

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



Las Virgenes-Malibu Council of Governments

Version 2.2
3/12/2012
2011-2012 LVMCOG HMP_v2.2

mlc

MLC & Associates, Inc.

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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:

Steering Committee

Greg Ramirez, City Manager - City of Agoura Hills
Tony Coroalles, City Manager - City of Calabasas
Cherie L. Paglia, City Manager - City of Hidden Hills
Jim Thorsen, City Manager - City of Malibu
Ray Taylor, City Manager - City of Westlake Village
Terry Dipple, Executive Director - Las Virgenes-Malibu Council of Governments

Planning Group

Louis Celaya, Deputy City Manager - City of Agoura Hills
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Dirk Lovett, City Engineer - City of Hidden Hills
Brad Davis, Emergency Preparedness Coordinator - City of Malibu
Kerry Kallman, Administrative Analyst - City of Westlake Village

EXECUTIVE SUMMARY

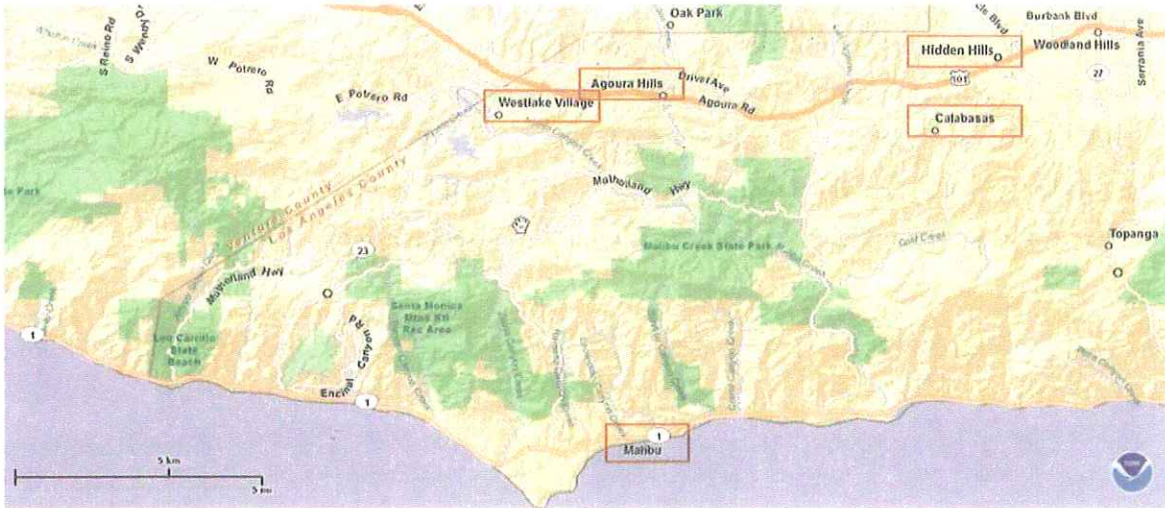
The Las Virgenes-Malibu Council of Governments (LVMCOG) was established by its members under a Joint Powers Agreement to provide a vehicle for members to engage in regional and cooperative planning and coordination of government services and responsibilities. The LVMCOG also provides a regional organization 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 2010 U.S. Census was 66,159.

City	Population (2010 U.S. Census)
Agoura Hills	20,330
Calabasas	23,058
Hidden Hills	1,856
Malibu	12,645
Westlake Village	8,270
Total	66,159

