purchasing a portable generator and emergency blankets for the emergency evacuation supply cache.</li> <li>• Three 55 gallon water storage containers have been filled and stored.</li> <li>• Round Meadow School and the Community Center has been identified as evacuation locations.</li> </ul> <p><b>Malibu</b></p> <ul style="list-style-type: none"> <li>• The Malibu High School gymnasium has been screened by the Red Cross for use as an emergency shelter. The City is working with the Red Cross to identify additional locations.</li> <li>• The City has a Right-of Entry permit with Los Angeles County Department of Beaches and Harbors for the use of Zuma Beach parking lot during an emergency. The site may be used for staging first responders, providing support to the community, and a temporary evacuation site for community members and large animals.</li> </ul>

Category	Description		
Project Name	<b>Emergency Shelter Identification (continued)</b>		
Implementation Description	<p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>• Calvary Community Church in Westlake Village and Civic Center Community rooms are designated as emergency shelter locations.</li> <li>• Berniece Bennett Park has been identified as an outdoor location to be used as a staging area, distribution point, or triage center in the event of an emergency.</li> <li>• EOP is being updated.</li> <li>• The City is currently in discussions with the school district regarding the school district's role in providing temporary shelter in the event of an emergency.</li> <li>• The City has identified additional locations including local hotels and the local YMCA facility to engage in discussions for future sheltering needs.</li> </ul>		
<b>Plan Goals Addressed</b>			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

**Pre-Established Contracts**

Category	Description		
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village		
Hazard	All Hazards		
Project Name	<b>Pre-Established Contracts</b>		
Status	Ongoing/Modified		
Strategy	Create pre-established contracts with local merchants to provide emergency items/materials in an emergency situation.		
Action Items	Continue to assess needs and opportunities to create relationships with local merchants for potential contracts for key supplies, i.e. water, candles, canned food, etc.		
Coordinating Department	Community Services		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	None, in-house staff time		
Funding Source(s)	N/A		
Constraints	Time		
Implementation Description	<p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>• Agreements with contractors for Emergency Services assistance established. Additionally, the city’s residential franchise agreement includes language mandating emergency assistance for debris removal.</li> <li>• The city currently has contracts with the following companies to assist with emergency services: Burns Construction (Public Works).</li> <li>• Additionally, the city's residential franchise agreement includes language mandating emergency assistance for debris removal.</li> <li>• The city is currently in discussions with the City of Thousand Oaks over Mutual Aid Agreements.</li> <li>• City established lodging agreements with the local hotels to accommodate City EOC workers to guarantee lodging accommodations in the event EOC employees are unable to return home from their designated shift.</li> </ul> <p><b>Calabasas</b></p> <ul style="list-style-type: none"> <li>• Calabasas maintains contacts with local vendors and a list of contractors for emergencies.</li> <li>• Calabasas maintains an account with SOS Survival Products for emergency supplies.</li> <li>• Calabasas maintains a contract with KR Nida Communications for radio service.</li> <li>• The city currently has a contract with Burns Construction (Public Works)</li> </ul> <p><b>Hidden Hills</b></p> <ul style="list-style-type: none"> <li>• Hidden Hills contracts with local vendors and maintains a list of contractors for emergencies.</li> <li>• Community Association work crews and equipment are available to the City.</li> </ul> <p><b>Malibu</b></p> <ul style="list-style-type: none"> <li>• The city maintains a list of contractors that could be called upon to provide services and necessary items in the event of an emergency. For example, Burns Pacific provides street repair services as well as debris removal, fuel for the city’s emergency generator and other services as required.</li> </ul> <p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>• The city maintains agreements with private vendors of services in the event that City resources are overwhelmed in an emergency situation.</li> <li>• Contracts are maintained for items such as generator fuel, road repair, and supplies.</li> <li>• City is working to establish further contracts for “First rights” of food and other supplies from local wholesale and big box retailers.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Hazard Awareness Public/Private Partnerships

Category	Description
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village
Hazard	All Hazards
Project Name	<b>Hazard Awareness Public/Private Partnerships</b>
Status	Ongoing/Modified
Strategy	Continue to create public/private partnerships to educate and involve surrounding community regarding hazard events.
Action Items	Continue to monitor opportunities to promote hazard awareness and create public/private partnerships to promote disaster preparedness and mitigation.
Coordinating Department	Public Works, Community Services, Emergency Services
Timeline/Completion Date/Priority	Ongoing / Priority 1
Total Cost	None, in house staff time
Funding Source(s)	N/A
Constraints	Time
Implementation Description	<p><b>All Cities</b></p> <ul style="list-style-type: none"> <li>Continue community outreach efforts.</li> <li>Continue to provide information through each city’s web site, media platforms, and CERT Program.</li> <li>Continue to promote awareness programs through public forums, local schools, and other institutions.</li> </ul> <p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>The City held a post Woolsey fire preparedness workshop in 2019 to educate businesses and residents about preparing for fire and possible evacuations. Mitigation efforts to protect their homes and businesses were discussed along with information of equine evaluation and preparedness. Multiple public safety agencies participated.</li> <li>June 22, 2022, City Council Meeting hosted Genasys Protect (Zonehaven Aware) presentation to educate community on the information platform and encouraged resident to register with the platform.</li> <li>September 24, 2022 – City Hosted “Preparedness Saturday” event in the Community to provide information and education on personal preparedness, AH Alert registration, CERT training classes and the CERT program. Attendees included the County of Los Angeles Fire Department.</li> <li>2023 – City implemented a “Home Hardening Grant” program where funding is available to assist residential property owners with home hardening technology or home hardening services to assist with home hardening to prevent fires.</li> </ul> <p><b>Calabasas</b></p> <ul style="list-style-type: none"> <li>Provides business continuity information and guidance via the city website.</li> <li>Calabasas is a member of the Santa Monica Mountains Fire Safe Alliance.</li> <li>Emergency Preparedness in Calabasas a Fire Safe Council (EPIC) is a part of the Calabasas EOC Organization to assist with communication.</li> </ul> <p><b>Hidden Hills</b></p> <ul style="list-style-type: none"> <li>There is no substantial business within Hidden Hills but City does work with the Community Association and Round Meadow Elementary School for hazard education and disaster preparedness.</li> <li>Conducted a wildfire education seminar post Woolsey.</li> <li>City installed smoke detector cameras on Bonneville Road.</li> <li>City continues to conduct CERT training.</li> <li>Community awareness using the monthly newsletter.</li> </ul>

Category		Description	
Project Name		<b>Hazard Awareness Public/Private Partnerships (continued)</b>	
Implementation Description		<p><b>Malibu</b></p> <ul style="list-style-type: none"> <li>• Malibu is a member of the Santa Monica Mountains Fire Safe Alliance.</li> <li>• Malibu is in the process of forging a public/private partnership with KBUU FM, a local radio station, to have direct access during an emergency to provide emergency information to the public. In addition, the City's 2023 Emergency Operations Plan update includes a community resource list which incorporates a variety of community organizations into the response network.</li> </ul> <p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>• Hosted an emergency preparation seminar in which several vendors with emergency preparedness products were represented.</li> <li>• City established a Public Safety Advisory Board comprised of appointed community members and Councilmembers to meet regularly and consider public safety issues.</li> <li>• The city Sheriff facilitates community events during “National Night Out” for residents to engage with different public safety and disaster response assets on an annual basis. The city continues to be involved in this.</li> <li>• Partnerships are being created with local homeowners’ associations and community groups to form Neighborhood Watch groups to encourage awareness and participation.</li> </ul>	
	Plan Goals Addressed		
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Tree Pruning Program and Fire Code Sections

Category	Description		
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village		
Hazard	Windstorm / Wildfire		
Project Name	<b>Tree Pruning Program and Fire Code Sections</b>		
Status	Ongoing/Modified		
Strategy	Create local City and utility awareness of tree pruning and Fire Code sections relevant to wind-resistant utility operations		
Action Items	<ol style="list-style-type: none"> <li>1. Continue to review and update current codes on tree pruning</li> <li>2. Continue to conduct assessments of trees within each city that can pose a safety hazard</li> <li>3. Implement (as needed) new codes regarding tree maintenance in each city’s general plan</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	None, in-house staff time		
Funding Source(s)	N/A		
Constraints	Time		
Implementation Description	<p><b>All Cities</b></p> <ul style="list-style-type: none"> <li>• All cities within the region are serviced by the Los Angeles County Fire Department. Requirements related to tree pruning and brush clearances are contained in the Los Angeles County Fire Code, Section 1117, "Clearance of Brush and Vegetation Growth".</li> <li>• All cities have tree pruning/maintenance programs and distribute information related to tree pruning and brush clearance via hardcopy and city websites. Examples include “A Roadmap to Fire Safety” and annual brush clearance mailers distributed by Los Angeles County.</li> <li>• Additional fire prevention requirements are contained in the California Fire Code and Los Angeles County Fire Code.</li> <li>• Calabasas has identified numerous dead trees after the 2018 Woolsey Fire and is removing them.</li> </ul> <p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>• 2023 – City implemented a “Home Hardening Grant” program where funding is available to assist residential property owners with fire ignitable vegetation removal.</li> </ul> <p><b>Hidden Hills</b></p> <ul style="list-style-type: none"> <li>• City has sent out public information on most fire retardant trees.</li> <li>• The City has expanded the brush clearance perimeter for communities near open space areas from the required 100 feet to 200 feet.</li> </ul> <p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>• Westlake Village conducts tree pruning each year. Trees are cycled in the program and cut at an average of every 3 years.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Communications Hardening

Category	Description
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village
Hazard	All Hazards
Project Name	<b>Communications Hardening</b>
Status	Ongoing
Strategy	Continue to monitor and act to update, revise, upgrade communications networks, facilities, equipment, etc. in the Region to avoid communications problems during a hazard event.
Action Items	Continue to monitor and implement actions to harden each city’s communications, including: <ol style="list-style-type: none"> <li>1. Antenna lease programs to avoid “black spots” in the Region</li> <li>2. Additional repeaters to existing radio systems</li> <li>3. Backup generators</li> <li>4. MOU’s with communications companies</li> <li>5. Additional or upgraded wireless communication, (such as handheld radios) equipment for EOC’s</li> <li>6. Engage telecom providers in the development of a fiber broadband network.</li> </ol>
Coordinating Department	Public Works, Building and Safety
Timeline/Completion Date/Priority	Ongoing / Priority 2
Total Cost	\$100,000
Funding Source(s)	FEMA HMGP funds or internal funding
Constraints	Funding
Implementation Description	<p><b>Agoura Hills, Calabasas, Hidden Hills, Westlake:</b></p> <ul style="list-style-type: none"> <li>• Established (CodeRed) Finalisite Connect Inc.’s Connect-CTY system which allows each city to send out emergency messages to residents' communication devices, email accounts, and social media platforms.</li> <li>• Deployed the County-wide Integrated Radio System (CWIRS).</li> <li>• Continued participation in the Operational Area Response and Recovery System (OARRS).</li> <li>• The LA County Sheriff's Department implemented NIXLE which is a system to send geographically specific text messages and E-mails.</li> </ul> <p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>• Established AH Alert (CodeRed) mass notification system which allows each city to send out emergency messages to residents' communication devices, email accounts, and social media platforms.</li> <li>• The city also possesses, via Area B, and mobile base station that permits radio communication with LA County OEM, other cities, and public safety agencies.</li> <li>• The City of Agoura Hills possesses a BGAN Mobile Satellite Communication System to ensure reliable communications backup if EOC communication system is not available.</li> <li>• The city has enhanced the CERT Volunteer repeater</li> <li>• The city has established multiple social media accounts, such as “X” (Twitter), Instagram etc., accounts which are used for disseminating information.</li> <li>• The City has 12 handheld radios to assist with emergency communication.</li> <li>• The city currently uses an APP "See Click Flix" which is can be used to help identify hazards during severe weather events.</li> <li>• The city has 17 CERT Volunteers licensed HAM operators. The City EOC also has a ham radio received and equipment to communicate with its volunteers and other ham operators.</li> <li>• At its Kimberly Peak site, a new communication tower will be constructed by LA RICS.</li> </ul>



Category		Description	
Project Name		<b>Communications Hardening (continued)</b>	
Implementation Description (continued)		<p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>• Maintains a satellite computer network that will allow the EOC to access the Internet even if the landline-based network is disrupted.</li> <li>• Maintains a disaster response radio room with radio equipment capable of communicating with multiple counties and agencies.</li> <li>• Maintains radio network with disaster response team members and regular testing</li> <li>• Purchased a mobile satellite system (BGAN) to provide WiFi communication backup if EOC communication system is not available.</li> <li>• Established a social media presence as an additional source of information dissemination.</li> <li>• Installed roof mounted radio antenna switch for handheld radio access.</li> <li>• The Current repeater tower located on Via Colinas will be repaired in the fiscal year. The city hall system still works.</li> </ul>	
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

**US 101 Freeway Corridor Improvement Study**

Category		Description	
City		All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village	
Hazard		All Hazards	
Project Name		<b>US 101 Freeway Corridor Improvement Study</b>	
Status		Complete / Monitoring and Mitigation Projects Scheduled	
Strategy		Documented potential solutions to the transportation deficiencies of the 40-mile transportation corridor including, and surrounding (city streets and public transportation), the US 101 Freeway from State Route 23 in Thousand Oaks to State Route 110 in Downtown Los Angeles.	
Action Items		Implement (if feasible) action items from the study and continue to monitor the corridor for opportunities for improvement.	
Coordinating Department		Las Virgenes-Malibu Council of Governments, Los Angeles Department of Transportation, Caltrans, Los Angeles County Metropolitan Transit Authority (METRO), Southern California Association of Governments (SCAG)	
Timeline/Completion Date/Priority		Complete / Monitoring Ongoing / Priority 2	
Total Cost		\$4.5 million	
Funding Source(s)		Grants from Metro and SCAG	
Constraints		Funding, Community Support	
Implementation Description		<ul style="list-style-type: none"> <li>• The City of Agoura Hills completed the construction of the US 101 Chesebro Interchange improvement project and now provides additional lanes for easier egress out the north eastern portion of the city.</li> <li>• The City of Calabasas completed a roundabout at Calabasas Road and Mureau Road Bridge.</li> <li>• The Lindero Canyon Interchange project construction was completed.</li> <li>• Hidden Hill’s project to improve circulation at the 101/Long Valley entrance is out to bid. Construction should commence in 2024.</li> </ul>	
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

**Emergency Preparedness Public Awareness Campaigns**

Category	Description
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village
Hazard	Multi-Hazard
Project Name	<b>Emergency Preparedness Public Awareness Campaigns</b>
Status	Ongoing
Strategy	A comprehensive program that would educate citizens about local hazards and what to do in case of hazard events.
Action Items	<ol style="list-style-type: none"> <li>1. Continue to provide the public with information regarding hazards</li> <li>2. Create public service TV shows on local cable channels</li> <li>3. Obtain matched funding through partnerships with local business community</li> </ol>
Coordinating Department	Community Services
Timeline/Completion Date/Priority	Ongoing / Priority 2
Total Cost	\$30,000
Funding Source(s)	FEMA grants and/or internal funds
Constraints	Funding
Implementation Description	<p><b>All Cities</b></p> <ul style="list-style-type: none"> <li>• Los Angeles County, State, and Federal government established the California Fire Alliance which includes an information campaign aimed at educating the public about wildfire safety.</li> <li>• The Los Angeles County Fire Department developed the Ready Set Go Wildfire Action Plan to promote wildfire mitigation and preparedness.</li> <li>• LA County Shake Out Exercise is conducted annually.</li> <li>• Distribute information campaigns and educational materials via city-owned TV, web sites, newsletters, handouts, CERT programs, and social media.</li> </ul> <p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>• The City of Agoura Hills continues to air public service announcements and programs information aimed at educating the public about emergency preparedness and mitigation on its local TV channel. The program runs 24/7.</li> <li>• The City continues to hosts personal emergency training twice per year for the general public. (CERT).</li> <li>• The City's local disaster response team hosts informational training sessions several times per year. Meetings are open to the general public.</li> <li>• The City hosted a “Preparedness Saturday” event on September 24, 2022, to educate the community on personal preparedness. LA County Fire and the City’s CERT volunteers were also present at the event.</li> <li>• The City hosted a “Public Safety Symposium” on April 20, 2023, with LA County Sheriff and LA County Fire and provided information on safety and preparedness. The event included a question and answers session.</li> </ul> <p><b>Calabasas</b></p> <ul style="list-style-type: none"> <li>• C TV – The Calabasas Channel airs public safety meetings and other emergency preparedness programs on local cable.</li> <li>• Calabasas website has educational information about disaster preparedness.</li> <li>• Map Your Neighborhood (MYN) Program serves to organize and educate residents in preparation for responding to a disaster.</li> <li>• AM radio – Calabasas radio 1630 AM for emergency broadcast information.</li> <li>• Finalsite Connect- WEA messaging.</li> </ul>

