

**BOARD OF FORESTRY AND FIRE PROTECTION**

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**To:** Resource Protection Committee

**From:** Edith Hannigan, Board Staff

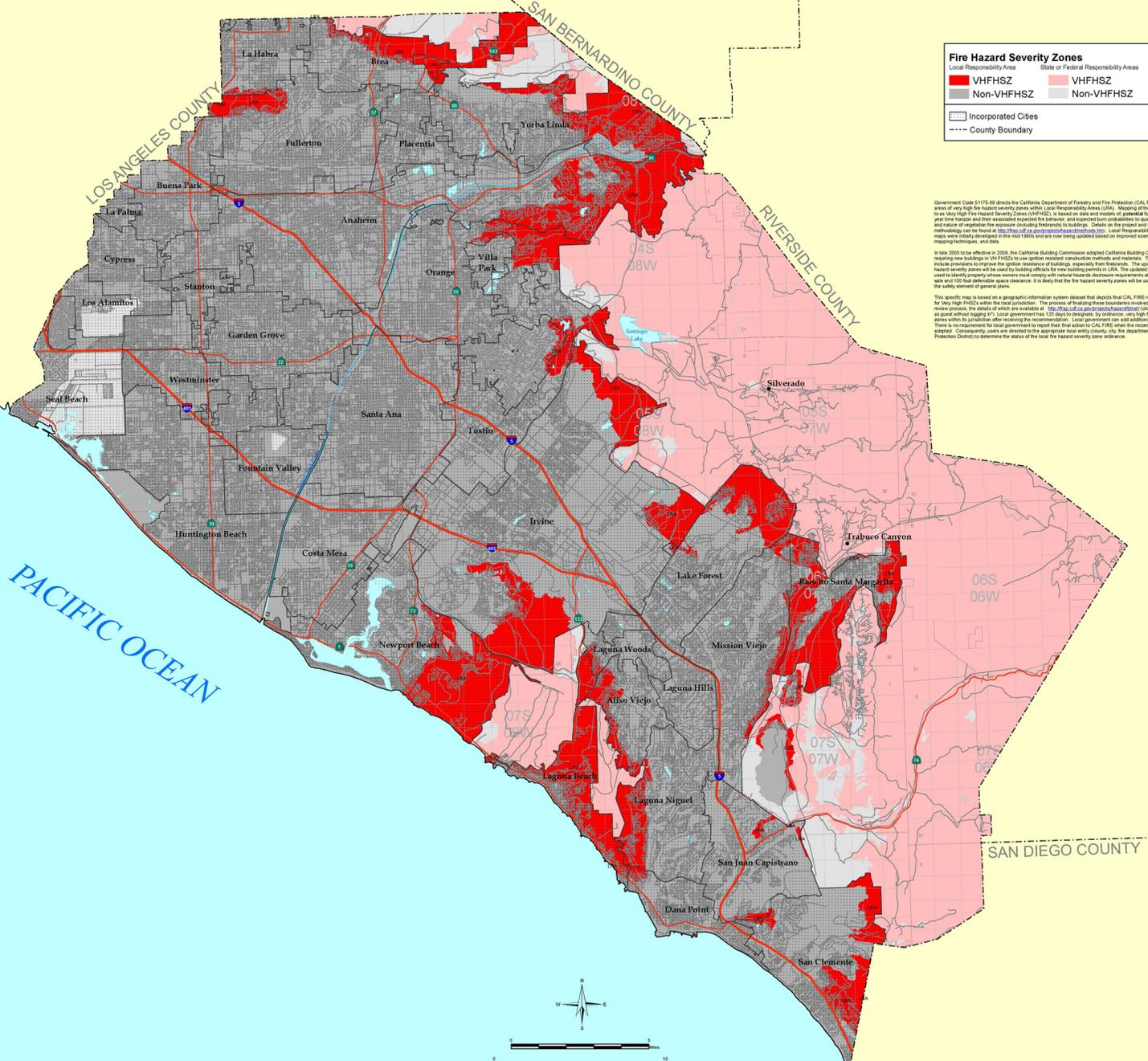
**Date:** March 28, 2016

**Re:** City of Mission Viejo Safety Element Review

Following please find the City of Mission Viejo Safety Element for your review.

As some background information, the City of Mission Viejo has chosen to repeal their city ordinances establishing any kind of Fire Hazard Severity Zone, Wildland-Urban Interface Zone, or similar identification of any area of the city that may have an elevated wildfire risk. CAL FIRE has recommended about 1,000 in the city be classified as Very High Fire Hazard. The city has chosen not to adopt those recommendations. Attached, for your reference, is the CAL FIRE VHFHSZ LRA recommendations for Orange County.