Table 1: LVMCOG Population by City

SOURCE: U.S. Census Bureau

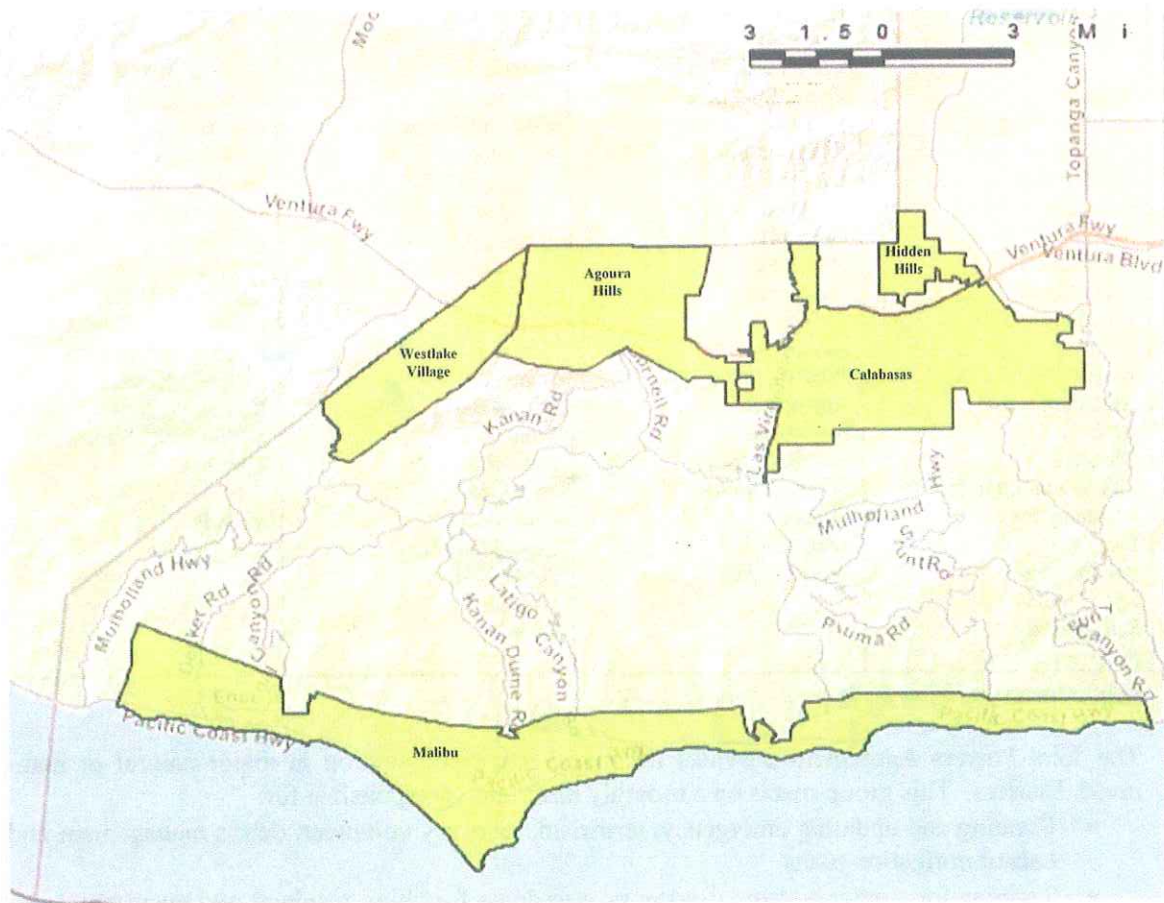


Map 1: Area Map

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.

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):