Category	Description		
Project Name	<b>Emergency Preparedness Public Awareness Campaigns (continued)</b>		
Implementation Description	<p><b>Hidden Hills</b></p> <ul style="list-style-type: none"> <li>• Preparedness information is made available via the City’s web page, handouts, TV Channel, and City and Community Association newsletters.</li> <li>• Hidden Hills conducted a public workshop and training for Wildfire evacuation for residents and large animals.</li> <li>• Ongoing CERT training.</li> </ul> <p><b>Malibu</b></p> <ul style="list-style-type: none"> <li>• Malibu airs multi-hazard public safety announcements on local television.</li> <li>• Malibu’s Media Team regularly posts preparedness information on all social media outlets.</li> <li>• Preparedness Public Service Announcements are regularly aired on Malibu’s local radio station KBUU.</li> <li>• CERT classes are offered to the public three times each year.</li> <li>• Public Safety and Education events are held regularly throughout the year.</li> </ul> <p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>• Westlake Village continues to provide TV, web site, newsletter (including video) and media information campaigns aimed at emergency preparedness and disaster mitigation.</li> <li>• Social media page established to increase awareness and participation.</li> <li>• “How To” video being developed to encourage residents to sign up to emergency notification systems.</li> </ul>		
	Plan Goals Addressed		
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Risk Assessment Project

Category	Description
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village
Hazard	All Hazards
Project Name	<b>Risk Assessment Project</b>
Status	Ongoing
Strategy	Conduct a comprehensive city by city risk assessment of life and property in direct earthquake, fire, landslide and flood zones.
Action Items	<ul style="list-style-type: none"> <li>• Monitor existing hazard zones and identify new hazard zones within each city of the Las Virgenes-Malibu COG Region (including new parcels and units).</li> <li>• Continue to update existing information as data becomes available and identify valuations of new buildings.</li> <li>• Continue to improve and/or add GIS technologies to better map hazard areas.</li> <li>• Conduct GIS training for internal staff (as applicable).</li> </ul>
Coordinating Department	Planning, Public Works, Information Technology, Building and Safety
Timeline/Completion Date/Priority	Ongoing / Priority 2
Total Cost	\$50,000
Funding Source(s)	FEMA HMGP funds
Constraints	Funding and resources



Category	Description		
Project Name	<b>Risk Assessment Project (continued)</b>		
Implementation Description	<p><b>Hidden Hills</b></p> <ul style="list-style-type: none"> <li>• The City of Hidden Hills General Plan continually monitored and updated (as needed) to identify elements requiring updates. Seismic, fire, landslide, flooding, and other hazardous risk programs are assessed. The General Plan is currently being assessed for a potential update.</li> <li>• The City of Hidden Hills continues to work with SCE to replace overhead power lines and poles with underground electrical systems. City of Hidden Hills mapped all utility poles within the City.</li> </ul> <p><b>Malibu</b></p> <ul style="list-style-type: none"> <li>• The Building and Safety Department conducted a survey to identify all of the soft story structures in the City.</li> <li>• The City of Malibu upgrades its GIS every year, including staffing, education, and equipment improvements.</li> <li>• A tree removal program was carried out to remove dead trees in the public right-of-way power line space to mitigate potential fire risks.</li> <li>• An assessment was conducted to evaluate overloaded/aging power and communication poles in the City.</li> <li>• The City of Malibu General Plan was adopted in July 2009 and is updated regularly as needed. The General Plan includes a Safety and Health Element that provides guidelines for reducing the potential for loss of life, injuries, damage to property, and social and economic dislocation resulting from major hazards throughout the community. The revised Hazard Mitigation Plan will become the new Safety Element in the General Plan.</li> </ul> <p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>• Fire hazard zones were identified and a GIS fire hazard map was developed. Westlake Village relies on state’s Fire Severity Zone mapping of the entire community.</li> <li>• Westlake Village has maps for each community but primarily uses Know Your Zone from LA County. Association in the City aid in individualized emergency alerts. Westlake Village also has Finalsite Connect to message individual communities.</li> <li>• Flood hazard zones related to Triunfo Creek and Three Springs Dam were identified and mapped using GIS. To identify flood zones Westlakes engineering team uses CALOES maps for review.</li> <li>• Training was conducted and will continue to be conducted on an ongoing basis.</li> <li>• City staff met with Cal Fire officials to review and approve safety elements of the General Plan update.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Rehabilitation of Residential Properties

Category	Description		
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village		
Hazard	<ul style="list-style-type: none"> <li>• Earthquake</li> <li>• Wildfire</li> <li>• Windstorm</li> <li>• Debris Flow</li> </ul>		
Project Name	<b>Rehabilitation of Residential Properties</b>		
Status	Ongoing/Modified		
Strategy	Provide funds for low/moderate income residents to improve health and safety conditions.		
Action Items	Continue to investigate opportunities and funding to mitigate hazards by providing funds, equipment and/or materials to residents that cannot afford to repair households that might pose safety hazards		
Coordinating Department	Building and Safety		
Timeline/Completion Date/Priority	Ongoing / Priority 2		
Total Cost	Up to \$35,000 per household		
Funding Source(s)	FEMA and/or CDBG Funds		
Constraints	Funding		
Implementation Description	<p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>• January 2023, the City adopted an Ordinance amending the 2022 California Green Building standards to establish a reach code and adopt all electrical building requirements to help build resiliency during climate change.</li> <li>• 2023 – The City initiated a Home Hardening Grant Program to assist residential property owners with implementing Home Hardening technologies at their residences.</li> </ul> <p><b>Calabasas</b></p> <ul style="list-style-type: none"> <li>• Calabasas maintains a Community Development Block Grant (CDBG) housing rehabilitation program that provides loans and grants to low and moderate income residents for emergency repairs, improvements to sub-standard properties, corrections for code violations, seismic retrofits and removal of lead-based paint and asbestos hazards. Up to a maximum of \$7,500 and deferred zero percent loans of up to \$15,000 are available to eligible homeowners who qualify as low or moderate income under U.S. Housing and Urban Development guidelines.</li> </ul> <p><b>Hidden Hills</b></p> <ul style="list-style-type: none"> <li>• The City has an aggressive program to eliminate all wood shake roofs. There are approximately 10 wood shake roofs left.</li> </ul> <p><b>Malibu</b></p> <ul style="list-style-type: none"> <li>• The City does not currently have a home rehabilitation program.</li> </ul> <p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>• Home renovation projects to address safety hazards (as well as other repairs to improve the livability or energy efficiency of the house) for low and moderate income residents are considered on an individual basis as a part of the Housing Rehab Program funded through the federal Community Development Block Grant program.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Advanced Community Training

Category	Description
City	All LVMCOG Cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village
Hazard	All Hazards
Project Name	<b>Advanced Community Training</b>
Status	Ongoing/Modified
Strategy	Provide advanced emergency training for community members.
Action Items	<ol style="list-style-type: none"> <li>1. Provide CPR training for residents</li> <li>2. Provide EMT training for residents</li> <li>3. Provide more Automatic External Defibrillators (AED)</li> <li>4. Provide training for residents and staff to be certified to operate AED's already present at some public buildings within the Region</li> <li>5. Provide Advanced Emergency Training for residents</li> <li>6. Provide Evacuation Training for Residents- KNOW YOUR ZONE GENASYS</li> </ol>
Coordinating Department	Community Services, Los Angeles County Fire Department
Timeline/Completion Date/Priority	Ongoing / Priority 3
Total Cost	\$25,000
Funding Source(s)	FEMA HMGP funds
Constraints	Funding, time
Implementation Description	<p><b>Agoura Hills</b></p> <ul style="list-style-type: none"> <li>• The City of Agoura offers 2 CERT classes annually and continues to offer these classes. These classes are open to anyone who wishes to attend - residents and non-residents.</li> <li>• CERT members participated in community events in order to give residents an opportunity to learn more about emergency preparedness and to promote the CERT training classes.</li> <li>• The City hosted American Red Cross Shelter Training in March 2022, July 2022 and March 2023 for City Staff and CERT Volunteers, and neighboring jurisdiction staff to educate on requirements for shelter management.</li> <li>• The city currently has 28 active and trained members of the public on its CERT Disaster Response Team.</li> <li>• Bi-annual CPR/AED 1st Aid Training Classes are offered to active DRT Members.</li> <li>• Five Active Members of the City's DRT have received advanced medical training. The city will continue to offer this training to its DRT members as they become available.</li> <li>• There are currently 17 licensed Amateur Radio CERT volunteers.</li> <li>• The City's CERT volunteers continue to train in disaster response, providing first aid at community events, and received CPR/AED and basic first aid training every two years.</li> <li>• CERT volunteers have received and continued to receive Shelter Management training to assist city staff.</li> <li>• CERT volunteer has received active shooter response training.</li> <li>• July 11, 2023, LA County CERT training was provided to the community. The six weeks course provides training on personal preparedness to class attendees.</li> </ul>

Category	Description		
Project Name	<b>Advanced Community Training (continued)</b>		
Implementation Description	<p><b>Calabasas</b></p> <ul style="list-style-type: none"> <li>Community Emergency Response Team (CERT) classes offered to residents annually.</li> <li>CPR/AED/First Aid training for volunteers of the city continues to be offered.</li> <li>Implemented a basic training component for residents in the MYN campaign.</li> <li>Promotes amateur radio licensing classes on a quarterly basis to become a HAM radio operator. Over 100 ham radio licenses earned per year.</li> <li>Calabasas will provide in person and social media outreach to HOAs to enhance awareness on evacuation zones and procedures.</li> </ul> <p><b>Hidden Hills</b></p> <ul style="list-style-type: none"> <li>The CERT team has continuing training in disaster response, first aid and evacuation shelter setup.</li> <li>The CERT first aid medical equipment trailer has been checked and updated.</li> <li>City staff and CERT team members have been trained in active shooter response, CPR and AED use.</li> <li>City emergency vehicle/fire truck fire equipment</li> </ul> <p><b>Malibu</b></p> <ul style="list-style-type: none"> <li>3 CERT classes are offered in Malibu every year. The City currently has trained over 300 members of the public in CERT.</li> <li>Approximately 30 CERT graduates have completed additional training, registered as disaster services workers and are part of the official Malibu CERT Team. CPR/AED and First Aid classes are offered once a year at City Hall.</li> </ul> <p><b>Westlake Village</b></p> <ul style="list-style-type: none"> <li>Westlake Village sends representatives to shelter training hosted by the American Red Cross when possible.</li> <li>Provide staff and Disaster Response Team members with access to CPR/AED/First Aid training.</li> <li>2-3 CERT classes available to residents of Westlake Village annually in conjunction with the LA County Fire Department</li> </ul>		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

**Other Regional Hazard Mitigation Efforts**

In addition to the regional mitigation projects listed, the following ongoing efforts are applicable for each city:

- New construction developments must meet all Los Angeles County Codes to mitigate the risk of earthquake, fire, and other disasters.
- There is a fuel modification program to mitigate the threat of wildfire that impacts structures that are within 200 feet of a state or national park.

## Agoura Hills Mitigation Projects

### Advanced Emergency Training

Category	Description		
City	Agoura Hills		
Hazard	All Hazards		
Project Name	<b>Advanced Emergency Training</b>		
Status	Ongoing		
Strategy	Provide advanced emergency management training to city personnel and the public.		
Action Items	<ul style="list-style-type: none"> <li>Utilize existing programs such as CERT to provide advanced emergency training to volunteers.</li> <li>Promote advanced emergency management training to city personnel including FEMA emergency management courses. .</li> </ul>		
Coordinating Department	Emergency Management		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	\$2,275 and \$4,263		
Funding Source(s)	Area B EMPG Grants		
Constraints	Time		
Implementation Description	<ul style="list-style-type: none"> <li>Improve Public and Staff preparedness by implementing advanced Emergency Training through existing and/or new programs. For example, the City of Agoura Hills conducted advanced medical training for CERT volunteers. Additionally, in 2022 and 2023 the City hosted American Red Cross Shelter Training for City Staff and CERT Volunteers to educate on requirements for shelter management. Further, the City of Agoura Hills hosted the Fire Preparedness Workshop in 2019 to educate the community on personal Fire Preparedness.</li> <li>The City has sent multiple EOC staff members to FEMA/CALOES training sessions on Finance, Operations, and Logistics.</li> <li>City staff also participated in CALOES Emergency Executive Management training held in the City of Calabasas.</li> </ul>		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Agoura Road Widening

Category	Description		
City	Agoura Hills		
Hazard	All Hazards		
Project Name	<b>Agoura Road Widening</b>		
Status	Ongoing / Roadway Complete, Environmental Mitigation Ongoing		
Strategy	Improve Multi-Modal Access, Emergency Bi-Pass, Improve Operational Capacity		
Action Items	<ul style="list-style-type: none"> <li>Secure Funding, Design Process, Right of Way, Construction, Environmental Mitigation</li> <li>Final mitigation completed – May 22, 2022</li> </ul>		
Coordinating Department	Start Sept. 2010 / Completion Fall of 2018 / Priority 1		
Timeline/Completion Date/Priority	Complete / Priority 1		
Total Cost	\$36,000,000		
Funding Source(s)	Measure R		
Constraints	Funding		
Implementation Description	Roadway Complete		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Annual Street Pavement Rehabilitation Project

Category	Description		
City	Agoura Hills		
Hazard	All Hazards		
Project Name	<b>Annual Street Pavement Rehabilitation Project</b>		
Status	Ongoing / Under Design		
Strategy	Maintain critical infrastructure - Reduce the potential for loss of life, injury, and economic damage to Agoura Hills residents and businesses by keeping the public roads in a state of good repair.		
Action Items	<ul style="list-style-type: none"> <li>Repair and maintain local streets to ensure ingress/egress routes are clear and improve environmental safety.</li> <li>Advertise for bids. Award contract.</li> <li>Complete construction.</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	FY 2019-20 – Out to Bid 5/22/2019/End of September 2019 FY2020-21 – Out to Bid 4/14/20; End of September 2020 FY 2022-23 – Out to Bid 5/11/23; End of September 2023		
Total Cost	FY 2019/20 \$345,555; FY 2021-22 \$992,000/FY 2022-23 - \$810,000		
Funding Source(s)	Measure R (Local, Road Rehab Fund), STP-L, SBI Funds; Prop C Funds		
Constraints	Funding		
Implementation Description	Remove & Reconstruct asphalt, and base. Replace curb ramps to current ADA Standards.		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation		Emergency Management

### Fairview Road Improvement Project

Category	Description		
City	Agoura Hills		
Hazard	All Hazards		
Project Name	<b>Fairview Road Improvement Project</b>		
Status	Completed		
Strategy	Maintain critical infrastructure for emergency egress on Fairview Road.		
Action Items	<ul style="list-style-type: none"> <li>Obtain approvals</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Complete / Priority 1		
Total Cost	TBD		
Funding Source(s)	General Fund / State Funding		
Constraints	Resources and Funding		
Implementation Description	Obtain road improvement funding and approvals for Fairview Road.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Roadside Bridge Widening

Category	Description		
City	Agoura Hills		
Hazard	Earthquake/Wildfire		
Project Name	<b>Roadside Bridge Widening</b>		
Status	Ongoing / Completing Design and Permitting		
Strategy	Reduce the potential for loss of life, injury, and economic damage to Agoura Hills residents and businesses from earthquake, wildfire, landslides, and the impacts of these hazards. Increase City's ability to serve the community during disaster response and recovery by mitigating risks to key infrastructure.		
Action Items	<ul style="list-style-type: none"> <li>Begin and complete construction</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	August 2018 - August 2019/ Priority 2		
Total Cost	\$2,000,000		
Funding Source(s)	HBP and Toll Credits		
Constraints	Limited right of way		
Implementation Description	Widen bridge to eliminate bottleneck. Install sidewalk.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Palo Camado Bridge Widening

Category	Description		
City	Agoura Hills		
Hazard	Earthquake/Wildfire		
Project Name	<b>Palo Camado Bridge Widening</b>		
Status	Ongoing / Completing Design and Permitting		
Strategy	Reduce the potential for loss of life, injury, and economic damage to Agoura Hills residents and businesses from earthquake, wildfire, landslides, and the impacts of these hazards. Increase City's ability to serve the community during disaster response and recovery by mitigating risks to key infrastructure.		
Action Items	<ul style="list-style-type: none"> <li>Begin and complete construction</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	July 2018 - July 2020/ Priority 3		
Total Cost	\$21 Million		
Funding Source(s)	Measure R and Measure M		
Constraints	Limited bridge height		
Implementation Description	Widen bridge to increase capacity. Install traffic signals and sidewalks. Seismic retrofit.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Culvert and Drain Improvements and Erosion Mitigation

Category	Description		
City	Agoura Hills		
Hazard	Flood/Severe Winter Storm/Landslide/Debris Flow		
Project Name	<b>Culvert and Drain Improvements and Erosion Mitigation</b>		
Status	New / Ongoing		
Strategy	Replace damaged drains and erosion, while enhancing the capability of culverts /drain inlets to today's building standards		
Action Items	<ul style="list-style-type: none"> <li>• Secure funding (in progress)</li> <li>• Design replacement of drains</li> <li>• Replace damaged drains and improve the capability of culverts</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	2024 / Priority 2		
Total Cost / BCR	\$400,000 / 1.68		
Funding Source(s)	FEMA and General Funding		
Constraints	Time and Funding		
Implementation Description	Improve drain and culvert capabilities to reduce the risk of flooding and landslides.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Other City of Agoura Hills Mitigation Efforts

### Emergency Power Generation

The City of Agoura Hills has completed implementation of emergency power generation capabilities for selected critical City locations. This furthers the City’s ability to maintain continuity of operations during a power disruption.