## VERY HIGH FIRE HAZARD SEVERITY ZONES IN LRA As Recommended By CAL FIRE



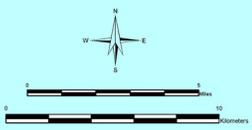
**Fire Hazard Severity Zones**

<span style="color: red;">■</span> VHFHSZ	<span style="color: lightgrey;">■</span> VHFHSZ
<span style="color: grey;">■</span> Non-VHFHSZ	<span style="color: lightgrey;">■</span> Non-VHFHSZ
<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Incorporated Cities	<span style="border-top: 1px dashed black; display: inline-block; width: 20px;"></span> County Boundary

Government Code §11755.50 directs the California Department of Forestry and Fire Protection (CAL FIRE) to identify areas of very high fire hazard severity zones within Local Responsibility Areas (LRAs). Mapping of fire areas, referred to as Very High Fire Hazard Severity Zones (VHFHSZ), is based on data and models of potential fuels over a 30-year time horizon and fire associated expected fire behavior, and expected burn probabilities to quantify the threat and nature of vegetation fire exposure including firebrands to buildings. Details on the project and specific modeling methodology can be found at [www.cdffire.com](http://www.cdffire.com). Local Responsibility Area VHFHSZ maps were initially developed in the mid 1990s and are now being updated based on improved science, mapping techniques, and data.

In late 2009 to be effective in 2010, the California Building Commission adopted California Building Code Chapter 7A, requiring new buildings in VHFHSZ to use greater resistant construction methods and materials. These new codes include provisions to improve the ignition resistance of buildings, especially from firebrands. The updated very high fire hazard severity zones will be used by building officials for new building permits in LRA. The updated zones will also be used to identify property whose owners must comply with related hazardous structure requirements at time of property sale and 100 foot defensible space standards. It is likely that the hazard severity zones will be used for updates to the state element of general plans.

This specific map is based on a geographic information system dataset that depicts final CAL FIRE recommendations for Very High Fire Hazard Severity Zones within the local jurisdiction. The process of finalizing these boundaries involved an extensive local review process, the details of which are available at [www.cdffire.com](http://www.cdffire.com). Local government has 120 days to designate, by ordinance, very high fire hazard severity zones within its jurisdiction after receiving the recommendations. Local government can add additional VHFHSZ. The map is intended primarily to advise property owners of their local fire hazard severity zones. For more information, contact CAL FIRE. Consequently, users are directed to the appropriate local entity (county, city, fire department, or Fire Protection District) to determine the status of the local fire hazard severity zone boundaries.



The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

Obtain FRAP maps, data, metadata and publications on the Internet at <http://frap.cdf.ca.gov>  
For more information, contact CDF-FRAP, PO Box 944246, Sacramento, CA 94244-2460, (916) 327-3939.

Jerry Brown, Governor, State of California  
John Laird, Secretary for Resources, The Natural Resources Agency  
Ken Pimlott, Director, Department of Forestry and Fire Protection

MAP ID: OrangeCo  
DATA SOURCES  
CAL FIRE Fire Hazard Severity Zones (FHSZ) 06\_1  
CAL FIRE Very High Fire Hazard Severity Zones in LRA - Orange (c30fshz06\_3)

# City of Mission Viejo

## CAL FIRE LUPP

### General Plan Safety Element Assessment Tier 2

April 6, 2016

Board of Forestry and Fire Protection



#### Contents

Purpose and Background

Methodology for Review and Recommendations

Review Process and Timeline

Tier 2 Recommendations

**Purpose and Background:** The State Board of Forestry and Fire Protection (Board) is required to review and make recommendations for the safety element of general plan updates in accordance with Government Code (GC) 65302.5. The review and recommendations apply to those general plans with State Responsibility Area (SRA) (Public Resources Code (PRC) 4125) or Very High Fire Hazard Severity Zone Local Responsibility Area (VHFHSZ LRA) (GC 51177(i), PRC 4125).

The statutory requirements for the Board review and recommendations pursuant to GC 65302.5 (a)(1) and (2), and (b) are as follows:

- *“The draft elements...to the fire safety element of a county’s or a city’s general plan...shall be submitted to the Board at least 90 days prior to... the adoption or amendment to the safety element of its general plan [for each county or city with SRA or VHFHSZ].”*
- *“The Board shall... review the draft or an existing safety element and report its written recommendations to the planning agency within 60 days of its receipt of the draft or existing safety element....”*
- *“Prior to adoption of the draft element..., the Board of Supervisors... shall consider the recommendations made by the Board... If the Board of Supervisors...determines not to accept all or some of the recommendations..., the Board of Supervisors... shall communicate in writing to the Board its reasons for not accepting the recommendations.”*

**Methodology for Review and Recommendations:** The Board established a standardized method to review the safety element of general plans. The methodology includes 1) examining the safety element for inclusion of factors that are important for mitigation of wildfire hazard and risks, and 2) making recommendations related to these factors. The evaluation factors and recommendations below were developed using CAL FIRE technical documents and input from local fire departments.

The Tier 2 recommendations below apply to communities with

- Medium amounts of VHFHSZ Zone acreage or 10 to 20% of acreage is VHFHSZ LRA; or
- Medium population densities; or
- VHFHSZ that does not encroach on population centers or does not add significantly to contiguous high fire hazard fuels at a regional level.