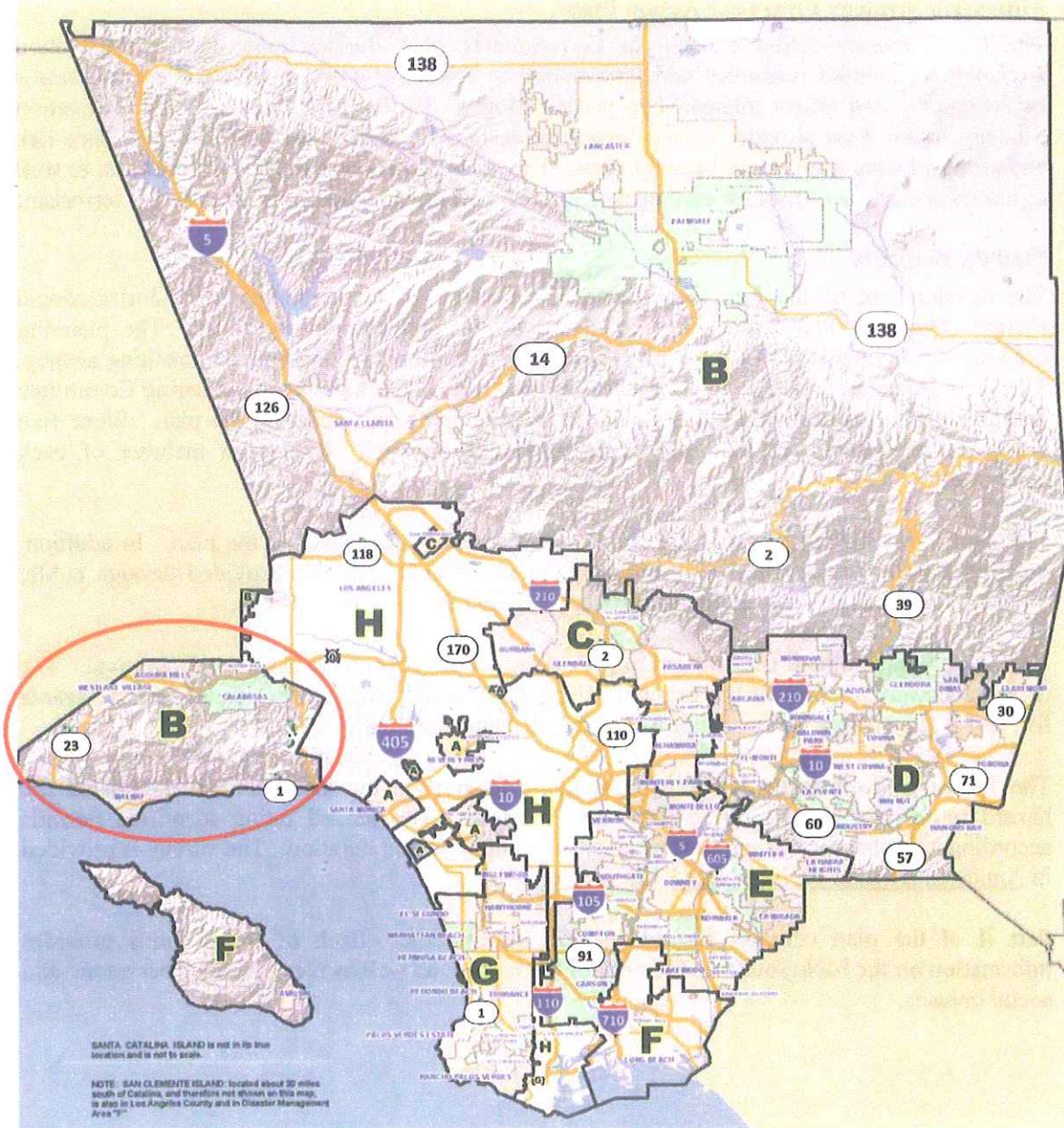
<p>Area A Beverly Hills Culver City Santa Monica West Hollywood</p> <p>Area B Agoura Hills* Calabasas* Hidden Hills* Lancaster Malibu* Palmdale Santa Clarita Westlake Village*</p> <p>Area C Alhambra Burbank Glendale La Canada Flintridge Monterey Park Pasadena San Fernando San Gabriel San Marino South Pasadena</p>	<p>Area D Arcadia Azusa Baldwin Park Bradbury Claremont City Of Industry 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>Area E Artesia Bell Bell Gardens Bellflower Carson 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>Area F Avalon Long Beach Signal Hill</p> <p>Area G 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>Area H 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 on a 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 and the Specific Needs Awareness Planning (SNAP) program.



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 Section 1: Plan Introduction.

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, fires, flooding, landslide, windstorms, and terrorism.

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, Inc. The Las Virgenes-Malibu Council of Governments Steering Committee 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 each committee.

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 Steering Committee was chosen to provide needed feedback, guidance and approval. The Steering Committee drafted the original Mission Statement, Plan Goals, identified the hazards list, and is responsible for final approval of the plan and strategies.