### Public Awareness

The City airs public service announcements via the City television channel and provides information through its web site, newsletters, and community events to promote emergency preparedness within the community. Examples are provided below:



**Consider Joining The Agoura Hills DRT? Why:**

Members of the CERT DRT are:

- 1) CERT Trained
- 2) Can help their families, neighbors and community during emergencies
- 3) Assist with community events

Call (818) 597-7300 for more information.



Training Exercise



**GET CONNECTED!**  
 FREE EMERGENCY NOTIFICATION ENROLL NOW!

Receive important and emergency notifications from the City. You can be reached within minutes by phone, email, text. Message sent by authorized City Officials.

Contact City Hall at (818) 597-7300, for more information, or sign up on the website – [www.ci.agoura-hills.ca.us](http://www.ci.agoura-hills.ca.us)




**Community Emergency Response Team  
 Los Angeles County Fire Department**

You will most likely have to take care of yourself, your family, and your neighbors after an earthquake or other emergency. Do you know what to do? Learn from the experts how to prepare and respond in the event of a major disaster.

**AGOURA HILLS  
 CLASSES BEGIN TUESDAY, MARCH 27, 2018**

Following a major disaster, police, fire and medical professionals may not be able to meet the demand for emergency medical attention. Residents and neighbors may need to rely upon one another to help with immediate life saving needs, particularly in isolated neighborhoods that may be cut off from the main roads.

The County of Los Angeles Fire Department Community Emergency Response Team (CERT) training was developed through FEMA to provide basic fire safety and life saving skills.

**All Tuesday Classes are from 6:30 pm to 9:00 pm**

Tuesday, March 27, 2018:	Disaster Preparedness
Tuesday, April 3, 2018:	Disaster Fire Suppression
Tuesday, April 10, 2018:	Disaster Medical Operations, Part 1
Tuesday, April 17, 2018:	Disaster Medical Operations, Part 2
Tuesday, April 24, 2018:	Light Search & Rescue / Trenching
Tuesday, May 1, 2018:	Disaster Psychology / Team Organization
Tuesday, May 8, 2018:	Review/Drill Simulation, Graduation

**Class Location**  
 Agoura Hills City Hall  
 Community Room  
 30001 Ladyface Court,  
 Agoura Hills, CA

**There is NO CHARGE for CERT classes.**  
 Please note: You must attend all sessions in order to receive a certificate of completion.

**TO REGISTER**  
 Call: (818) 597-7309, or  
 Register online at: [www.fire.lacounty.gov/cert](http://www.fire.lacounty.gov/cert)  
 (Scroll to Agoura Hills listing, then click on the "register" link)



**Community Emergency Response Team  
 Los Angeles County Fire Department**

You will most likely have to take care of yourself, your family, and your neighbors after an earthquake or other emergency. Do you know what to do? Learn from the experts how to prepare and respond in the event of a major disaster.

**AGOURA HILLS  
 CLASSES BEGIN TUESDAY, SEPTEMBER 18, 2018**

Following a major disaster, police, fire and medical professionals may not be able to meet the demand for emergency medical attention. Residents and neighbors may need to rely upon one another to help with immediate life saving needs, particularly in isolated neighborhoods that may be cut off from the main roads.

The County of Los Angeles Fire Department Community Emergency Response Team (CERT) training was developed through FEMA to provide basic fire safety and life saving skills.

**All Tuesday Classes are from 6:30 pm to 9:00 pm**

Tuesday, September 18, 2018:	Disaster Preparedness
Tuesday, September 25, 2018:	Disaster Fire Suppression
Tuesday, October 2, 2018:	Disaster Medical Operations, Part 1
Tuesday, October 9, 2018:	Disaster Medical Operations, Part 2
Tuesday, October 16, 2018:	Light Search & Rescue / Trenching
Tuesday, October 23, 2018:	Disaster Psychology / Team Organization
Tuesday, October 30, 2018:	Review / Drill Simulation, Graduation

**Class Location**  
 Agoura Hills City Hall  
 Community Room  
 30001 Ladyface Court,  
 Agoura Hills, CA

**There is NO CHARGE for CERT classes.**  
 Please note: You must attend all sessions in order to receive a certificate of completion.

**TO REGISTER**  
 Call: (818) 597-7309, or  
 Register online at: [www.fire.lacounty.gov/cert](http://www.fire.lacounty.gov/cert)  
 (Scroll to Agoura Hills listing, then click on the "register" link)

The City of Agoura Hills utilizes the Connect-CTY (Finalsite Inc.) system to provide residents with critical information such as emergency notifications and targeted community outreach bulletins (such as road closures). Residents are encouraged to sign-up for the program via the City TV channel and newsletters. Currently the City has more than 7,100 residents signed-up for Connect-CTY.

## Calabasas Mitigation Projects

### Fire Code Update

City	Calabasas		
Hazard	Wildfire		
Project Name	<b>Fire Code Update<sup>8</sup></b>		
Status	Complete		
Strategy	Review and update existing city codes		
Action Items	<ul style="list-style-type: none"> <li>Review existing codes relevant to fire protection and prevention in the wildland interface</li> <li>Work with Los Angeles County Fire Department to enforce new codes</li> </ul>		
Coordinating Department	Los Angeles County Fire Department and Community Development		
Timeline/Completion Date/Priority	Complete / Priority 1		
Total Cost	None, in-house staff time		
Funding Source(s)	N/A		
Constraints	Time		
Implementation Description	Calabasas Building and Safety Staff changes to the fire code pending the next triennial cycle of the LA County Fire Code for review.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Incentive Based Lot Mergers

City	Calabasas		
Hazard	Wildfire		
Project Name	<b>Incentive Based Lot Mergers</b>		
Status	Complete		
Strategy	Initiate process to provide incentive for residents to merge smaller lots		
Action Items	<ul style="list-style-type: none"> <li>Begin process to educate and provide incentive for residents to consolidate small lots into one larger lot</li> <li>Encourage homes to be developed with enough distance from one another in order to prevent the spread of fires</li> </ul>		
Coordinating Department	Community Development		
Timeline/Completion Date/Priority	Complete / Priority 2		
Total Cost	\$1,000,000		
Funding Source(s)	FEMA HMGP funds		
Constraints	Funding, community participation		
Implementation Description	The General Plan update incentivizing small lot mergers was completed and adopted by the City Council in 2008. The 2010 Development Code updates reflect such policies. No additional incentives are required at this time.		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

<sup>8</sup> <http://www.cityofcalabasas.com/departments/fire.html> - All fire services are provided to residents through contract with the Consolidated Fire Protection District of Los Angeles County. The City receives fire protection and paramedic services as well as wildland fire protection and forestry tree service

## Green Streets Program

Category	Description		
City	Calabasas		
Hazard	Flooding		
Project Name	<b>Green Streets Program</b>		
Status	New/Ongoing		
Strategy	Create landscaped catch-basins within the right of way to capture, treat and infiltrate storm water runoff. Designed to catch rainwater at its source, the improvements work to avoid flooding and retain water resources for future use rather than allowing run-off into storm drains and ultimately the ocean.		
Action Items	Continue to investigate opportunities for future installations of green street locations throughout the city.		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Ongoing Priority 2		
Total Cost / BCR	Current Phase: \$5,000,000 / 1.97		
Funding Source(s)	Measure M, Prop. 1 (Rd 1)		
Constraints	Funding		
Implementation Description	Calabasas has started a Green Streets program of locating green street improvements citywide. As funding becomes available, we will prioritize locations that best serve the objectives of flooding mitigation and sustainability.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

**Mulholland Highway – Phase I & II**

Category	Description		
City	Calabasas		
Hazard	Flooding/Landslide/Debris Flow/Mudslide		
Project Name	<b>Mulholland Highway – Phase I &amp; II</b>		
Status	New/Under Design Phase I under construction; Phase II in design		
Strategy	Construct retaining wall, storm drain and pedestrian sidewalk improvements to increase safety for pedestrians and retain slope from failure during heavy water events.		
Action Items	Design and construct improvements unique to this area and geography.		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Feb. 2024 Priority 2		
Total Cost / BCR	\$5,500,000 / 2.05		
Funding Source(s)	Measure M		
Constraints	Difficult coordination with other agencies (i.e. school district, utilities)		
Implementation Description	Construction of retaining wall, sidewalk improvements and necessary utility relocation has begun on Phase I. Design of Phase II is underway.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### West Calabasas Road Improvements

Category		Description	
City		Calabasas	
Hazard		All Hazards	
Project Name		<b>West Calabasas Road Improvements</b>	
Status		New/Under Design	
Strategy		Seek areas to install multi-modal improvements improving traffic safety for all users. Addresses Slope Erosion, Traffic Safety, and Pedestrian-Bicycle Safety.	
Action Items		<ul style="list-style-type: none"> <li>Slope stabilization – retaining wall or pinned shotcrete in erosion prone areas</li> <li>Road improvements for greater traffic flow and safety (i.e. left turn lane, bypass lane, protected bike and pedestrian improvements)</li> </ul>	
Coordinating Department		Public Works	
Timeline/Completion Date/Priority		2025 Priority 2	
Total Cost / BCR		\$3,230,000 / 1.71	
Funding Source(s)		Measure R	
Constraints		Funding / Staff Resources	
Implementation Description		<ul style="list-style-type: none"> <li>Currently in the design phase of the project</li> <li>Following design, bid project for construction</li> </ul>	
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

### Citywide Weed Abatement Program

Category		Description	
City		Calabasas	
Hazard		Wildfire	
Project Name		<b>Citywide Weed Abatement Program</b>	
Status		New/Ongoing	
Strategy		Systematic abatement of weeds and brush in City Parks, and neighborhood districts.	
Action Items		Contract with a landscape contractor to clear weeds, grass and dead plants to 200 feet from structures in city parks, public roadways and designated areas within Calabasas' four landscape Maintenance and Lighting Districts. Addresses weeds and other plant fuel too close to homes.	
Coordinating Department		Public Works	
Timeline/Completion Date/Priority		Ongoing Priority 1	
Total Cost / BCR		\$2,100,000 annually / 1.05	
Funding Source(s)		City general landscape maintenance fund and LMD/LLD district revenues	
Constraints		Funding	
Implementation Description		Calabasas is in the second year of a four-year agreement to abate weeds, grass and dead plants.	
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Las Virgenes Creek Restoration III

Category	Description		
City	Calabasas		
Hazard	Flooding		
Project Name	<b>Las Virgenes Creek Restoration III</b>		
Status	New/Under Design		
Strategy	Restore creek and serving infrastructure for enhanced recreational use and wildlife preservation.		
Action Items	Addresses sustainability/clean water, as well as wildlife preservation. Currently preparing grant applications for preliminary design.  Issue RFP for restoration Award Contract Scope: <ul style="list-style-type: none"> <li>• Repair and maintain storm drain outlets</li> <li>• Implement “soft-bottom” improvements</li> <li>• Initiate naturalization efforts at key locations(Lost Hills Rd &amp; Las Virgenes Rd)</li> <li>• Trash pick-up as part of creek cleanup</li> <li>• Develop a connection to the County’s hiking trail network</li> <li>• Potential development of fish passage infrastructure</li> <li>• On-going monitoring of creek/water cleanliness</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	2027 Priority 2		
Total Cost / BCR	\$4,500,000 / 1.49		
Funding Source(s)	Measure W		
Constraints	Time / Resources		
Implementation Description	Developing partnership with other interested jurisdictions and environmental agencies to jointly seeking funding for preliminary design. Following preliminary design, partnership will seek construction funding and contractor.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation		Emergency Management

### Upgrade Data Warehouse Storage

Category		Description	
City		Calabasas	
Hazard		All Hazards	
Project Name		<b>Upgrade Data Warehouse Storage</b>	
Status		New/Ongoing	
Strategy		Upgrade Data Warehouse to enhance cloud-based capabilities in the event that on-premises servers are not available.	
Action Items		<ol style="list-style-type: none"> <li>1. Identify the qualified service provider who can provide this service.</li> <li>2. Identify the plan and capacity for the DR site</li> <li>3. Purchase DR service</li> </ol>	
Coordinating Department		Information Technology	
Timeline/Completion Date/Priority		2024 Priority 1	
Total Cost / BCR		Estimated cost \$40-50K per year / 8.21	
Funding Source(s)		General Fund and hopefully some grant	
Constraints		Funding and staffing	
Implementation Description		To setup a cloud-based DR site for the city data infostructure. Users can still access the data in the event the on-prem data servers are not available.	
Plan Goals Addressed			
	Public Awareness		Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Las Virgenes Road Embankment and Shoulder Repair

Category		Description	
City		Calabasas	
Hazard		Landslide/Debris Flow / Flood/Winter Storm	
Project Name		<b>Las Virgenes Road Embankment and Shoulder Repair</b>	
Status		New	
Strategy		Storm damage repair and future damage prevention/mitigation	
Action Items		Design and construction of slope and shoulder stabilization and installation of RSP to prevent future slope washout. Limit potential for future slope failures, and protect the road surface from being undermined by future slope distress.	
Coordinating Department		Public Works	
Timeline/Completion Date/Priority		2024 / Priority 2	
Total Cost / BCR		\$231,440 / 15.51	
Funding Source(s)		FEMA	
Constraints		Funding/Staff Resources	
Implementation Description		<ul style="list-style-type: none"> <li>• Damage assessment</li> <li>• Preliminary engineering</li> </ul>	
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### McCoy Creek Mitigation/Restoration

Category	Description		
City	Calabasas		
Hazard	Landslide/Debris Flow / Flood/Winter Storm		
Project Name	<b>McCoy Creek Mitigation/Restoration</b>		
Status	New		
Strategy	Storm damage repair and mitigation		
Action Items	Design and construct streambank stabilization and embankment reconstruction: section of parking lot pavement and AC dike repair. Limit potential for future slope failures, and protect the road surface from being undermined by future slope distress.		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	2024 / Priority 2		
Total Cost / BCR	\$500,200 / 1.43		
Funding Source(s)	FEMA		
Constraints	Funding/Staff Resources		
Implementation Description	<ul style="list-style-type: none"> <li>• Damage assessment</li> <li>• Preliminary engineering</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Emergency Power for Critical Facilities

Category	Description		
City	Calabasas		
Hazard	All Hazards		
Project Name	<b>Emergency Power for Critical Facilities</b>		
Status	New		
Strategy	Ensure redundant power for critical facilities		
Action Items	1. Identify critical facilities in need of redundant power 2. Receive proposals and options from qualified contractor to achieve redundant power for critical city facilities		
Coordinating Department	Public Safety and Emergency Preparedness, Public Works		
Timeline/Completion Date/Priority	2025 / Priority 1		
Total Cost / BCR	\$1,000,000 / 42.78		
Funding Source(s)	FEMA HMGP funds		
Constraints	Funding		
Implementation Description	Research, identify facilities, and identify redundant power options for each facility. Option #1 Develop an RFP to hire a contractor to upgrade existing generator power at the city hall complex comprised of the city hall, senior center and library. Option #2 Develop an RFP to hire a contractor to install redundant power at the senior center only as that would be the future location of the city EOC. Option #3 Develop an RFP to hire a contractor to install redundant power at the Calabasas Community center as it is the alternate city hall location identified in the city’s COOP.		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Other City of Calabasas Hazard Mitigation Efforts

- Continue the Map Your Neighborhood Program - This was a program encourages local homeowners to conduct neighborhood emergency planning.