The counties assigned Safety Element Assessment Tier 2 are **Colusa, Imperial, Inyo, Kings, Merced, Modoc, and Mono**. There are 48 cities, listed below, evaluated under Tier 2.

As local fuels, boundaries, populations, and other variables change throughout time, Board staff have the discretion to re-assign a jurisdiction into a lower or higher assessment tier. Staff will consider:

- Variations in population and population density; or
- Changes in proportion of land designated VHFHSZ (lower or higher); or
- Firefighting capabilities (paid, volunteer, equipment, etc) and contract changes; or

- Past planning efforts and involvement of organizations such as local Fire Safe Councils and new initiatives or efforts that have emerged over time; or
- Changes to the context of VHFHSZ within the region – does the VHFHSZ in a jurisdiction combine with neighboring fuels to create a continual pattern of very high fire risk in a way that it hadn't previously?

Cities (alphabetical by county)					
<b>Alameda</b>	<b>Monterey</b>	<b>Riverside con't</b>	<b>San Diego</b>	<b>Shasta</b>	
Berkeley	Monterey	Palm Springs	Carlsbad	Anderson	
Piedmont	<b>Orange</b>	Perris	Chula Vista	<b>Siskiyou</b>	
Pleasanton	Fullerton	Riverside	Del Mar	Etna	
<b>Calaveras</b>	Irvine	San Jacinto	El Cajon	Yreka	
Angels Camp	Laguna Woods	Temecula	Solana Beach	<b>Sonoma</b>	
<b>Los Angeles</b>	Mission Viejo	Wildomar	Vista	Santa Rosa	
Arcadia	Orange	<b>San Bernardino</b>	<b>San Luis Obispo</b>	<b>Tehama</b>	
West Covina	<b>Riverside</b>	Chino Hills	San Luis Obispo	Red Bluff	
<b>Marin</b>	Corona	Fontana	<b>Santa Clara</b>	<b>Ventura</b>	
Larkspur	Hemet	Hesperia	Morgan Hill	Camarillo	
<b>Mendocino</b>	Jurupa Valley	Rialto	San Jose	Fillmore	
Ukiah	Menifee	Upland		Ventura	
	Moreno Valley	Yucca Valley			

## Review Process and Timeline

The county/local jurisdiction and CAL FIRE Land Use Planning staff will receive and review technical guidance documents, the Board assessment, and relevant information from CAL FIRE and the Governor's Office of Planning and Research.



The county or local jurisdiction will work closely with CAL FIRE Land Use Planning staff during the development of the general plan and the safety element in particular.



**At least 90 days prior to the adoption or amendment of the General Plan:** The county or local jurisdiction will submit the safety element to the Board of Forestry & Fire Protection for review. Jurisdictions are encouraged to send safety elements to the Board prior to the 90 day statutory requirement for greater collaboration.



**No more than 60 days later:** The Board will consider staff recommendations and approve as-is or with changes at the next Board meeting. This deadline may be modified upon mutual agreement between Board staff and local jurisdictions.

# Standard List of General Plan Safety Element Recommendations

Please click on the appropriate box to “check” whether the plan satisfies each point. Standard recommendations are included in the checklist but please highlight or add additional comments as necessary.

## 1.0 Inter-agency Wildfire Protection Planning

- 1.1 General Plan references and incorporates County or Unit Fire Plan: Yes Partial No

**Recommendation:** Identify, reference or create (if necessary) a fire plan for the geographic scope of the General Plan. The General Plan should incorporate the general concepts and standards from any county fire plan, fire protection agency (federal or state) fire plan, and local hazard mitigation plan. Identify or reference the local Unit Fire Plan and, if applicable, the Community Wildfire Prevention Plan.

**Priority:** High Medium Low N/A No reference provided

**Recommendation:** Ensure fire plans incorporated by reference into the General Plan contain evaluations of fire hazards, assessment of assets at risk, prioritization of hazard mitigation actions, and implementation and monitoring components.

**Priority:** High Medium Low N/A No areas referenced

- 1.2 Map or describe existing emergency service facilities and areas lacking services, specifically noting any areas in SRA or VHFHSZs. Yes Partial No No FHSZ’s identified on maps provided. Safety Element figure PS-5 identifies Emergency facilities including Emergency shelters, Hospitals, Fire stations and Evacuation routes.

**Recommendation:** Include descriptions of emergency services including available equipment, personnel, and maps of facility locations.

**Priority:** High Medium Low N/A

**Recommendation:** Initiate studies and analyses to identify appropriate staffing levels and equipment needs commensurate with the current and projected emergency response environment.

**Priority:** High Medium Low N/A

**Recommendation:** Establish goals and policies for emergency service training that meets or exceeds state or national standards.

**Priority:** High Medium Low N/A

- 1.3 Inter-fire service coordination preparedness/mutual aid and multi-jurisdictional fire service agreements. Yes Partial No Identified in Safety Element policy 6.3

**Recommendation:** Adopt the Standardized Emergency Management Systems for responding to large scale disasters requiring a multi-agency response. Ensure and review mutual

aid/automatic aid and other cooperative agreements with adjoining emergency service providers.