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 LVMCOGs' 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 more resistant to hazards.
- 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 Implementation, Monitoring, and Evaluation 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, the Las Virgenes-Malibu Council of Governments and each city adopted the original Multi-Jurisdictional Hazard Mitigation Plan. Subsequently, in 2012 this HMP update was 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 Emergency Management Agency (Cal-EMA). Cal-EMA 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 Las Virgenes-Malibu Council of Governments Hazard Mitigation Steering Committee was responsible for coordinating implementation of plan strategies and undertaking the formal review process. The Planning Group was responsible for supporting the Steering Committee and the tactical/operational tasks required to implement the Hazard Mitigation Plan.

Implementation Through Existing Programs

Each city within the Las Virgenes-Malibu Council of Governments addresses 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.

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 the Hazard Mitigation Steering Committee 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 at various locations throughout the Region including but not limited to libraries, City Halls and respective city websites. The existence and location of these copies were publicized on city websites 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 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, this 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, Inc. The Steering Committee was composed of the Las Virgenes-Malibu Council of Governments City Managers and was established in order to guide the process and provide final approval of the HMP and mitigation strategies. In addition, the Planning Group facilitated the plan update process, provided feedback, reviewed the plan, and was responsible for initial approvals.

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
- Fire
- Planning
- Public Works
- Recreation & Parks
- Sheriff's Department

The workflow below depicts the basic process of updating the plan.

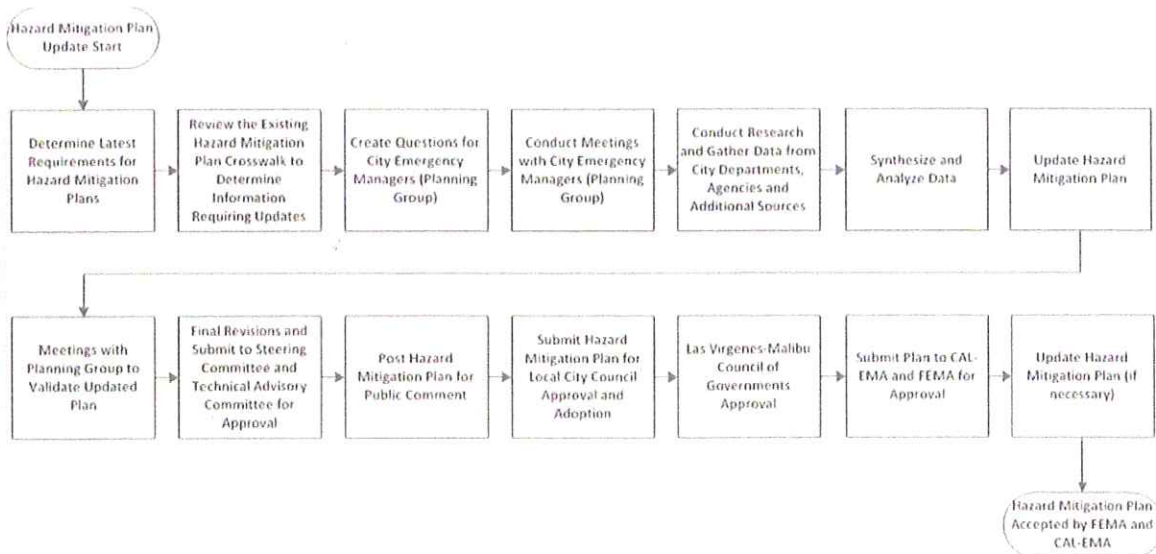


Figure 1: HMP Update Process Workflow

Internal Input

The Steering Committee was composed of the Las Virgenes-Malibu Council of Governments City Managers and was established in order to facilitate the update to the plan, provide feedback, guidance, and approval.

The Hazard Mitigation Steering Committee along with Planning Committee, 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 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.
- Formal adoption by each City Council.
- Plan Review by CAL EMA and FEMA.

Public/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](#).