**RESIDENTS INVITED TO FREE "MAP YOUR NEIGHBORHOOD" CLASS**



The Calabasas Department of Public Safety and Emergency Preparedness invites all Calabasas residents to attend a "Map Your Neighborhood" Train-the-Facilitator class on Thursday, March 31, 2011 from 6:30p.m. to 8:30p.m. at Founders Hall in the Calabasas Library (200 Civic Center Way in Calabasas). [Map Your Neighborhood](#) is a program designed to help neighborhoods prepare for disasters.

The purpose of the class is to prepare neighborhoods for emergencies and disaster situations which can save lives, reduce the severity of injuries and trauma, and reduce property damage. Participants will learn how to share information with their neighbors regarding the nine steps to take immediately following a disaster, identify neighborhood skills and equipment inventory, and create a neighborhood map & contact list. In addition, working together as a team and contributing as an individual develops stronger communities and improves the quality of life in the community.

The class is free and participants are encouraged to RSVP by contacting Debbie Larson at [\(818\) 224-1620](tel:(818)224-1620). [Map Your Neighborhood](#) was developed by LuAn K Johnson, PhD, Public Education Manager, Washington State Emergency Management. For more information on this program, please visit <http://www.emd.wa.gov/myn/index.shtml>.

- Facebook and “X” (formerly Twitter) – Social media resources are used to issue public notices. Residents can sign-up voluntarily through the City’s website.

## *Hidden Hills Mitigation Projects*

### Update the City of Hidden Hills General Plan and Local Ordinances

City	Hidden Hills		
Hazard	All Hazards		
Project Name	<b>Update the City of Hidden Hills General Plan and Local Ordinances</b>		
Status	Ongoing		
Strategy	Continue to review and update the General Plan and local ordinances for the City of Hidden Hills to reflect current conditions. The city is undergoing a General Plan assessment that could lead to an update.		
Action Items	<ul style="list-style-type: none"> <li>Continue to review make adjustments to reflect changes in city conditions, most notably the Safety Element of the plan</li> <li>Continue to review existing codes for possible changes or amendments</li> </ul>		
Coordinating Department	Engineering/Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	None, in-house staff time		
Funding Source(s)	N/A		
Constraints	Time		
Implementation Description	<ul style="list-style-type: none"> <li>The City General Plan continues to incorporate elements to mitigate seismic, fire, landslide and flooding events.</li> </ul>		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Comprehensive Hill Slope Management Program

City	Hidden Hills		
Hazard	Landslide		
Project Name	<b>Comprehensive Hill Slope Management Program</b>		
Status	Ongoing		
Strategy	To recognize the concern for future property damages incurred by residents		
Action Items	<ul style="list-style-type: none"> <li>Continue the ongoing program that manages hill slope activity where development is already present</li> <li>Continue to suggest appropriate proactive measures that govern the long-term stability of potentially active landslide areas</li> <li>Prevent future development on potentially unstable hillsides and conduct geology reviews on a case by case basis</li> </ul>		
Coordinating Department	Engineering/Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	None, in-house staff time		
Funding Source(s)	N/A		
Constraints	Time		
Implementation Description	Geological evaluations are required for all proposed hillside developments. Landslides are identified, mapped, and mitigated. In addition, the City has adopted a ridgeline protection ordinance to help preserve scenic corridors.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Wood Shake Shingle Roof Replacement Program

City	Hidden Hills		
Hazard	Wildfire		
Project Name	<b>Wood Shake Shingle Roof Replacement Program</b>		
Status	Ongoing		
Strategy	To providing incentives to replace older wood shake shingle roofs by residents.		
Action Items	<ul style="list-style-type: none"> <li>Identify and obtain funding sources to mitigate the cost of wood shake shingle roof replacement by residents with fire resistant materials.</li> </ul>		
Coordinating Department	City of Hidden Hills Emergency Management		
Timeline/Completion Date/Priority	In Process / Priority 2		
Total Cost	TBD		
Funding Source(s)	General Funds / FEMA HMGP funds / Internal time		
Constraints	Funding / Time		
Implementation Description	The City is looking into a program to help offset the cost of replacing remaining wood shake roofs in the City. All new construction bans the installation of wood shake shingles.		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

### Emergency Satellite Communications

City	Hidden Hills		
Hazard	All Hazards		
Project Name	<b>Emergency Satellite Communications</b>		
Status	Maintenance Ongoing		
Strategy	Purchased satellite telephones to avoid communications problems during an emergency		
Action Items	<ul style="list-style-type: none"> <li>Monitor the Service Level Agreement with the satellite communications provider</li> <li>Continue ongoing maintenance and management of the satellite telephones</li> <li>Purchased two new satellite phones.</li> </ul>		
Coordinating Department	Public Works, Building and Safety		
Timeline/Completion Date/Priority	Complete / Maintenance Ongoing Priority 2		
Total Cost	\$2,000		
Funding Source(s)	General Fund		
Constraints	Funding		
Implementation Description	<ul style="list-style-type: none"> <li>The City has satellite phone and internet ability and two-way radio communications equipment. Two-way radio batteries were recently replaced. Fire truck has emergency service communications.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

## Advanced Emergency Training

City	Hidden Hills		
Hazard	All Hazards		
Project Name	<b>Advanced Emergency Training</b>		
Status	Ongoing		
Strategy	Provide increased advanced emergency training for the City's Community Emergency Response Team (CERT) and staff.		
Action Items	<ul style="list-style-type: none"> <li>Provide additional Advanced Emergency Training for CERT members</li> </ul>		
Coordinating Department	City of Hidden Hills Emergency Management		
Timeline/Completion Date/Priority	Ongoing / Priority 2		
Total Cost	\$25,000		
Funding Source(s)	General Fund, FEMA HMGP funds when applicable and available		
Constraints	Funding and time		
Implementation Description	<p>CERT training is offered on an ongoing basis:</p> <ul style="list-style-type: none"> <li>The CERT team has continuing training in disaster response, first aid and evacuation shelter setup</li> <li>The CERT first aid medical equipment trailer has been checked and updated.</li> <li>City staff and CERT team members have been trained in active shooter response.</li> <li>CERT training on mobile fire equipment.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Communications Improvements

City	Hidden Hills		
Hazard	All Hazards		
Project Name	<b>City of Hidden Hills Communications Improvements</b>		
Status	Ongoing		
Strategy	Continue to improve cellular telephone reception in areas of the City that are currently underserved.		
Action Items	<ul style="list-style-type: none"> <li>Continue to work with local carriers to improve cellular telephone reception in areas of the City that are currently underserved.</li> <li>Add repeaters and update existing radio systems, when necessary.</li> <li>Improve community emergency notification capabilities (IPAWS).</li> </ul>		
Coordinating Department	Public Works, Building and Safety		
Timeline/Completion Date/Priority	Ongoing / Priority 2		
Total Cost	\$50,000		
Funding Source(s)	General Funds, FEMA HMGP funds / Internal time		
Constraints	Funding		
Implementation Description	<ul style="list-style-type: none"> <li>Cellular telephone and radio coverage is regularly evaluated.</li> <li>Hidden Hills is now authorized to send out emergency messages to cell phones (IPAWS Wide Area Alerts).</li> <li>A fiber optic plan is being worked on by the community to provide high speed Internet and help provide WiFi cell service.</li> <li>Mobile command post (fire truck) has all communications.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Community Evacuation Routes, Planning, and Training

City	Hidden Hills		
Hazard	All Hazards		
Project Name	<b>Community Evacuation Routes, Planning, and Training</b>		
Status	Workshop and Training Complete / Monitoring Ongoing		
Strategy	Ensure alternate evacuation routes in case of an emergency event		
Action Items	<ul style="list-style-type: none"> <li>Continue to manage alternative routes as a means of city evacuation</li> </ul>		
Coordinating Department	Engineering/Public Works		
Timeline/Completion Date/Priority	Complete – Monitoring Ongoing / Priority 2		
Total Cost	In-house Time Only		
Funding Source(s)	N/A		
Constraints	Geographic limitations of egress routes		
Implementation Description	<p>There are only 3 points of ingress/egress (security gates) to the City of Hidden Hills:</p> <ul style="list-style-type: none"> <li>When one of the gates is closed for any reason, signage is used to direct all persons to either or both of the open gates.</li> <li>Similar signage is used for evacuation routes in the case of emergency. Plus, there is a pedestrian and equestrian exit to the Upper Las Virgenes Canyon Open Space Preserve.</li> <li>Ingress and egress to the City has been improved with addition of contractor parking areas at the gates.</li> <li>The City will allow school buses, for Round Meadow Elementary School, through the gates to bring students to reunification sites if Mureau Road is closed.</li> <li>The City is actively working on a revision of traffic flow at the Long Valley gate, adding a turn lane and providing contractor parking areas to keep traffic flowing into and out of Hidden Hills. This roadway update will also aid traffic flow onto the Northbound 101 freeway onramp.</li> <li>The City conducted a public workshop for Wildfire evacuation for residents and large animals. Training was offered to the residents on horse trailer loading and unloading. Also offered was a CHP sponsored horse trailer inspection day.</li> <li>Sent out Genasys Protect (Zonehaven Protect) information to all residents.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Storm Drain Management

City	Hidden Hills		
Hazard	Flood		
Project Name	<b>City of Hidden Hills Storm Drain Management</b>		
Status	Ongoing		
Strategy	Continue to maintain the storm drain system to ensure that drains are free from debris to prevent flooding.		
Action Items	<ul style="list-style-type: none"> <li>Continue ensure that city-owned storm drains are clear of debris.</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 2		
Total Cost	\$500/year		
Funding Source(s)	General Funds		
Constraints	None		
Implementation Description	<ul style="list-style-type: none"> <li>LA County Public Works maintains the sewer system and storm drains. In the event of power failure Public Works has stand by generators to maintain 2 sewer pump stations in the City.</li> <li>While the storm drains are managed by Los Angeles County, the City does work to ensure the free flow of water to prevent street flooding.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

## Backup Power for the City's Critical Sites

City	Hidden Hills		
Hazard	Power Outage, Wind, Wildfire		
Project Name	<b>Backup Power for the City's Critical Sites</b>		
Status	Complete / Maintenance Ongoing		
Strategy	Maintain backup power systems for City Hall and the Community Center.		
Action Items	<ul style="list-style-type: none"> <li>Maintain backup power generation for City Hall and the Community Center.</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 2		
Total Cost	\$2,500/year		
Funding Source(s)	General Funds		
Constraints	None		
Implementation Description	<ul style="list-style-type: none"> <li>Backup power generation systems for City and the Community Center are maintained on an annual basis.</li> <li>Added in additional backup batteries to repeater site.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Underground Utility Line Implementation

City	Hidden Hills		
Hazard	Power Outage, Wind, Wildfire		
Project Name	<b>Underground Utility Line Implementation</b>		
Status	Ongoing		
Strategy	Replace overhead power lines with underground lines to mitigate the risk of power failure and wildfires during periods of high winds.		
Action Items	<ul style="list-style-type: none"> <li>Continue to monitor and work with SCE to replace overhead power lines and poles with underground electrical systems.</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 2		
Total Cost	None		
Funding Source(s)	City and private funding if an assessment district is established.		
Constraints	None		
Implementation Description	<ul style="list-style-type: none"> <li>Work with SCE to plan, approve permits, inspect, and install underground power systems. Approximately 20 poles have been removed and 14 more are scheduled for removal this fiscal year.</li> <li>The City has adopted an assessment district program should private residents choose to fund.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Brush Clearance Program

City	Hidden Hills		
Hazard	Wildfire		
Project Name	<b>Brush Clearance Program</b>		
Status	New/Ongoing		
Strategy	Expanded brush clearance around the community's perimeter that interfaces with open space.		
Action Items	<ul style="list-style-type: none"> <li>Continue to carry out brush clearance efforts around the city.</li> </ul>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost / BCR	\$45,736 / 21.43		
Funding Source(s)	N/A		
Constraints	None		
Implementation Description	<ul style="list-style-type: none"> <li>For the last 4 years the City has done expanded brush clearance around the Communities perimeter that interfaces with open space. Instead of the required 100 feet the City uses Goats to expand to 200 feet.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

*Malibu Mitigation Projects*

**Bluffs Park Improvement Project**

City	Malibu		
Hazard	All-Hazards		
Project Name	<b>Bluffs Park Improvement Project</b>		
Status	In Progress		
Strategy	Roofing upgrade for critical infrastructure to improve reliability for emergency shelter		
Action Items	<ol style="list-style-type: none"> <li>1. Assess building and identify needs</li> <li>2. Design improvements</li> <li>3. Secure funding to implement the improvement project</li> <li>4. Construction of improvement project</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Scheduled for 2023/2024 Priority 1		
Total Cost	\$2.5M		
Funding Source(s)	General Fund and/or Grant Funds		
Constraints	Funding		
Implementation Description	In-progress.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management



Figure 70: Michael Landon Center at Bluffs Park

### Catch Basin and Culvert Upgrades

City	Malibu		
Hazard	Flood		
Project Name	<b>Catch Basin and Culvert Upgrades</b>		
Status	Complete		
Strategy	Upgrade City catch basins and culverts to increase capacity in order to prevent flooding and landslides		
Action Items	<ol style="list-style-type: none"> <li>1. Inventory catch basins and culverts</li> <li>2. Identify catch basins and culverts that need upgrades</li> <li>3. Design projects to increase capacity to accommodate larger water flows</li> <li>4. Secure funding for project implementation</li> <li>5. Implement project</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Timeline to be determined Priority 1		
Total Cost	\$1.0M		
Funding Source(s)	General Fund and/or Grant Funding		
Constraints	Funding		
Implementation Description	Complete		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

### Excavation and Emergency Shelter at Zuma Beach

City	Malibu		
Hazard	All Hazards		
Project Name	<b>Excavation and Emergency Shelter at Zuma Beach</b>		
Status	Complete		
Strategy	Work with LA County Beaches to develop the Zuma Beach parking lot as an emergency shelter location and secure access.		
Action Items	<ol style="list-style-type: none"> <li>1. Work with LA County Beaches to establish the Zuma Beach parking lot as an emergency shelter</li> </ol>		
Coordinating Department	Public Works and Emergency Preparedness		
Timeline/Completion Date/Priority	Timeline to be determined Priority 1		
Total Cost	\$300K		
Funding Source(s)	General Fund and/or Grant Funding		
Constraints	Funding, Time, and Permitting		
Implementation Description	Complete		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation		Emergency Management