**Priority:**  High  Medium  Low  N/A

**Additional Wildfire Protection Planning Recommendations: Adopt CAL FIRE FRAP recommendations for FHSZ maps or develop a more inclusive local representation of the hazards to detail a framework of risk analysis providing pre and post incident response elements.**

## 2.0 Land Use:

2.1 Disclose wildland urban interface hazards including Fire Hazard Severity Zones designations and other vulnerable areas as determined by CAL FIRE or fire prevention organizations. Describe or map any Firewise Communities or other firesafe communities as determined by the National Fire Protection Association, Fire Safe Council, or other organizations.

Yes  Partial  No

No maps provided, all previously referenced maps have been repealed by council action dated 3/2/2015 and subsequently deleted from the city municipal codes.

**Recommendation:** Specify whether the entity has a Very High Fire Hazard Severity Zones (VHFHSZ) designation pursuant GC 51175 and include a map of the zones that clearly indicates any area designated VHFHSZ.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Adopt CAL FIRE recommended Fire Hazard Severity Zones including model ordinances developed by the Office of the State Fire Marshal for establishing VHFHSZ areas.

**Priority:**  High  Medium  Low  N/A

2.2 Goals and policies include mitigation of fire hazard for future development.  Yes  Partial  No  
City municipal code 8.04.140 section 320 requires fuel modification for new construction but the city does not identify those areas that have hazardous combustible vegetation.

**Recommendation:** Adopt fire safe development codes to be used as standards for fire protection for new development in Very High Fire Hazard Severity Zones (VHFHSZ) within the entity's jurisdiction that meet or exceed statewide standards in 14 California Code of Regulations Section 1270 et seq and have them certified by the Board of Forestry.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Establish goals and policies for specific ordinances, or specify the current existing ordinances, code sections, or regulations, that address evacuation and emergency vehicle access; water supplies and fire flow; fuel modification for defensible space; and home addressing and signing.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Consider mitigation of previously developed areas that do not meet

Title 14 California Code of Regulations Section 1270 et seq. or equivalent local ordinance.

**Priority:**  High  Medium  Low  N/A

- 2.3 The design and location of new development provides for adequate infrastructure for the safe ingress of emergency response vehicles and simultaneously allows civilian egress during an emergency:  Yes  Partial  No

**Recommendation:** Develop pre-plans for fire prone areas that address civilian evacuations to temporary safety locations.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Develop a policy that approval of parcel maps and tentative maps is conditional based on meeting regulations adopted pursuant to §4290 and 4291 of the Public Resources Code, particularly those regarding road standards for ingress, egress, and fire equipment access.

**Priority:**  High  Medium  Low  N/A

- 2.4 Fire suppression defense zones.  Yes  Partial  No **None identified**

**Recommendation:** Establish goals and policies that create wildfire defense zones for emergency services, including fuel breaks or other staging areas where WUI firefighting tactics could be most effectively deployed.

**Priority:**  High  Medium  Low  N/A

- 2.5 Prioritizing asset protection from fire when faced with a lack of suppression forces.

Yes  Partial  No

**Recommendation:** Identify and prioritize protection needs for assets at risk in the absence of response forces.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Establish fire defense strategies (such as fire ignition resistant areas) that provide adequate fire protection without dependency on fire resources (both air and ground) and could serve as safety zones for the public or emergency support personnel.

**Priority:**  High  Medium  Low  N/A

**Additional Land Use Planning Recommendations:** Identify or provide reference to items identified above as deficient. Some information can be obtained from the Orange County General Plan Safety Element and Housing Elements.

### 3.0 **Housing:**

- 3.1 Incorporation of current fire safe building codes.  Yes  Partial  No **Identified in Safety Element policy 6.5**

**Recommendation:** Adopt building codes for new development in State Responsibility Areas or incorporated areas with VHFHSZ that are based on those established by the Office of the State Fire Marshal in Title 19 and Title 24 CCR, referred to as the “Wildland Urban Interface Building Codes.”

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Ensure new development proposals contain specific fire protection plans, actions, and codes for fire engineering features for structures in VHFHSZ. Examples include codes requiring automatic sprinklers in VHFHSZ.

**Priority:**  High  Medium  Low  N/A

- 3.2 Consideration of diverse occupancies and their effects on wildfire protection.  
 Yes  Partial  No

**Recommendation:** Ensure risks to uniquely occupied structures, such as seasonally occupied homes, multiple dwelling structures, or other unique structures/owners, are considered for appropriate wildfire protection needs.

**Priority:**  High  Medium  Low  N/A

- 3.3 Fuel modification around homes.  Yes  Partial  No

**Recommendation:** Establish ordinances in SRA or VHFHSZ for vegetation fire hazard reduction around structures that meet or exceed the Board of Forestry and Fire Protection's Defensible Space Guidelines for SRA and the Very High Fire Hazard severity zones, including vacant lots.