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 six 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

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 six 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: Windstorm

Section 9: Landslide

Section 10: Flood

Section 11: Terrorism

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: Local Hazard Mitigation Plan Review Crosswalk

This section includes the Local Hazard Mitigation Plan Review Crosswalk for California Local Governments. The Crosswalk provides a quick reference to key sections of the plan.

Annex C: Disaster Preparedness 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: Steering Committee/Planning Group Hazard Rating Survey

This survey was provided to the Steering Committee and 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. This section also provides

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.

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 2010 Census data, the population of the five cities in the Las Virgenes-Malibu Council of Governments region totaled 66,159. Within the region, Calabasas represents the largest population closely followed by Agoura Hills. Calabasas also represented the fastest growth area (15.1%) outpacing Los Angeles County (3.1%) through the period from 2000 to 2010. The population levels of the other cities within the area were relatively stable during the past ten years. 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	2010 Population	% of Los Angeles County	2000 Population	% Change from 2000 to 2010
Agoura Hills	20,330	0.21%	20,537	-1.0%
Calabasas	23,058	0.23%	20,033	15.1%
Hidden Hills	1,856	0.02%	1,875	-1.0%
Malibu	12,645	0.13%	12,575	0.6%
Westlake Village	8,270	0.08%	8,368	-1.2%
LVMCOG	66,159	0.67%	63,388	4.4%
Los Angeles County	9,818,605	100.00%	9,519,338	3.1%

Table 2: Las Virgenes-Malibu 2010 Population Data

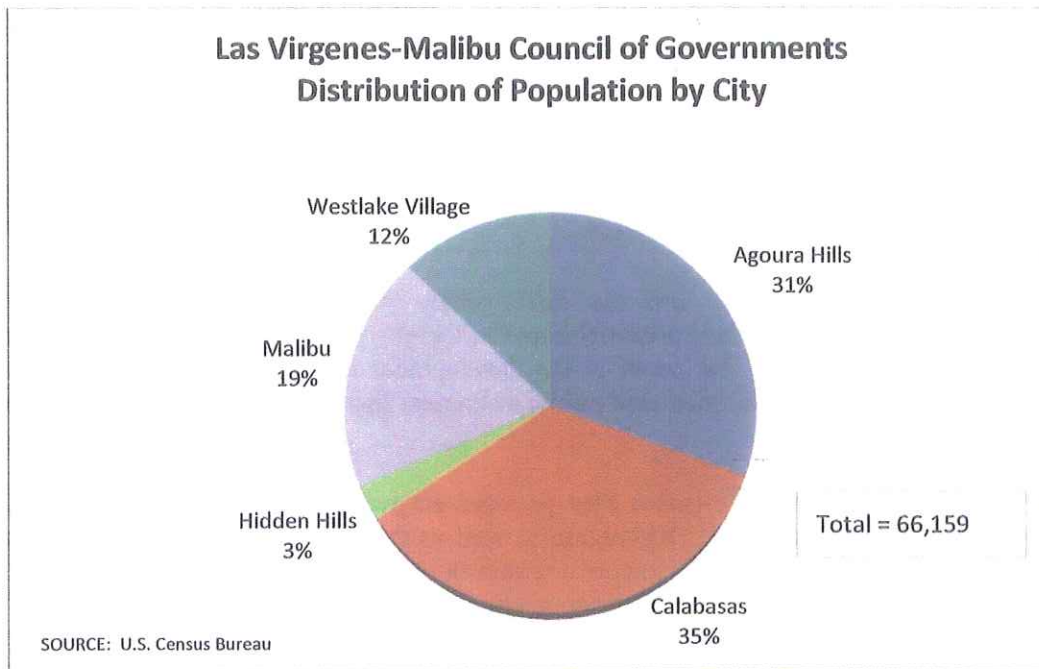
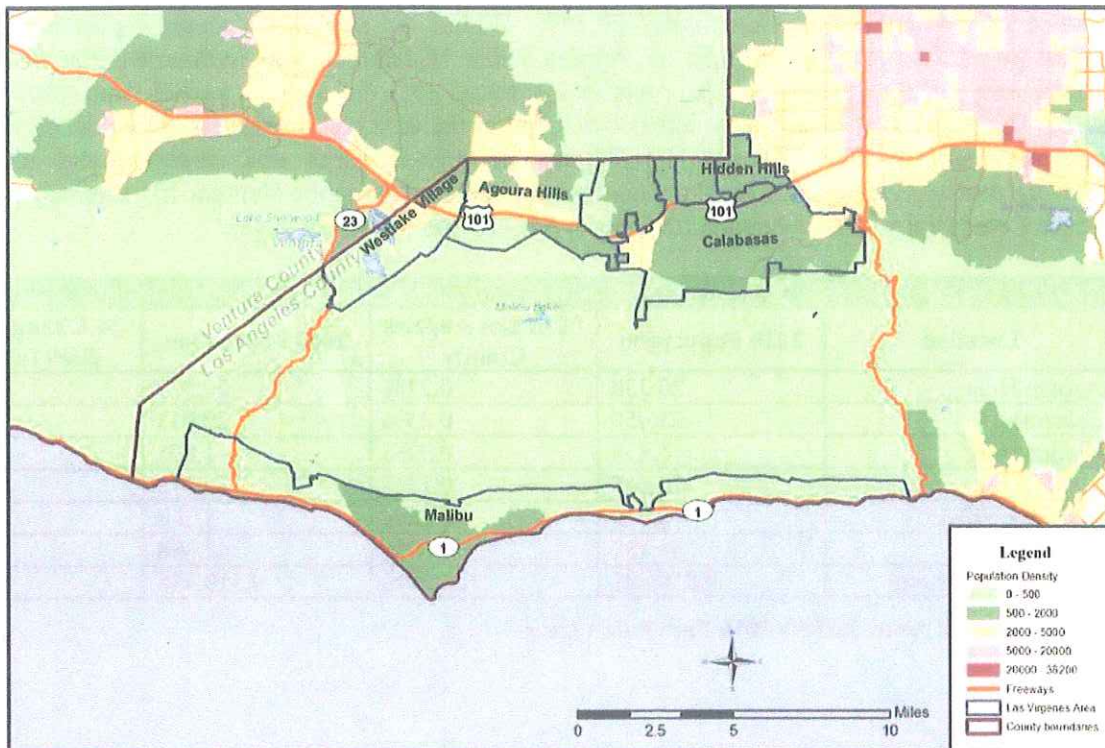