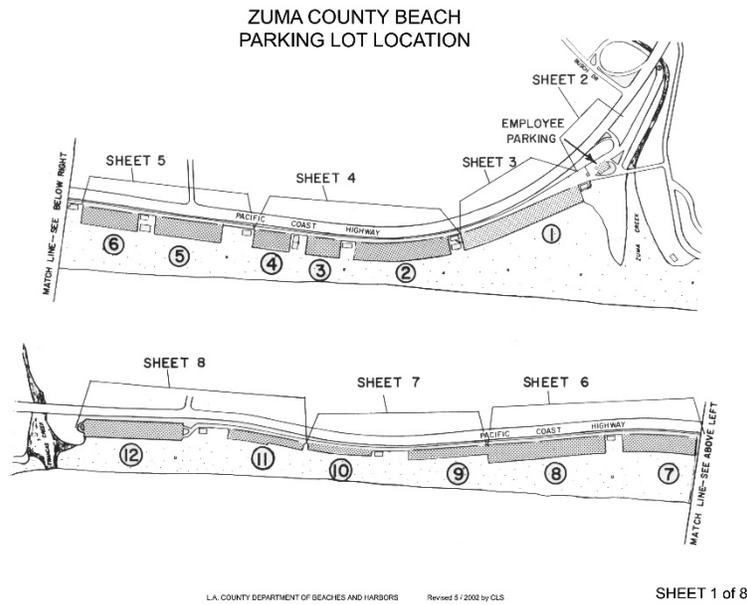


Figure 71: Zuma Beach Parking Lot

### Las Flores Road Canyon Improvements

City	Malibu		
Hazard	All Hazards		
Project Name	<b>Las Flores Road Canyon Improvements</b>		
Status	In Progress		
Strategy	Improve pavement and draining to reduce flooding and erosion		
Action Items	<ol style="list-style-type: none"> <li>1. Design road and drainage improvements to accommodate surface run-off (as identified in the Storm Drain Master Plan)</li> <li>2. Secure funding to implement improvements</li> <li>3. Construct road and draining improvements</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Timeline to be determined Priority 1		
Total Cost	\$250K		
Funding Source(s)	General Fund and/or Grant Funding		
Constraints	Funding		
Implementation Description	In-progress		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Tree Removal in City Right-of-Way

City	Malibu		
Hazard	All Hazards		
Project Name	<b>Tree Removal in City Right-of-Way</b>		
Status	Ongoing		
Strategy	Identify and remove trees in the City Right-of-Way to maintain a safe distance from power poles and reduce fire risk.		
Action Items	<ol style="list-style-type: none"> <li>1. Develop tree inventory (complete)</li> <li>2. Systematically remove trees from the Right-of-Way (as part of Annual Street Maintenance)</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Timeline to be determined Priority 1		
Total Cost	\$100K		
Funding Source(s)	General Fund		
Constraints	Funding and Time		
Implementation Description	Tree inventory complete. Tree removal in-progress/ongoing as part of Annual Street Maintenance).		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

### City of Malibu GIS Upgrade

City	Malibu		
Hazard	All Hazards		
Project Name	<b>City of Malibu GIS Upgrade</b>		
Status	Complete		
Strategy	Upgrade the Geographic Information Systems to incorporate more information regarding trails, geological sensitive areas, and tsunami maps etc.		
Action Items	<ol style="list-style-type: none"> <li>1. In progress, developing new system to utilize new technologies to better map the City and hazard areas in particular</li> <li>2. Complete training and provide ongoing training to staff on how to use GIS</li> </ol>		
Coordinating Department	Planning Department		
Timeline/Completion Date/Priority	Complete Priority 1		
Total Cost	\$40,000		
Funding Source(s)	FEMA HMGP funds		
Constraints	Funding and time		
Implementation Description	GIS update complete.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Flood Mitigation Action Plans

City	Malibu		
Hazard	Flood		
Project Name	<b>Flood Mitigation Action Plans</b>		
Status	Complete / Ongoing		
Strategy	Implement floodplain management activities as recommended by the Flood Mitigation Plan, City of Malibu.		
Action Items	<ol style="list-style-type: none"> <li>1. Floodplain Regulations</li> <li>2. Flood Mapping (revised and completed)</li> <li>3. Flood Protections Assistance</li> <li>4. Flood Protection Materials</li> <li>5. Flood Protection Activities</li> <li>6. Emergency Manager Training</li> <li>7. Flood Warning and Preparedness</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Complete / Ongoing Priority 1		
Total Cost	\$25,000		
Funding Source(s)	FEMA (HMGP)		
Constraints	Time, Funding		
Implementation Description	Included mitigation goals in the City of Malibu General Plan (see Mitigation Plan strategy). In addition, Flood Warning and Preparedness information is made available via the City of Malibu web site (Emergency Preparedness Library). Finally, the City of Malibu is a participant in the 2012 FEMA California Coastal Analysis and Mapping Project/Open Pacific Coast Study (CCAMP). These efforts will address gaps in required engineering and mapping for high flood risk areas impacted by coastal flooding, levee systems, and other flood hazards (e.g., lakes, rivers, and ponds). Revised flood maps have been developed and the City has adjusted flood zones along the coast.		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

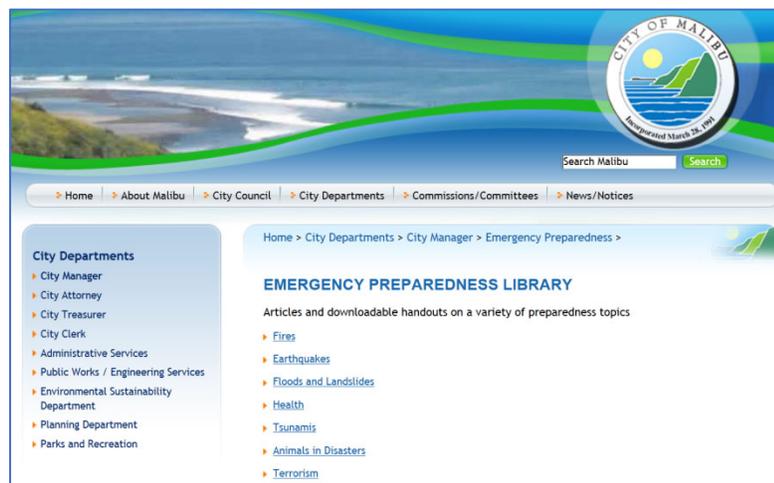


Figure 72: City of Malibu Emergency Preparedness Library



U.S. Department of Homeland Security  
1111 Broadway, Suite 1200  
Oakland, CA 94607-4052

**FEMA**

October 7, 2011

Honorable John Sibert, Mayor  
City of Malibu  
23825 Stuart Ranch Road  
Malibu, California 90265

RE: FEMA California Coastal Analysis and Mapping Project/Open Pacific Coast Study

Dear Mayor Sibert:

Thank you for your participation in the National Flood Insurance Program administered by the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA). Under the Risk Mapping, Assessment, and Planning (MAP) Program, Region IX has prioritized for fiscal year 2012 Flood Insurance Rate Map and Flood Insurance Study updates in support of the state of California for coastal analysis and mapping. This Program shifts focus from digital flood map production to new detailed engineering analysis, and mapping of coastal and flooding sources in many of the flood-prone communities throughout Region IX.

A feature of the Risk MAP program in Region IX is the re-study of the populated coastline for the state of California's coastal counties and communities. The California Coastal Analysis and Mapping Project (CCAMP) / Open Pacific Coast (OPC) Study will involve over 1,200 miles of new coastal flood hazard mapping and base-flood elevation determinations. Under this initiative, many coastal communities will have coastal flood data and mapping updated for the first time in over 20 years. This study effort will improve the quality of the coastal data used for both floodplain management and planning purposes.

The City of Malibu will be an important participant in the CCAMP / OPC Study. In the first phase of the re-study, coastal data from each community along the open Pacific Ocean shoreline and adjacent inland floodplains is being compiled. FEMA Region IX requests your support and assistance to identify local resources for coastal flood history, flood records, problematic flood-prone areas, topographic data, bathymetric data, beach erosion data, coastal storm or tsunami planning or mapping, and any other information that may be of importance when conducting the coastal re-study in your community. Geographic Information System (GIS) layers such as base maps, aerial photography, and land use information will be extremely useful as well. We appreciate the opportunity to partner with your community. Any data you provide will contribute significantly to an improved coastal flood mapping product which more accurately reflects your current flood risk.

Figure 73: CCAMP Letter (Page 1)

Honorable John Sibert  
October 7, 2011  
Page 2 of 2

FEMA will facilitate an initial kick-off meeting to discuss the following:

- Nature and intent of the re-study
- Study schedule and milestones
- Potential obstacles that might impact the study effort and potential solutions
- Available flood hazard information that could be used or incorporated into this study effort
- Key points of contact within your community, FEMA Region IX, and the Risk MAP Production and Technical Services Contractor (BakerAECOM, LLC)

In the near future, we will contact your staff to establish an available date for the initial kick-off meeting, anticipated to occur November, 2011 through January, 2012. Information will be provided at that meeting regarding how your community may benefit from the Risk MAP program and the CCAMP / OPC Study. Additionally, a new website has been developed to monitor the CCAMP / OPC Study online at [www.r9coastal.org](http://www.r9coastal.org). This website allows each community to stay informed of the flood insurance re-study progress.

We look forward to working with the City of Malibu on this multi-year coastal re-study and mapping project. If you have questions about the CCAMP / OPC Study, you may contact Edward Curtis, Regional Engineer, at (510) 627-7207, or by e-mail at [Edward.Curtis@dhs.gov](mailto:Edward.Curtis@dhs.gov). An alternate contact is Vince Geronimo, CCAMP / OPC Study Project Manager with BakerAECOM, at (510) 879-4533, or by email at [Vince.Geronimo@aecom.com](mailto:Vince.Geronimo@aecom.com).

Sincerely,



Sally Ziolkowski, Director  
Mitigation Division

cc: Robert Brager, Public Works Director / Floodplain Manager, City of Malibu  
Jim Thorsen, City Manager, City of Malibu  
Senator Boxer, State Office  
Senator Feinstein, State Office  
Representative Henry Waxman, District Office

Figure 74: CCAMP Letter (Page 2)

### Malibu Flood Mitigation Plan

City	Malibu		
Hazard	Flood		
Project Name	<b>Malibu Flood Mitigation Plan</b>		
Status	In Progress / Ongoing (covered in the City General Plan)		
Strategy	Identify and implement recommendations presented in the Flood Mitigation Plan.		
Action Items	<ol style="list-style-type: none"> <li>1. Prioritize project recommendations</li> <li>2. Develop projects and attempt to secure funding to implement</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	In Progress / Ongoing Priority 1		
Total Cost	None, in-house staff time		
Funding Source(s)	General Fund		
Constraints	Funding		
Implementation Description	<p>Implemented goals within the City of Malibu General Plan related to flood mitigation. Specific goals covered under 5.3.1 S Goal 1: <u>A community that is free from all avoidable risks to safety, health and welfare from natural and man-made hazards</u> include:</p> <ul style="list-style-type: none"> <li>• <b>S Policy 1.2.4:</b> The City shall require development to be consistent with minimum Federal Emergency Management Agency (FEMA) guidelines for flood plain management (complete).</li> <li>• <b>S Implementation Measure 40:</b> Adopt and update as appropriate maps of extreme fire danger areas, 100-year flood plains, landslide and debris flow danger, active and potentially active faults, tsunamis, and any other hazard areas; and inform residents of those areas of risks and possible mitigation measures.</li> <li>• <b>S Implementation Measure 43:</b> Encourage area residents to participate in National Flood Insurance Program.</li> <li>• <b>S Implementation Measure 44:</b> Design coastal development, except supporting structure, to be above the wave uprush level for storms within the past 100 years, and above the 100-year flood plain.</li> <li>• <b>S Implementation Measure 51:</b> Evaluate proposed development for its impact on, and from, geologic hazards, flood and mud flow hazard, and fire hazard.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

### Annual Street Pavement Project

City	Malibu		
Hazard	Flood		
Project Name	<b>Annual Street Pavement Project</b>		
Status	Ongoing		
Strategy	Resurface the City's public roads by repaving damaged roadways		
Action Items	<ol style="list-style-type: none"> <li>1. Continue to plan and commence work to complete the Pavement Rehabilitation Project</li> <li>2. Clear out damaged, worn pavement</li> <li>3. Replace worn pavement with new pavement</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 2		
Total Cost	\$600,000		
Funding Source(s)	General Fund		
Constraints	Funding and Time		
Implementation Description	<ul style="list-style-type: none"> <li>• Rehabilitation work is performed every year on the City's public roads.</li> <li>• Rehabilitation projects have included Broad Beach Road, Malibu Canyon Road, Civic Center Way, and Cross Creek Road.</li> <li>• The City will continue to perform annual road rehabilitation projects as necessary.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

### FM Alert System

City	Malibu		
Hazard	All Hazards		
Project Name	<b>FM Alert System</b>		
Status	New		
Strategy	Implement an FM Alert System to create additional communication avenues		
Action Items	<ol style="list-style-type: none"> <li>1. Obtain funding for license and infrastructure</li> <li>2. Obtain funding for 2,000 residential receivers</li> <li>3. Implement alert system</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	1 Year / Priority 2		
Total Cost / BCR	\$648,000 / 23.49		
Funding Source(s)	General Fund		
Constraints	Funding and Time		
Implementation Description	<ul style="list-style-type: none"> <li>• The is looking for funding for the license and infrastructure (\$450,000), as well as funding for 2,000 residential receivers (\$99 each) to implement an FM Alert System that can be used as a method of communication during emergency events.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Broadband Improvements for Emergency Communications

City	Malibu		
Hazard	All Hazards		
Project Name	<b>Broadband Improvements for Emergency Communications</b>		
Status	New		
Strategy	Install Broadband Capabilities to greatly improve communication during a disaster		
Action Items	<ol style="list-style-type: none"> <li>1. Install conduits in designated parts of the city (complete)</li> <li>2. Install equipment to improve Broadband Capabilities</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	1 Year / Priority 2		
Total Cost / BCR	\$5,680,000 (estimate) / 18.89		
Funding Source(s)	General Fund		
Constraints	Funding and Time		
Implementation Description	<ul style="list-style-type: none"> <li>• The City of Malibu is looking to install Broadband Capabilities which can greatly improve communication during a disaster.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Other City of Malibu Hazard Mitigation Efforts

The City of Malibu television broadcast regularly provides public preparedness, prevention, and mitigation information. Examples are provided below:



Figure 75: City of Malibu Emergency Information TV Bulletins

## Westlake Village Mitigation Projects

### Communications Improvements

City	Westlake Village		
Hazard	All Hazards		
Project Name	<b>City of Westlake Village Communications Improvements</b>		
Status	Ongoing		
Strategy	Improve cellular telephone reception in areas of the City that are currently underserved		
Action Items	<ol style="list-style-type: none"> <li>1. Continue to work with local carriers to improve cellular telephone reception in areas of the City that are currently underserved</li> <li>2. Create antenna lease programs to avoid “black spots” in the Region</li> <li>3. Add repeaters to existing radio systems</li> <li>4. Engage telecommunications providers in the installation of broadband fiber infrastructure.</li> </ol>		
Coordinating Department	Public Works, Building and Safety		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	\$100,000		
Funding Source(s)	FEMA HMGP funds		
Constraints	Funding		
Status Implementation	<ul style="list-style-type: none"> <li>• Westlake Village continues to work with wireless phone carriers to improve mobile phone reception in the areas of the city that are not adequately covered by wireless networks.</li> <li>• The County-wide Integrated Radio System (CWIRS) was deployed. Furthermore, the City installed a satellite-based computer network that allows the EOC to connect to the Internet in the event of a disruption to the landline computer network.</li> <li>• The system is regularly tested during power outages and the EOC is able to remain connected to the Internet.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

## GIS Upgrade

City	Westlake Village		
Hazard	All Hazards		
Project Name	<b>City of Westlake Village GIS Upgrade</b>		
Status	Complete		
Strategy	To upgrade the Geographic Information Systems in order to add a higher resolution backdrop to map trails, flood hazard areas, geologic sensitive areas and document more detailed information		
Action Items	<ol style="list-style-type: none"> <li>1. Complete upgrading the system using new technologies to better map hazard areas</li> <li>2. Complete training and provide ongoing training to staff on how to use GIS technologies</li> <li>3. Continue to seek funding through internal grant writers</li> </ol>		
Coordinating Department	Community Development		
Timeline/Completion Date/Priority	Complete / Maintenance Ongoing Priority 1		
Total Cost	\$1000		
Funding Source(s)	FEMA HMGP funds		
Constraints	Funding		
Implementation Description	The Geographic Information System was updated and higher resolution maps were created of the Westlake Reservoir, the FEMA floodplain, and the fire hazard areas. A fire hazard severity map was created. Training of personnel on the GIS was conducted and will continue to be performed on an ongoing basis.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Emergency Power Generation