See [http://www.bof.fire.ca.gov/pdfs/Copyof4291finalguidelines9\\_29\\_06.pdf](http://www.bof.fire.ca.gov/pdfs/Copyof4291finalguidelines9_29_06.pdf)

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Reduce fuel around communities and subdivisions, considering fuels, topography, weather (prevailing winds and wind event specific to the area), fire ignitions and fire history.

**Priority:**  High  Medium  Low  N/A **No plans identified**

**Recommendation:** Include policies and recommendations that incorporate fire safe buffers and greenbelts as part of the development planning. Ensure that land uses designated near high or very fire hazard severity zones are compatible with wildland fire protection strategies/capabilities.

**Priority:**  High  Medium  Low  N/A **No plans identified**

- 3.4 Identification and actions for substandard fire safe housing and neighborhoods relative to fire hazard area.  Yes  Partial  No

**Recommendation:** Identify and map existing housing structures that do not conform to contemporary fire standards in terms of building materials, perimeter access, and vegetative hazards in VHFHSZ or SRA by fire hazard zone designation.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Identify plans and actions to improve substandard housing structures and neighborhoods. Plans and actions should include structural rehabilitation, occupancy reduction, demolition, reconstruction, neighborhood-wide fuels hazard reduction projects, community education, and other community based solutions.

**Priority:**  High  Medium  Low  N/A

3.5 Assessment and projection of future emergency service needs.  Yes  Partial  No **Not provided**

**Recommendation:** Ensure new development includes appropriate facilities, equipment, personnel and capacity to assist and support wildfire suppression emergency service needs. Future emergency service needs should be:

- Established consistent with state or national standards.
- Developed based on criteria for determining suppression resource allocation that includes elements such as identified values and assets at risk, ignition density, vegetation type and condition, as well as local weather and topography.
- Local Agency Formation municipal services reviews for evaluating level of service, response times, equipment condition levels and other relevant emergency service information.

**Priority:**  High  Medium  Low  N/A **May be identified by community development policies but not provided**

**Additional Housing/Structures and Neighborhoods Recommendations: Provide information or references to community development guidelines or policies that may apply.**

#### 4.0 **Conservation and Open Space:**

4.1 Identification of critical natural resource values relative to fire hazard areas.  Yes  Partial  No **Areas not specifically identified but referenced.**

**Recommendation:** Identify critical natural resources and other “open space” values within the geographic scope of the General Plan.

**Priority:**  High  Medium  Low  N/A

4.2 Inclusion of resource management activities to enhance protection of open space and natural resource values.  Yes  Partial  No

**Recommendation:** Develop plans and action items for vegetation management that provides fire damage mitigation and protection of open space values.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Establish goals and policies for reducing the wildland fire hazards within the entity’s boundaries and, with the relevant partners, on adjacent private wildlands, federal lands, vacant residential lots, and greenbelts with fire hazards that threaten the entity’s

jurisdiction.

**Priority:**  High  Medium  Low  N/A

- 4.3 Integration of open space into fire safety effectiveness.  Yes  Partial  No

**Recommendation:** Establish goals and policies for incorporating systematic fire protection improvements for open space. Specifics policies should address fire mitigation planning with agencies/private landowners managing open space adjacent to the General Plan area, water sources for fire suppression, and other fire prevention and suppression needs.

**Priority:**  High  Medium  Low  N/A

**Additional Conservation and Open Space Recommendations:** Include reference to Fuel Reduction programs or Orange County VMP programs.

## 5.0 Circulation:

- 5.1 Adequate access to high hazard wildland/open space areas.  Yes  Partial  No **No information provided**

**Recommendation:** Establish goals and policies for adequate access in Very High Fire Hazard Severity Zones that meet or exceed standards in Title 14 CCR 1270 for lands with no structures, and maintain conditions of access in a suitable fashion for suppression access or public evacuation.

**Priority:**  High  Medium  Low  N/A

- 5.2 Incorporate a policy that provides for a fuel maintenance program along roadways in the agency having jurisdiction.  Yes  Partial  No **No areas identified but, referenced in city municipal code 8.01.240 section 503.2.1.1**

**Recommendation:** Develop an adaptive vegetation management plan that considers fuels, topography, weather (prevailing winds and wind event specific to the area), fire ignitions and fire history.

**Priority:**  High  Medium  Low  N/A

- 5.3 Emergency response barriers.  Yes  Partial  No

**Recommendation:** Identify goals and policies that address vital access routes that if removed would prevent fire fighter access (bridges, dams, etc.). Develop an alternative emergency access plan for these areas.

**Priority:**  High  Medium  Low  N/A

- 5.4 Adequacy of existing and future transportation system to incorporate fire infrastructure elements.  Yes  Partial  No

**Recommendation:** Establish goals and policies for proposed and existing transportation

systems to facilitate fire infrastructure elements such as turnouts, helispots and safety zones.

**Priority:**  High  Medium  Low  N/A

**Additional Circulation and Access Recommendations:** Inclusion of necessary civilian evacuation and routes including shelter locations for at risk areas.