Figure 2: LVMCOG Population Distribution by City

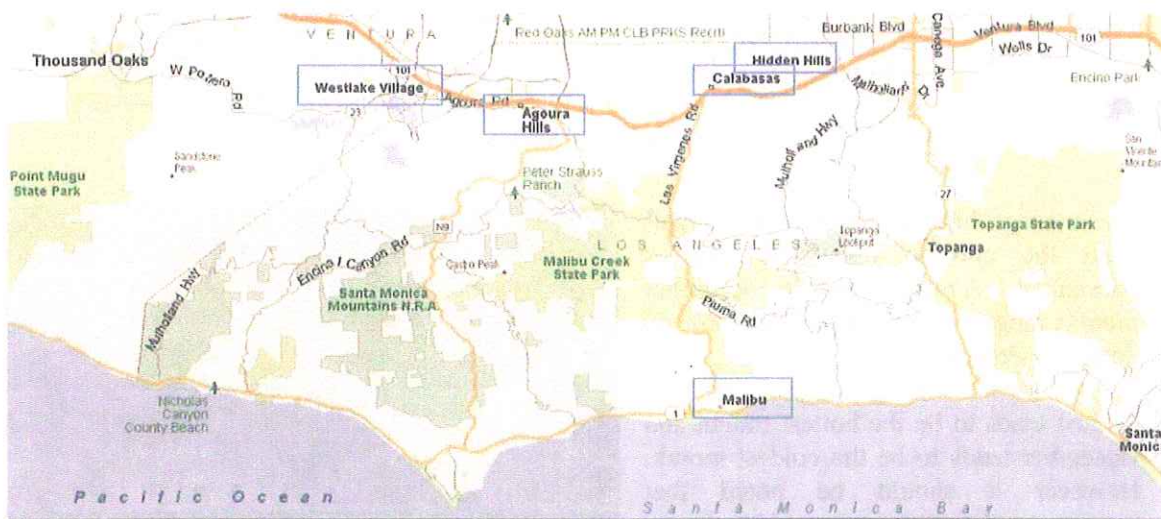


Map 4: Population Density per Square Mile

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 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.