City	Westlake Village		
Hazard	All Hazards		
Project Name	<b>Emergency Power Generation</b>		
Status	Ongoing		
Strategy	Ensure backup power supplies for key City facilities		
Action Items	<ol style="list-style-type: none"> <li>1. Purchase generators</li> <li>2. Evaluate potential use of battery energy storage as source of backup power.</li> </ol>		
Coordinating Department	Public Works, Building and Safety		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	\$250,000		
Funding Source(s)	FEMA HMGP funds		
Constraints	Funding		
Implementation Description	<ul style="list-style-type: none"> <li>• Generators were purchased for the EOC and the Community Room. The City must conduct a study to determine the feasibility of rewiring City Hall and the Community Rooms to provide entire facility rather than only select rooms with backup power in the event of an outage. Study was conducted to assess the practicality of replacing the City’s diesel fuel generators with battery storage units. Westlake Village is Currently exploring solar panels as an option.</li> <li>• The city of Westlake Village also entered an MOU with the Clean Power Alliance of Southern California (CPA) in October 2022 for the design, installation, and operation of a solar plus storage system with emergency power generation capability through the power ready program. The CPA issued the initial request for offer process and the end of 2022 and completed a detailed assessment of the Civic Center Complex in July 2023. The second submission round of the RFO is scheduled to be completed during the summer of 2023. After a developer is selected from the RFO process, the City will negotiate a 20-year site lease agreement directly with the developer and CPA will negotiate a Power Purchase Agreement (PPA) with the developer. The project is currently scoped to include replacement of the Civic Center roof, installation of solar panel arrays on the new roof, and installation of a battery that is large enough to provide adequate backup power generation during an emergency, inclusive of operating the cooling center at the community rooms at the Civic Center. The project is anticipated to be completed in 2025.</li> </ul>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Smoke Detector Installation

City	Westlake Village		
Hazard	Fire		
Project Name	<b>Smoke Detector Installation</b>		
Status	Complete / Ongoing		
Strategy	Encourage residents to install smoke detectors in existing residences built prior to January 1, 1986		
Action Items	<ol style="list-style-type: none"> <li>1. Implement a program to educate the public about the importance of smoke detectors</li> <li>2. Provide instructional services on how to install a smoke detector</li> <li>3. Provide smoke detectors to the public</li> </ol>		
Coordinating Department	Engineering/Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	\$15,000		
Funding Source(s)	General Fund, HMGP funds		
Constraints	Funding		
Implementation Description	A program to educate the public about the importance of installing smoke detectors and replacing batteries periodically was instituted. Information was disseminated to the public through articles in a series of city newsletters. Westlake Village does a periodic reminder of smoke detectors through videos and written newsletters.		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation		Emergency Management

## Tree Census

City	Westlake Village		
Hazard	Windstorm/Fire		
Project Name	<b>Tree Census</b>		
Status	Complete / Ongoing		
Strategy	Conduct a thorough census of the trees in the city to keep track of aging or poorly maintained trees that may create a fire or windstorm hazard		
Action Items	<ol style="list-style-type: none"> <li>1. Develop a team to manage the project</li> <li>2. Obtain proper means of cataloguing and displaying such information such as GIS tools</li> <li>3. Prepare map(s) identifying trees and separating those that pose a potential threat in case of a fire or windstorm event</li> <li>4. Develop a strategy to eliminate problematic trees</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	One year from planning to end Priority 1		
Total Cost	No Cost – In house staff time		
Funding Source(s)	N/A		
Constraints	Staff time		
Implementation Description	The City’s Public Works personnel identified and inspected every tree on public property in the City. Trees determined to be hazardous were cut down. The City continues to assess trees annually, and trees are cycled in the program and trimmed at an average of every 3 years. In addition, a GIS tree mapping program has developed. A Heritage Tree Ordinance was also adopted in 2018 (updated in 2022/2023) to identify trees in the city with particular significance to be monitored more closely.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

**Annual Street Resurfacing Program**

City	Westlake Village		
Hazard	Flood		
Project Name	<b>Annual Street Resurfacing Program</b>		
Status	Ongoing		
Strategy	Resurface the City's public roads by repaving damaged roadways.		
Action Items	<ol style="list-style-type: none"> <li>1. Continue the ongoing Street Resurfacing Program</li> <li>2. Resurface and repair damaged and worn pavement</li> </ol>		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost	\$1,500,000 per year		
Funding Source(s)	Measure R, Measure M, and General Fund		
Constraints	Funding, Time		
Implementation Description	<p>Ongoing effort. In 2016/17 completed asphalt overlay work on the following streets: Three Springs Drive, Fallview Rd., Timbridge Ct., Snowpeak Dr., Torchwood Pl., Yellowwood Dr., Aspen View Ct., Woodburn Ave., Carrie Pl., South Shore Pla., Sandpiper Ct., Royal Glen Rd., Lyndbrook Ct., Trowbridge Ct., Tynebourne Ct., Langspur Ct., Beaucroft Ct., Bedfordhurst Ct., Village School Rd., Shropshire Dr., Dunraven Ct., Bain Ct., Hardfired Ct., Havington Ct., Orchard View Ct.</p> <p>In 2017/2018 completed asphalt overlay work on the following streets: Kristen Lee Dr., Denver Springs Dr., Wellbrook Dr., Montview Ct., Grand Oaks Dr., Village Center Rd., and Greengate Ct.</p> <p>Completed 2016/17 slurry seal work on the following streets: Lindero Canyon Road , Oak Crest Drive and Park Terrace</p> <p>Completed slurry work in 2017/18 Three Springs neighborhood, First Neighborhood, Triunfo Canyon Rd, La Tienda Rd, and Russell Ranch Rd.</p> <p>Ongoing Effort. In Fiscal Year 2018/19 industrial and commercial streets were repaved or slurry sealed, including Russell Ranch Road, Portola Court, Sterling Center Drive, Via Colinas, Via Rocas, La Baya Drive and Corsa Avenue. Residential street repaving was also completed on Overfall Drive and Three Springs Drive. During Fiscal Year 2019/20 portions of Agoura Road and Lindero Canyon Road received slurry seal and Lindero Canyon Road was repaved from Thousand Oaks Blvd to the northern city limit. In Fiscal Year 2021/22 Lakeview Canyon Road, Watergate Road and the Civic Center parking lot were repaved. The Fiscal Year 2023/24 budget includes \$1.3M for street resurfacing in primarily residential streets. The city will continue to invest in annual street maintenance and rehabilitation projects.</p>		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

### Advanced Emergency Training

City	Westlake Village		
Hazard	All Hazards		
Project Name	<b>Advanced Emergency Training</b>		
Status	Ongoing		
Strategy	Provide advanced emergency training for the City’s CERT team		
Action Items	<ul style="list-style-type: none"> <li>Provide Advanced Emergency Training for CERT team</li> </ul>		
Coordinating Department	Westlake Village DRT Team		
Timeline/Completion Date/Priority	Complete / Ongoing updates (as required) Priority 2		
Total Cost	\$25,000		
Funding Source(s)	FEMA HMGP funds		
Constraints	Funding and time		
Implementation Description	Advanced training is provided to CERT members every year and will continue to be provided. The COG offers 2 to 3 CERT classes every year. The City of Malibu hosted shelter training to which Westlake sent representatives. Westlake Village offers many different trainings to the CERT team and rotates topics to keep the team engaged and prepared.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

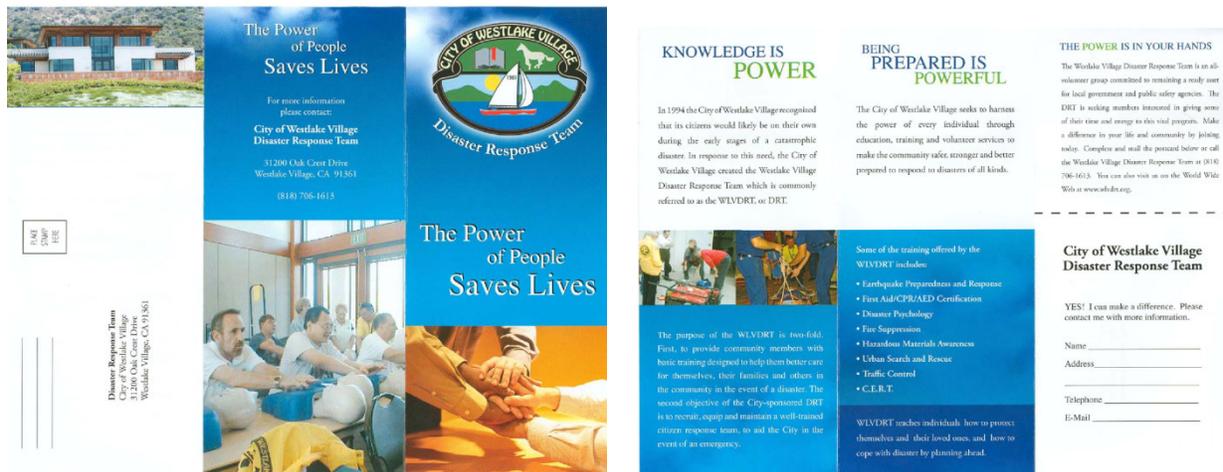


Figure 76: Westlake Village Training Brochure

### Public Emergency Preparedness

City	Westlake Village		
Hazard	All Hazards		
Project Name	<b>Public Emergency Preparedness</b>		
Status	Ongoing		
Strategy	A program to educate citizens about hazards within the City, how to prepare, and what actions to take in case of a disaster		
Action Items	1. The City of Westlake Village is prioritizing emergency preparedness through initiatives such as updating the Emergency Preparedness Plan, participating in the California Fire Alliance, and hosting joint events to promote public awareness.		
Coordinating Department	Community Services		
Timeline/Completion Date/Priority	Ongoing / Priority 2		
Total Cost	\$20,000		
Funding Source(s)	FEMA grants		
Constraints	Funding		
Implementation Description	<ul style="list-style-type: none"> <li>Westlake Village completed an update to the Emergency Preparedness Plan (for residents) in 2005. The plan is available through the City’s website. The plan is reviewed and updated as needed. See example below.</li> <li>Los Angeles County established the California Fire Alliance which includes an information campaign aimed at educating the public about wildfire safety. The Los Angeles County Fire Department developed the Ready Set Go Wildfire Action Plan to inform residents of actions they can take to keep them safe from wildfires.</li> <li>Westlake Village and Agoura Hills hosted a joint emergency preparedness event in August 2010 aimed at educating the public and continually seek new opportunities to promote public awareness. Further public preparedness efforts ongoing.</li> <li>In coordination with the LA County Sheriff, Westlake Village held an Emergency Preparedness event in November 2022.</li> </ul>		
Plan Goals Addressed			
X	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

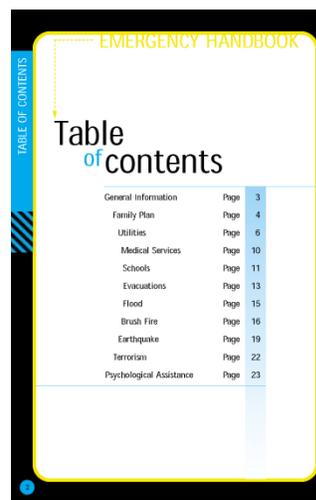
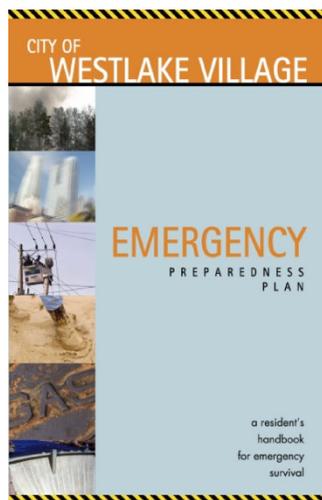


Figure 77: Westlake Village Emergency Preparedness Plan

### Triunfo Creek Bridge Resurfacing

City	Westlake Village		
Hazard	Flood		
Project Name	<b>Triunfo Creek Bridge Resurfacing</b>		
Status	Completed		
Strategy	Resurfaced bridge deck for maintenance to reduce the risk of flood.		
Action Items	Completed		
Coordinating Department	Public Works		
Timeline/Completion Date/Priority	Complete / Priority 2		
Total Cost	\$100,000		
Funding Source(s)	Highway Bridge Preventative Maintenance Program		
Constraints	None		
Implementation Description	Completed in 2017. LA County designed and executed the construction contract.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
X	Partnerships and Implementation	X	Emergency Management

### Mobile EOC

City	Westlake Village		
Hazard	All Hazards		
Project Name	<b>Mobile EOC</b>		
Status	New		
Strategy	Procure a mobile EOC to allow the city staff to deploy to an ICS while operating as an EOC.		
Action Items	Purchase a vehicle to serve as a mobile Emergency Operations Center.		
Coordinating Department	Public Works and Emergency Preparedness		
Timeline/Completion Date/Priority	Ongoing / Priority 2		
Total Cost / BCR	\$100,000 / 1.37		
Funding Source(s)	N/A		
Constraints	None		
Implementation Description	The City of Westlake Village would like to purchase a vehicle to serve as a mobile Emergency Operations Center. All emergency management is handled at City Hall, but there have been events where city staff needs to be at an Incident Command Site in order to mitigate damages cause by an emergency. One of the main functions of the City’s response during a disaster is informing the public of necessary actions to take to protect their lives/home, and a mobile EOC would allow city staff to deploy to an ICS while operating as an EOC. This vehicle would be equipped with lights, speakers, radio repeaters, and more in order to help inform residents of ways to mitigate disasters while they occur.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## Home Hardening & Defensible Space Fire Prevention Grant Program

City	Westlake Village		
Hazard	Wildfire		
Project Name	<b>Home Hardening &amp; Defensible Space Fire Prevention Grant Program</b>		
Status	New/Ongoing		
Strategy	Provide a program that would protect residents and homes in Westlake Village, most of which is in a Very High Fire Severity Zone.		
Action Items	Establish a grant program that provides funding for homeowners that will be used for home hardening.		
Coordinating Department	Public Works and Emergency Preparedness		
Timeline/Completion Date/Priority	Ongoing / Priority 1		
Total Cost / BCR	\$50,000 / 11.36		
Funding Source(s)	N/A		
Constraints	None		
Implementation Description	Home hardening is one of the most efficient ways for residents to mitigate the spread and effects of a wildfire. The City of Westlake Village would like to establish a grant program that provides funding for homeowners that will be used for home hardening. This includes vent and chimney coverings, gutter maintenance, and creation of defensible zones per Cal Fire’s specifications. Bolstering home hardening and defensible spaces will mitigate damage caused by wildfires. This program would protect residents and homes in Westlake Village, most of which is in a Very High Fire Severity Zone. (The City would need to pursue grant funding for this project.		
Plan Goals Addressed			
	Public Awareness	X	Protect Life, Property, and the Environment
	Partnerships and Implementation	X	Emergency Management

## SECTION 5. PLAN MAINTENANCE, MONITORING, AND GENERAL PLANS

This plan maintenance section details the formal process that will ensure that the Las Virgenes-Malibu COG Multi-Jurisdictional Hazard Mitigation Plan is an active and relevant document. This section includes a description of the implementation and plan adoption process and a schedule for monitoring and evaluating the plan. Additionally, a description of how the Las Virgenes-Malibu COG will integrate public participation throughout the plan maintenance process is provided. Finally, this section includes an explanation of how the city governments in the Las Virgenes-Malibu COG intend to incorporate the mitigation strategies outlined in this plan into existing planning mechanisms such as individual city General Plans, Capital Improvement Plans, Building & Safety Codes and other programs and or plans within the cities. Finally, a brief discussion on future development trends is provided to highlight potential areas of focus when updating the HMP.

### IMPLEMENTATION AND PLAN ADOPTION

The Las Virgenes-Malibu Council of Governments (LVMCOG) and individual cities (city councils) within the LVMCOG were responsible for adopting the Las Virgenes-Malibu Multi-Jurisdictional Hazard Mitigation Plan. These governing bodies have the authority to promote sound public policy regarding hazards.

#### *Adoption and Implementation*

The LVMCOG adopted the Las Virgenes-Malibu Multi-Jurisdictional Hazard Mitigation Plan and the LVMCOG Governing Board in conjunction with the Planning Group are responsible for plan implementation. The Executive Director of the Las Virgenes-Malibu COG serves as a convener to facilitate the Hazard Mitigation meetings. Plan implementation and evaluation are a shared responsibility among all of the LVMCOG Governing Board Members. The LVMCOG Governing Board and the Planning Group are responsible for providing information gained from committee meetings with staff and community members in their respective cities.