## 6.0 **Post Fire Safety, Recovery and Maintenance:**

The post fire recommendations address an opportunity for the community and landowners to re-evaluate land uses and practices that affect future wildfire hazards and risk. They also provide for immediate post-fire life and safety considerations to mitigate potential losses to life, human assets and critical natural resources. **No plan identified within General Plan or Elements**

6.1 Develop post-fire priorities and goals for the recovery of the built and natural environments.

Yes  Partial  No

**Recommendation:** Reevaluate hazardous conditions and provide for future fire safe conditions. Evaluate redevelopment in high or very high fire hazard severity zones.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Restore sustainable landscapes and restore functioning ecosystems. Incorporate wildlife habitat/endangered species considerations.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Provide polices and goals for maintenance of the post-fire-recovery projects, activities, or infrastructure.

**Priority:**  High  Medium  Low  N/A

6.2 Post fire life and safety assessments.  Yes  Partial  No

**Recommendation:** Develop frameworks for rapid post-fire assessment and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.

**Priority:**  High  Medium  Low  N/A

**Additional Post Fire Safety, Recovery and Maintenance Recommendations:** Above items may be in an Emergency Operations Plan but no reference within the General Plan Elements.

**Additional Recommendations:** Coordinate Safety Element development with local and adjoining public safety agencies. Many of the identified components of the Safety Element are already in place through local agreements but are not specifically identified.

11 7

# **PUBLIC SAFETY ELEMENT**

# TABLE OF CONTENTS

<b>Section</b>	<b>Page</b>
<b>INTRODUCTION TO THE PUBLIC SAFETY ELEMENT</b>	<b>1</b>
Purpose of the Public Safety Element	1
Related Plans and Programs	1
Scope and Content of Element	2
<b>PUBLIC SAFETY ELEMENT GOALS AND POLICIES</b>	<b>3</b>
Geologic Hazards	3
Seismic Hazard	4
Flood Hazard	5
Disaster Preparedness Plan	6
Hazardous Material Exposure	6
Fire	8
Crime	10
Water Quality	10
<b>RELATED GOALS AND POLICIES</b>	<b>12</b>
<b>THE PUBLIC SAFETY PLAN</b>	<b>13</b>
Introduction and Scope of Plan	13
Potential Public Safety Hazard Areas and Assessment	14
Hazard Mitigation	15
Modified Mercalli Intensity Scale (Table PS-2)	16
Emergency Response and Action	17
Hazardous Materials Plan	17

## LIST OF TABLES

<b>Section</b>		<b>Page</b>
<b>Table PS-1</b>	Public Safety Policies by Element	12
<b>Table PS-2</b>	Modified Mercalli Intensity Scale	16

## LIST OF FIGURES

<b>Section</b>		<b>Page</b>
<b>Figure PS-1</b>	Seismic Hazard Zones	18
<b>Figure PS-2</b>	Fault Map	19
<b>Figure PS-3</b>	Flood Hazard Zones	20
<b>Figure PS-4</b>	Hazardous Materials Map	21
<b>Figure PS-5</b>	Emergency Facilities Map	22

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## INTRODUCTION TO THE PUBLIC SAFETY ELEMENT

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The Public Safety Element is directly concerned with reducing the potential risk of loss of life, injury, property damage, and economic and social dislocation resulting from a disaster, accident, or other hazard. This element outlines goals and policies to mitigate identified hazards specific to Mission Viejo. The Public Safety Element was first adopted on October 8, 1990 and previously updated on February 2, 2009.

### PURPOSE OF THE PUBLIC SAFETY ELEMENT

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Section 65302(g) of the State of California Government Code requires general plans to include, “a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, and dam failure; slope instability leading to mudslides and landslide, subsidence and other geologic hazards known to the legislative body; flooding and wildland and urban fires.”

The Element contains goals and policies that will minimize the risks associated with identified hazards in order to protect the community. Much of the background information necessary to formulate goals and policies is included in the Public Safety Element Technical Report and the Master Environmental Assessment (MEA). These reports identify the major hazards that might affect the City as well as the resources that are currently available to respond in the event of an emergency.

### RELATED PLANS AND PROGRAMS

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#### **Mission Viejo General Plan**

The Public Safety Element is closely related to the goals, policies, plans, and programs outlined in the other Mission Viejo General Plan Elements. The Land Use Element, for example, contains land use policies to ensure that development does not occur in areas that may be subject to flooding, landslides, wildland fires, or other hazards. The Circulation Element ensures efficiency of roadways in moving large numbers of people during emergency situations.

#### **Emergency Operations Plan (EOP)**

Mission Viejo has prepared an Emergency Operations Plan to address the City’s response in the event of a large scale disaster or emergency situations. The City of Mission Viejo Emergency Operation Plan closely relates to the Public Safety Element because it outlines the City’s response to emergency situations. The EOP is required by all California cities and the California Emergency Management Agency (Cal EMA) has provided directives concerning the preparation of the EOP.