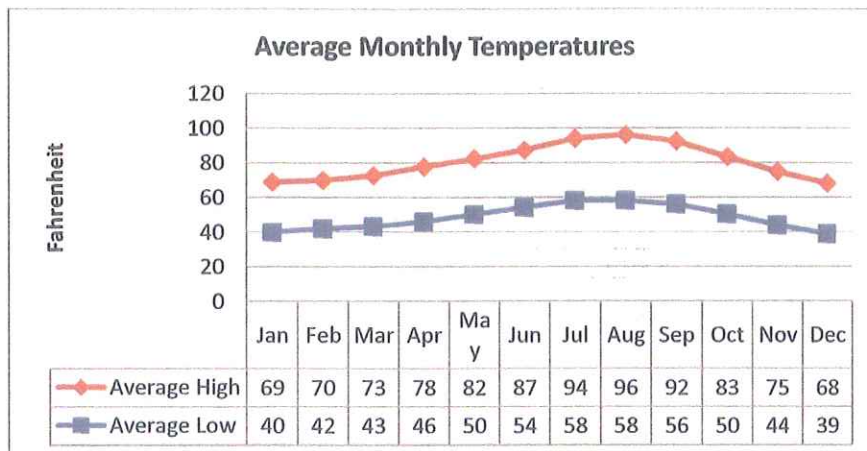


Figure 3: Average Temperature by Month

The average high in the summer ranges from the mid to upper 90 degrees Fahrenheit. Average lows in the winter months range from the upper 30 to low 40 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 4: Santa Ana Winds (Feb 2002)

SOURCE: NASA/JPL-Caltech)

Rainfall

Rainfall in the LVMCOG region averages nearly 18 inches per year. 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.