#### *HMP Submission and Approval*

The prior plan and this update were submitted to the State Hazard Mitigation Officer at the California Governor's Office of Emergency Services (Cal OES). Cal OES is responsible for submitting the plan to the Federal Emergency Management Agency (FEMA) for review. The review includes the criteria outlined in FEMA Mitigation Planning Final Rule 44 CFR Part 201. Upon acceptance by FEMA, the cities within the Las Virgenes-Malibu COG will maintain their eligibility for Hazard Mitigation Grant Program funds.

## PLAN MONITORING, EVALUATION, UPDATES, AND FORMAL REVIEW PROCESS

The Las Virgenes-Malibu Multi-Jurisdictional Hazard Mitigation Plan is evaluated on an annual basis to determine the effectiveness of programs, and to reflect changes in development or programs that may affect mitigation priorities.

### *Coordinating Body*

LVMCOG Governing Board members in conjunction with the Planning Group are responsible for monitoring and evaluating the progress of the mitigation strategies in the plan. The LVMCOG Governing Board and Planning Group also responsible for updating the plan.

The Las Virgenes-Malibu Hazard Mitigation LVMCOG Governing Board and Planning Group were responsible for coordinating and undertaking the formal review process. The review process includes an evaluation of the goals and action items to determine their relevance to changing conditions within the Region, as well as changes in State or Federal policy, and to ensure they are addressing current and expected conditions. The LVMCOG Governing Board and Planning Group also review the risk assessment portion of the plan to determine if this information should be updated or modified, given any new available data.

In addition, the LVMCOG Governing Board and Planning Group were responsible for ensuring that reviews and updates to the plan were performed. Further, the LVMCOG Governing Board and Planning Group provide coordination between the cities, intra-city departments, and with other public agencies.

Finally, the LVMCOG Governing Board and Planning Group conduct annual reviews of the Hazard Mitigation Plan and when deemed necessary by the Hazard Mitigation LVMCOG Governing Board in coordination with the Planning Group including a determination if a public meeting is to be held. The meetings provide the public a forum where they can express their concerns, opinions, or ideas about the plan. In addition, each City maintains an ongoing ability to receive and respond to public concerns via their City web sites.

The Planning Group comprised of representatives from each LVMCOG city and supports the LVMCOG Governing Board by attending regularly scheduled meetings to review local planning efforts and evaluate progress on mitigation efforts. The Planning Group reports progress to the LVMCOG Governing Board and works with other city departments to implement the mitigation strategies contained in this Hazard Mitigation Plan.

The city departments responsible for the various action items identified in Section 4: Hazard Mitigation Goals and Strategies will report on the status of their projects, the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies require revision.

In addition to ongoing and annual reviews, every five years the Multi-Jurisdictional Hazard Mitigation Plan is thoroughly reviewed and updates to all sections are conducted, additional public outreach meetings are held, and the updated plan is submitted to Cal-OES and FEMA for formal review and approval. Once Cal-OES and FEMA approval are obtained, each City Council within the LVMCOG formally adopts the revised HMP for the next five years.

**Continued Public Participation and Involvement**

The cities within the Las Virgenes-Malibu COG are dedicated to involving the public in the Hazard Mitigation Plan process. Members of the public, businesses, and other interested parties had the opportunity to provide feedback on local area risks and the Hazard Mitigation Plan. Copies of the plan are catalogued and maintained in appropriate departments as well as on city web sites to be easily accessible for public viewing. Further, each city conducts ongoing events to promote public participation. Examples include Disaster Preparedness Month events and workshops, monthly newsletter bulletins, and coordination with other programs such as CERT training. This ongoing public outreach effort provides a continual feedback opportunity to the public for their input and comments (see **Public Involvement** below for additional details).

**Public Involvement**

Public involvement is a key component of hazard mitigation planning (per 44 CFR §201.6(c)(4)(iii)). The cities within the Las Virgenes-Malibu COG provide access of the Hazard Mitigation Plan to the public and continue to involve the public in the Hazard Mitigation Planning, Implementation, and Maintenance process through several mechanisms:

Distribution Method	Description
<p><b>City Web Pages</b></p>	<ul style="list-style-type: none"> <li>• Downloadable online copies of the Hazard Mitigation Plan are posted on each City’s website.</li> <li>• Members of the Public may provide feedback on each City’s mitigation via the contact information from their public web pages:                             <ul style="list-style-type: none"> <li>○ Agoura Hills (818) 597-7314 or <a href="https://www.agourahillscity.org/services/emergency-services">https://www.agourahillscity.org/services/emergency-services</a></li> <li>○ Calabasas (818) 224-1600 Email: <a href="mailto:info@cityofcalabasas.com">info@cityofcalabasas.com</a> and <a href="https://www.cityofcalabasas.com/government/public-safety-emergency-preparedness/emergency-preparedness">https://www.cityofcalabasas.com/government/public-safety-emergency-preparedness/emergency-preparedness</a></li> <li>○ Hidden Hills (818) 888-9281 Email: <a href="mailto:eoc@hiddenhillscity.org">eoc@hiddenhillscity.org</a></li> <li>○ Malibu (310) 456-2489 ext. 313 <a href="https://malibucity.org/225/Emergency-Preparedness">https://malibucity.org/225/Emergency-Preparedness</a></li> <li>○ Westlake Village (818) 706-1613 <a href="https://wlv.org/189/Emergency-Preparedness">https://wlv.org/189/Emergency-Preparedness</a></li> </ul> </li> <li>• Links to mitigation and preparedness resources are provided via City web sites. Examples include:                             <ul style="list-style-type: none"> <li>○ <a href="http://www.Ready.gov">www.Ready.gov</a></li> <li>○ <a href="http://www.fema.gov/national-flood-insurance-program">www.fema.gov/national-flood-insurance-program</a></li> <li>○ <a href="http://fire.lacounty.gov/SafetyPreparedness/SafetyPreparedness.asp">http://fire.lacounty.gov/SafetyPreparedness/SafetyPreparedness.asp</a></li> <li>○ <a href="http://www.redcross.org/prepare">www.redcross.org/prepare</a></li> </ul> </li> </ul>
<p><b>City Facilities</b></p>	<ul style="list-style-type: none"> <li>• Mitigation brochures and handouts are made available at designated City-owned facilities including City Halls and Libraries.</li> </ul>
<p><b>Public Surveys</b></p>	<ul style="list-style-type: none"> <li>• An ongoing Disaster Preparedness (Mitigation) and Risk Survey provides continual feedback opportunities to the public for their input and comments regarding hazard mitigation planning, prioritization of mitigation efforts and risks, and community mitigation and preparedness needs. <a href="https://www.surveygizmo.com/s3/4297498/2018-Las-Virgenes-Malibu-Community-Risk-Survey">https://www.surveygizmo.com/s3/4297498/2018-Las-Virgenes-Malibu-Community-Risk-Survey</a></li> </ul>

Distribution Method	Description
<b>Public Meetings and Events</b>	<ul style="list-style-type: none"> <li>• National Emergency Preparedness Month <u>Annual Public Preparedness, and Mitigation Planning Events</u> (each September).</li> <li>• Local Disaster Preparedness Events.</li> <li>• City Council Meetings (as applicable per published Agenda items).</li> </ul>
<b>Local Media</b>	<ul style="list-style-type: none"> <li>• Preparation and Mitigation Information Posted in Local News Media (including links to the HMP, Hazard Survey, and Planning Meetings).</li> <li>• Preparation and Mitigation Tips and Announcements via City TV and social media Information Bulletins.</li> </ul>
<b>Training Programs</b>	<ul style="list-style-type: none"> <li>• Mitigation and response activities are included in ongoing CERT Program training.</li> </ul>

## Agoura Hills HMP Web Page

The screenshot shows the City of Agoura Hills website. The header includes the city logo and navigation links: Agendas, Services, Department, Business, and Our City. A left sidebar menu lists various services, with 'Emergency Preparedness' expanded to show links for Beacon Boxes, Alert AH, CERT Volunteers, Emergency Operations Plan-EOP, and Home Hardening. The main content area is titled 'Las Virgenes-Malibu Council of Governments - Multi-Jurisdictional Hazardous Mitigation Plan'. It includes a paragraph explaining the plan's purpose and a list of download links for various parts and annexes of the 2018 LVMCOG HMP.

Services » Emergency Preparedness »

### Las Virgenes-Malibu Council of Governments - Multi-Jurisdictional Hazardous Mitigation Plan

Font Size: [f](#) [A](#) [Share & Bookmark](#) [Feedback](#) [Print](#)

As required by FEMA, the five cities (Agoura Hills, Calabasas, Hidden Hills, Westlake, and Malibu) have prepared the following update to the Multi-Jurisdictional Hazard Mitigation Plan to meet the requirements of the Disaster Mitigation Act of 2000. The plan is pending approval by each City within the Las Virgenes-Malibu Council of Governments. As always we value any feedback we receive from the members of our local communities. If you have any questions or feedback please Email us at [lcalava@agourahillscity.org](mailto:lcalava@agourahillscity.org) or contact MLC & Associates, Inc. at [mic@mlcandassociates.com](mailto:mic@mlcandassociates.com). Thank you for your participation." Please click on the links below to download and review the Multi-Jurisdictional Hazard Mitigation Plan.

- [2018 LVMCOG HMP Part I](#)
- [2018 LVMCOG HMP Part II](#)
- [2018 LVMCOG HMP Annex A-E](#)
- [2018 LVMCOG HMP Annex F-1 Agoura Hills](#)
- [2018 LVMCOG HMP Annex F-2 Calabasas](#)
- [2018 LVMCOG HMP Annex F-3 Hidden Hills](#)
- [2018 LVMCOG HMP Annex F-4 Malibu](#)
- [2018 LVMCOG HMP Annex G-H](#)

Figure 78: City of Agoura Hills HMP Public Download Links

## Calabasas HMP Web Page

The screenshot shows the City of Calabasas website interface. At the top, there is a dark green header with the City of Calabasas logo and name, a 'SERVICE FINDER' button, and a search bar. Below the header is a navigation bar with four tabs: 'SERVICES', 'OUR CITY', 'GOVERNMENT', and 'CALABASAS A-Z'. The 'GOVERNMENT' tab is selected, leading to a page titled 'The Las Virgenes-Malibu Council of Governments (LVMCOG)'. The page content includes a breadcrumb trail 'Government » Public Safety & Emergency Preparedness », a title 'The Las Virgenes-Malibu Council of Governments (LVMCOG)', and a paragraph describing the COG as comprising five cities: Agoura Hills, Calabasas, Hidden Hills, Malibu, and Westlake Village. A map of the COG area is shown, with the five cities highlighted in different colors. Below the map, there is a paragraph explaining the COG's purpose and mission. At the bottom of the page, there is a section titled 'Las Virgenes - Malibu Council of Governments Multi-Jurisdictional Hazard Mitigation Plan' with a list of public download links: 'Part I', 'Part II', 'Annex A-E', 'Annex F', and 'Annex G-H'. On the left side of the page, there is a sidebar menu with various categories, including 'PUBLIC SAFETY & EMERGENCY PREPAREDNESS', 'Emergency Preparedness', and 'Hazard Mitigation Plan - Las Virgenes-Malibu Council of Governments', which is currently selected.

Figure 79: City of Calabasas HMP Public Download Links

### Hidden Hills HMP Web Page

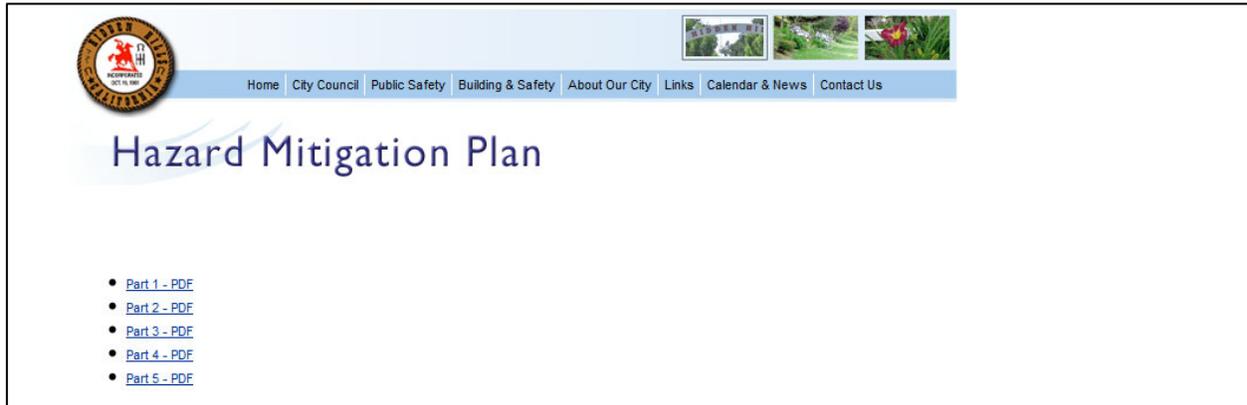


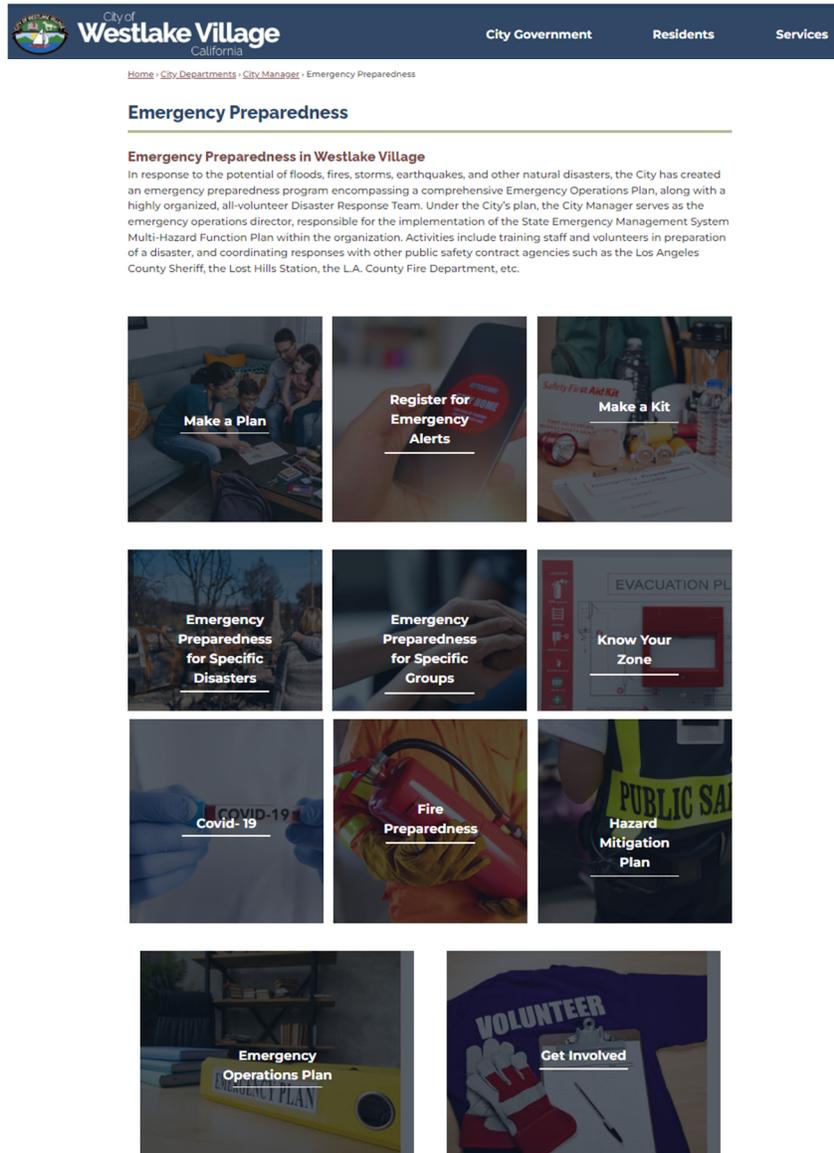
Figure 80: City of Hidden Hills HMP Public Download Links

### Malibu HMP Web Page



Figure 81: City of Malibu HMP Public Download Link

## Westlake Village HMP Web Page



### Emergency Notifications

Residents are encouraged to sign up for the City's emergency notifications through [Blackboard Connect -CTY](#). In the case of an emergency or large scale incident, residents who sign up will receive timely messages via email, cell phone, home phone, or text message. This system is controlled by the City and is the City's primary mass notification system to send shelter-in-place instructions, evacuation, and other emergency messages.