The EOP's focus is on the operational concepts and response procedures relative to large-scale disasters. The City of Mission Viejo adopted the Emergency Operations Plan (EOP) in 1992. This plan received substantive updates in 1999 and 2003 to be in full compliance with the California Standardized Emergency Management System (SEMS), qualifying the City of Mission Viejo for disaster reimbursement from the State of California. The policies and measures indicated in this Public Safety Element are designed as supplements to the specific procedures contained in the City's EOP for emergency responses.

### **Local Hazard Mitigation Plan (LHMP)**

The purpose of hazard mitigation is to help reduce the loss of life and property during disaster events. Mitigation measures are permanent long-term solutions to repetitive damages that have occurred as a result of natural or man-made disasters. The purpose of mitigation planning is to identify local policies and actions that can be implemented over the long-term to reduce risk and future loss from disasters, and create safer, more disaster-resilient communities. Mitigation requires the coordinated effort and participation of a wide range of stakeholders and the public in the planning process. Proactive mitigation is an investment in the community's future safety and sustainability.

Following the Ferrocarril Landslide, which occurred in 2005, the City prepared a Local Hazard Mitigation Plan (LHMP) to secure funding for a proposed repair to the landslide area. The LHMP was approved by the California Governor's Office of Emergency Services (OES) and the Federal Emergency Management Agency (FEMA) in 2007. In 2014 the City prepared a comprehensive update to the LHMP, which will enable the City to apply for disaster assistance grants related to hazard mitigation activities.

### **County of Orange**

Other plans related to public safety include the County's Safety Element of their General Plan, which describes regional hazards and County procedures for emergency response. The County's Waste Management Plan also is referenced within this Element as it relates to the transportation and disposal of waste materials in Mission Viejo and the state and local policies for control of these materials.

### **SCOPE AND CONTENT OF ELEMENT**

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The Public Safety Element is organized into two main sections: the Public Safety Goals and Policies and the Safety Plan. The Public Safety Goals and Policies contain broad goals of minimizing risk and specific policies emphasizing emergency preparedness and prudent land use planning. The Safety Plan builds upon the assessment of local hazards contained in the City's Master Environmental Assessment and the Public Safety Element Technical Report. The Safety Plan identifies appropriate standards that are needed to ensure that adequate levels of emergency services are provided.

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## PUBLIC SAFETY ELEMENT GOALS AND POLICIES

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This section contains goals and polices focused on reducing the risks associated with hazards where mitigation is possible. The following goals and policies are grouped into a number of major hazard areas ranging from natural to man-made hazards.

There is an important relationship between land use planning and the reduction of potential hazards. Certain considerations need to be given when development is proposed in areas subject to environmental constraints that could result in loss of life, personal injury, or property damage. In addition, physical design controls provide protection against a number of potential hazards. Policies related to building design and site planning provide a basis for the development of specific guidelines and regulations that are effective in reducing the damaging effects of natural and man-made disasters.

### GEOLOGIC HAZARDS

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Landslides, subsidence, uplift, erosion, and dangerous soil characteristics (expansive, peat, sulfate, gaseous, and corrosive soils, and hydro-consolidation) are natural geologic occurrences that can have devastating impacts on developed areas resulting in property damage, and even loss of life. As part of the City's mandate to protect the public health and safety, it must ensure that new development is constructed on lands that are geologically safe or that have been properly prepared for development. For these reasons, the following goal policies are established:

**GOAL 1:     Protect the community from hazards associated with geologic formations.**

**Policy 1.1:**     Require soil and geotechnical reports for new developments, both residential and commercial. Development in areas that contain potentially hazardous geologic/soils conditions shall require detailed geotechnical studies and mitigation measures that reduce the identified risks prior to the approval of development.

**Policy 1.2:**     Monitor known and potential geologic hazards in the City through periodic updates to the City's Master Environmental Assessment and Emergency Operations Plan.

**Policy 1.3:**     Coordinate with the County of Orange and surrounding jurisdictions to reduce geologic hazard conditions.

## SEISMIC HAZARD

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Mission Viejo is situated in a seismically active region. The California Building Codes reference modern design standards from the American Society of Civil Engineers (ASCE 7) requiring that all buildings be designed to resist earthquake ground motions based on ground-acceleration maps developed by the US Geological Survey (USGS). The City is aware of the need to cooperate with local and state agencies to reduce the risk of seismic hazards to its inhabitants. The State of California passed the Alquist-Priolo Special Studies Zone Act and the Seismic Hazards Mapping Act to assist localities in identifying and mitigating potential seismic hazards.

**The Alquist-Priolo Special Studies Zone Act** was passed in 1972 by the State legislature to mitigate the hazards of surface faulting to structures for human occupancy. The State Geologist designates regulatory zones (known as Earthquake Fault Zones) near active faults that have the potential to surface rupture. Proposed development projects within Earthquake Fault Zones require a geologic investigation prior to local government approval. A licensed geologist must carry out the geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. The most recent list of cities affected by the Alquist-Priolo Earthquake Fault Zones was published in January 2010 by the Department of Conservation, California Geological Survey. Mission Viejo is not listed as one of the affected cities.