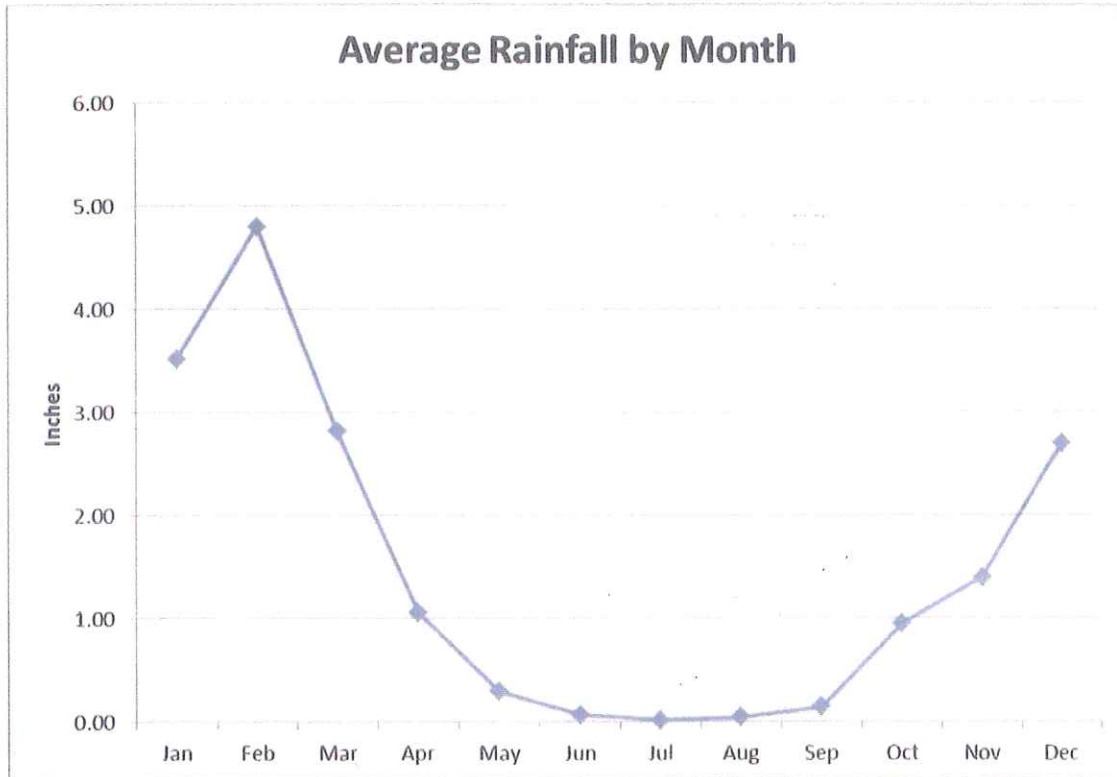


Figure 5: Average Rainfall by Month

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.

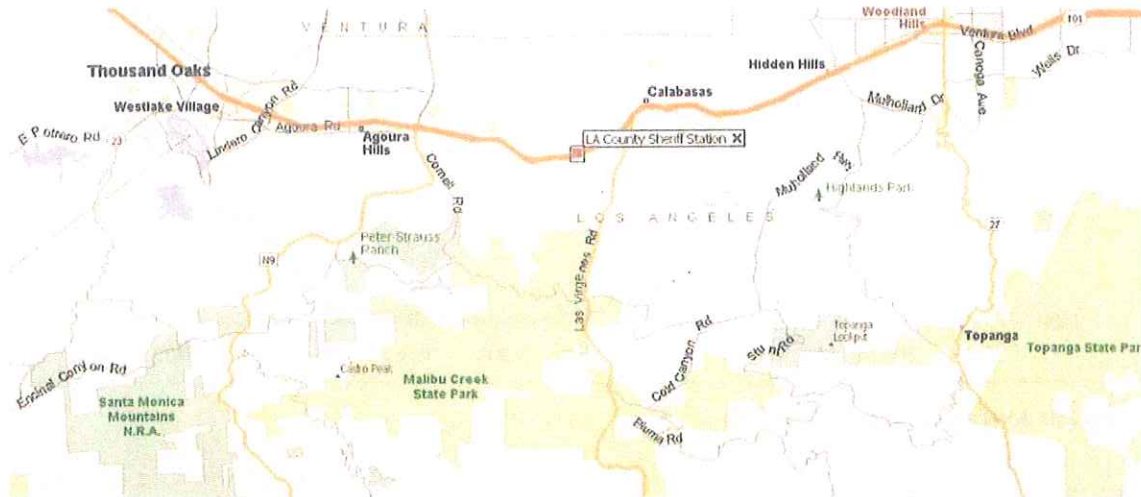
Los Angeles County Sheriff's Department

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, Calabasas, 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.



Figure 6: LASD Malibu/Lost Hills Station



Map 6: LASD Malibu/Lost Hills Station Location

The cities served by the Malibu/Lost Hills Station include Agoura Hills, Calabasas, Hidden Hills, Malibu, and Westlake Village as well as the unincorporated communities¹ of Chatsworth Lake Manor, Malibu Lake, Topanga, and West Hills. The station's jurisdiction is sectioned into 27 areas.

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 traffic routes.

¹ Information obtained from the Los Angeles County Sheriff's Department

Furthermore, 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**.

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 Agoura Hills, Calabasas, Hidden Hills, Malibu, and Westlake Village. 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 Emergency Management Agency (Cal EMA). 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.

Los Angeles County Fire Department

Agoura Hills, Calabasas, Hidden Hills, Malibu and Westlake Village contract fire services with 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. Battalion 5 of the Los Angeles County Fire Department is assigned to directly serve the Las Virgenes-Malibu region. The local LA County Fire Department headquarters are located at 3970 Carbon Canyon Rd., Malibu 90265.

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