### Hazard Mitigation Plan

- [2018 LVMCOG HMP Part 1 | 2](#)

Figure 82: City of Westlake Village HMP Public Download Links

## Hazard Mitigation Community Risk Survey

In August 2023, a public community risk survey was implemented. Announcements were made by each city, encouraging public input and participation via each city’s web site, Emails, social media, and community news outlets. The intent of the survey was to provide a platform for local residents to voice their opinions about their disaster preparedness needs and concerns. The survey resulted in 116 responses from members of the public who completed the survey (see **Annex C** for a summary of the results).

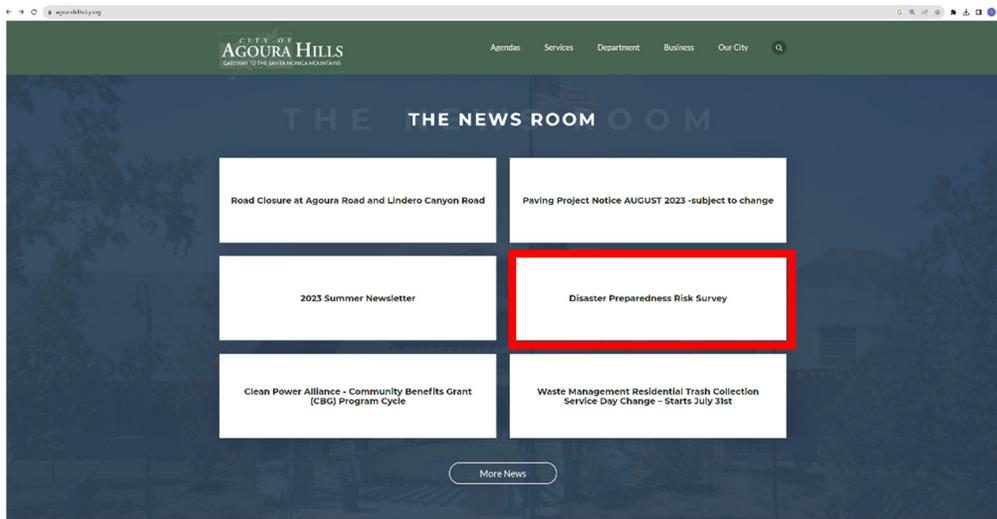


Figure 83: HMP Community Risk Survey Announcement and Link - City of Agoura Hills

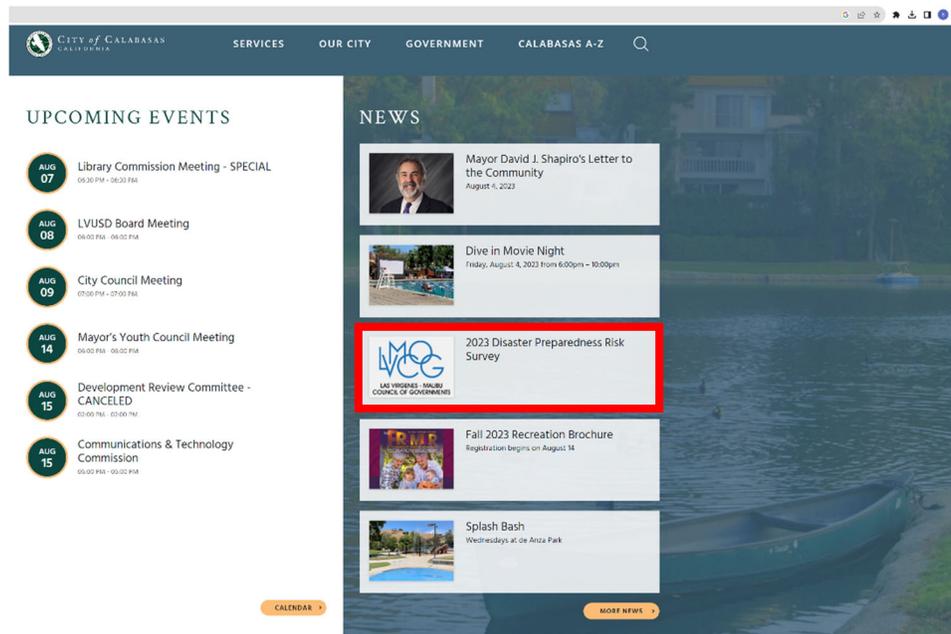


Figure 84: HMP Community Risk Survey Link - City of Calabasas

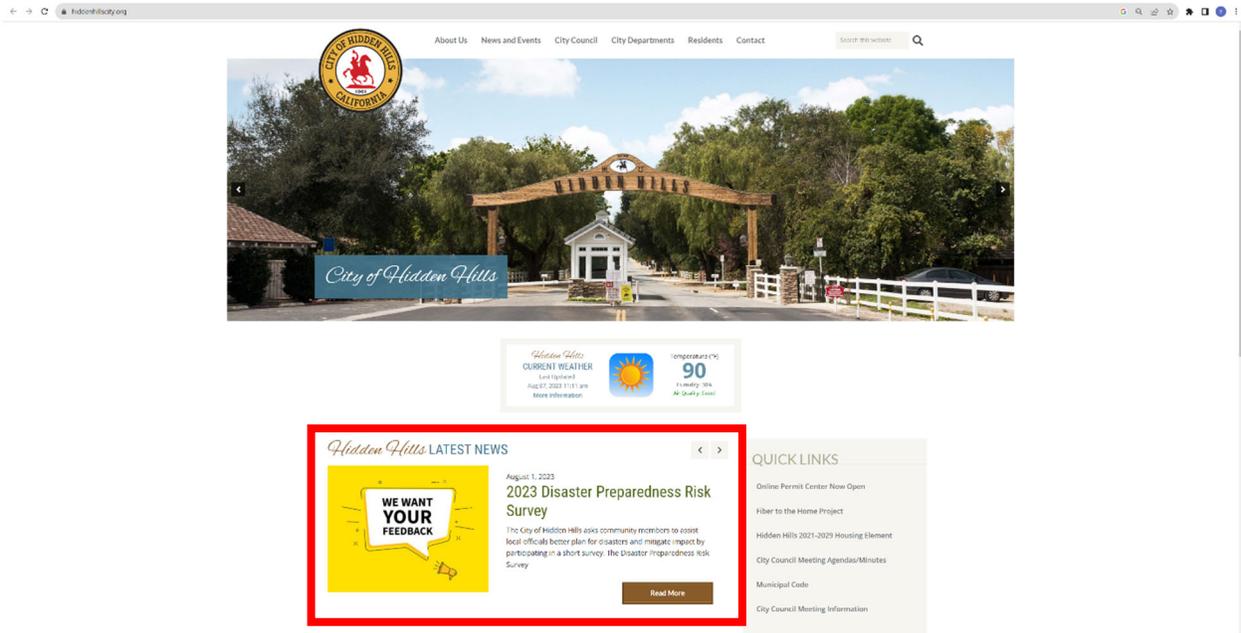


Figure 85: HMP Community Risk Survey Announcement - City of Hidden Hills

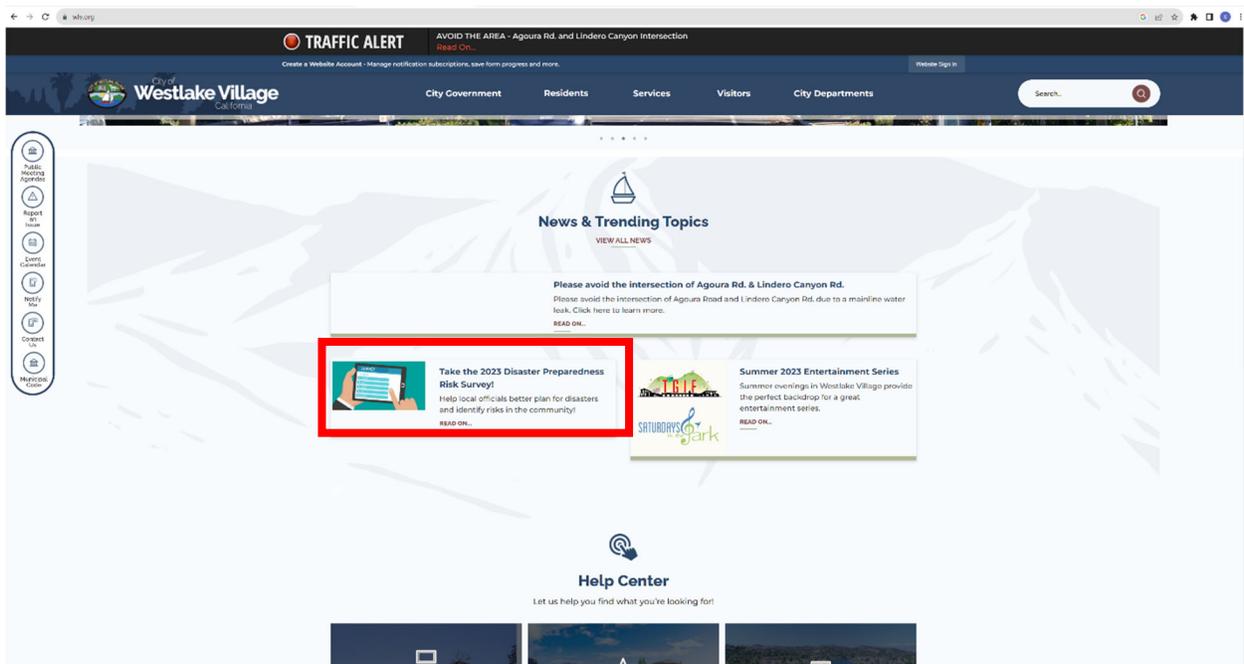


Figure 86: HMP Community Risk Survey Announcement - City of Westlake Village

## Public Forums and Workshops

In addition to ongoing web page, social media, and public service announcements each city conducts preparedness events. For example, on June 10, 2023 the City of Malibu conducted a Public Safety Expo to further promote preparedness and mitigation action in the community. Similarly, the cities hold events and participate in National Preparedness Month (annually in September). For example, on September 14, 2023 the City of Calabasas held Community Fire Season Briefing (see **Public Involvement section** for further details on how the public is involved in the disaster mitigation and planning process).

Furthermore, each city has established Community Emergency Response Team (CERT) programs that promote preparedness, planning, and mitigation. Finally, a series of public forums were held by each city to obtain public input to the Hazard Mitigation Plan from all residents within the LVMCOG.

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## IMPLEMENTATION THROUGH EXISTING PROGRAMS

### *Integration of the Hazard Mitigation Plan into Existing Planning Mechanisms*

In addition to ongoing disaster preparation and mitigation efforts such as quarterly Los Angeles County Disaster Management Area B meetings, each city in the LVMCOG integrates the HMP into existing planning mechanisms such as General Plans, Capital Improvement Plans, Land Use Plans, Building & Safety Codes, enforcement, and permitting activities. This Multi-Jurisdictional Hazard Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs within the cities. A description of each city's individual process is summarized below:

City	HMP Integration Process
<p><b>Agoura Hills</b></p>	<ul style="list-style-type: none"> <li>• The Deputy City Manager and Administrative Aide are part of the HMP Planning Group and is responsible for tracking the progress of mitigation projects included in the HMP.</li> <li>• Risk assessments and planning elements contained within the HMP are incorporated (as needed) into the <b>City of Agoura Hills General Plan</b> (primarily within the Safety Element) as part of the General Plan update process.</li> <li>• The Agoura Hills Deputy City Manager works with the departments within the city to review the HMP and existing projects as well as coordinate the addition of new mitigation projects into the HMP. City of Agoura Hills departments involved in the process include (as required):                         <ul style="list-style-type: none"> <li>○ Planning &amp; Community Development</li> <li>○ Building and Safety</li> <li>○ Public Works/Engineering</li> </ul> </li> <li>• Updates to General Plan to incorporate HMP elements involve an ongoing process by the Agoura Hills Deputy City Manager with the Planning &amp; Community Development Department as well as approval from the City Manager, Planning Commission, and the City Council.</li> </ul>
<p><b>Calabasas</b></p>	<ul style="list-style-type: none"> <li>• The Director of Public Safety and Public Safety Coordinator are part of the HMP Planning Group and are responsible for tracking the progress of mitigation projects included in the HMP.</li> <li>• Risk assessments and planning elements contained within the HMP are incorporated (as needed) into the City of Calabasas General Plan (primarily within the Safety Element) as part of the General Plan update process.</li> <li>• The Calabasas Director of Public Safety and Public Safety Coordinator work with other divisions and departments within the city to review the HMP and existing projects as well as coordinate the addition of new mitigation projects into the HMP. City of Calabasas divisions and departments involved in the process include (as required):                         <ul style="list-style-type: none"> <li>○ Planning Division</li> <li>○ Building &amp; Safety Division</li> <li>○ Public Works</li> </ul> </li> <li>• Updates to General Plan to incorporate HMP elements involve an ongoing process by the Calabasas Director of Public Safety and Public Safety Coordinator with the Planning Division as well as approval from the City Manager, applicable Commissions, and the City Council.</li> </ul>

City	HMP Integration Process
<b>Hidden Hills</b>	<ul style="list-style-type: none"> <li>• The Hidden Hills Emergency Services Coordinator is part of the HMP Planning Group and is responsible for tracking the progress of mitigation projects included in the HMP.</li> <li>• Risk assessments and planning elements contained within the HMP are incorporated (as needed) into the City of Hidden Hills General Plan (primarily within the Safety Element) as part of the General Plan update process.</li> <li>• The Hidden Hills City Emergency Services Coordinator works with the City Manager, the Planning Department, and the Building &amp; Safety Department to review the HMP and existing projects as well as coordinate the addition of new mitigation projects into the HMP.</li> <li>• Updates to General Plan to incorporate HMP elements involve an ongoing process by the Hidden Hills City Emergency Services Coordinator and City Manager as well as approval from the City Council.</li> </ul>
<b>Malibu</b>	<ul style="list-style-type: none"> <li>• The Malibu Emergency Services Coordinator is part of the HMP Planning Group and is responsible for tracking the progress of mitigation projects included in the HMP.</li> <li>• Risk assessments and planning elements contained within the HMP are incorporated (as needed) into the City of Malibu General Plan (primarily within the Safety Element) as part of the General Plan update process.</li> <li>• The Malibu Emergency Services Coordinator works with other departments within the city to review the HMP and existing projects as well as coordinate the addition of new mitigation projects into the HMP (see example Sign-In sheet on next page). City of Malibu departments involved in the process include (as required):                         <ul style="list-style-type: none"> <li>○ Planning Department</li> <li>○ Public Works / Engineering</li> <li>○ Building Safety</li> <li>○ Public Safety</li> <li>○ Wastewater Management/Environmental Health</li> </ul> </li> <li>• Updates to General Plan to incorporate HMP elements involve an ongoing process by the Malibu Emergency Services Coordinator with the Planning Department as well as approval from the City Manager, applicable Boards, and the City Council.</li> </ul>
<b>Westlake Village</b>	<ul style="list-style-type: none"> <li>• The Westlake Village Administrative Analyst is part of the HMP Planning Group and is tasked with ongoing management of the HMP.</li> <li>• Risk assessments and planning elements contained within the HMP are incorporated (as needed) into the City of Westlake Village General Plan (primarily within the Safety Element) as part of the General Plan update process.</li> <li>• The Administrative Analyst works with other departments within the city to review the HMP and existing projects as well as coordinate the addition of new mitigation projects into the HMP. City of Westlake Village departments involved in the process include (as required):                         <ul style="list-style-type: none"> <li>○ Planning Department</li> <li>○ Building &amp; Safety</li> </ul> </li> <li>• Updates to General Plan to incorporate HMP elements involve an ongoing process by the Westlake Village Administrative Analyst with the Planning Department as well as approval from the City Manager, applicable City Committees, and the City Council.</li> </ul>