**The Seismic Hazards Mapping Act** was passed on April 1, 1991 by the State legislature to identify areas where earthquakes are likely to cause shaking, liquefaction, landslides, or other ground failures, and to regulate development to reduce future earthquake losses. The process for this act is similar to the process outlined in the Alquist-Priolo Special Studies Zone Act. The State Geologist designates regulatory zones (called Zones of Required Investigation) in areas where seismic hazards exist. The Zones of Required Investigation require geologic investigations and appropriate mitigation measures prior to obtaining building permits. When real property within the zones is sold, the seller or the seller's agent must disclose this fact to potential buyers.

Using the above-mentioned acts, the City of Mission Viejo implements planning and building standards ensuring new development implements mitigation measures thus reducing the risk of damage from seismic events. In addition, maintenance of public facilities is necessary to reduce the risk of hazards involving a major structure, such as dam failure, as a result of a seismic event. The following goal and policies have been adopted by the City to help reduce risks to its inhabitants from seismic hazards:

**GOAL 2:      Reduce the risk of seismic hazards.**

**Policy 2.1:**   Follow established standards for grading and construction to mitigate the potential for seismic hazards.

**Policy 2.2:**   Support continued State inspection of the Upper Oso Reservoir Dam, El Toro Reservoir Dam, and Lake Mission Viejo Dam to reduce risk of dam failure as a result of a seismic event.

- Policy 2.3:** Coordinate with the County of Orange, Caltrans and surrounding jurisdictions to reduce seismic hazard conditions and preparing for seismic event conditions.
- Policy 2.4:** Coordinate with Caltrans and the County of Orange to ensure that any seismic hazards associated with bridges are identified and corrected.
- Policy 2.5:** Ensure that critical facilities, such as hospitals and schools, are not located across active or potentially active faults.
- Policy 2.6:** Continue to implement operational guidelines and design standards, consistent with Public Utility Commission limitations, for subsurface transmission lines including natural gas, petroleum, water, and waste water which minimize potential environmental damage resulting from operational failure due to natural or man-made catastrophes.
- Policy 2.7:** Monitor any proposed changes to the Alquist-Priolo Special Studies Zone Act and the Seismic Hazards Mapping Act that may impact the City.

**(See figure PS-1 Seismic Hazard Zone Map and figure PS-2 Fault Map)**

## **FLOOD HAZARD**

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New development results in more impermeable surfaces such as parking lots, paved streets, etc. These impermeable surfaces result in increased runoff during storms sometimes resulting in flooding. Four watercourses exist through parts of the City. Land uses that exist in or adjacent to these flood plains may become threatened in the case of a 100-year flood event or a stream blockage. In addition, in the unlikely event of a dam failure, flooding of portions of the City may occur. Areas subject to flooding and dam inundation should contain only those land uses that are appropriate with potential flooding conditions (open space, parks, etc.). Any structures within flood-prone areas should be protected from flooding events. For these reasons, the following goals and policies are established:

**GOAL 3: Protect the City’s inhabitants from risk associated with flood hazards.**

- Policy 3.1:** Maintain appropriate land use designations for areas subject to flooding.
- Policy 3.2:** Identify flood hazard areas and implement a system of protective controls.
- Policy 3.3:** Work with the Federal Emergency Management Agency and the County of Orange in reducing community risk due to flooding.
- Policy 3.4:** Prohibit development, grading, or filling in floodplain areas with the exception of necessary public roadways, water supply projects, flood control projects, recreational uses, or where the primary function is improvement of fish and wildlife habitat.

- Policy 3.5:** Maintain and update a storm drain master inventory.
- Policy 3.6:** Coordinate the city's storm drain master inventory with adjacent communities.
- Policy 3.7:** Give priority to less intrusive, environmentally compatible flood control projects over extensive man-made controls.

(See figure PS-3 Flood Hazard Zone Map)

## **DISASTER PREPAREDNESS PLAN**

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Manmade and natural disasters can have devastating consequences on a community that is not prepared for such a catastrophe. While emergency preparedness cannot always prevent a disaster from occurring, the loss of life, injury, and property damage can be substantially reduced in most instances. Most experts agree that the effects of a major disaster can be significantly reduced if persons are familiar with the appropriate actions to take in the event of a major disaster or crisis. The importance of emergency preparedness in the City is underscored by the following goal and supporting policies.

**GOAL 4: Develop and maintain a disaster preparedness plan.**

- Policy 4.1:** The City's adopted Emergency Operations Plan (EOP) shall serve as the City's disaster preparedness plan, which shall identify all resources and funds (City, County, State and Federal) available for use in the event of a natural or man-made disaster.
- Policy 4.2:** Establish standard operating procedures or programs under the EOP, such as debris removal, care and sheltering support operations, communications, evacuation and economic recovery.
- Policy 4.3:** Establish procedures for requesting emergency funds from State and Federal sources.
- Policy 4.4:** Maintain financial reserves at adequate levels to allow for disaster response activities, such as debris removal, care and sheltering operations, communications, evacuation and economic recovery.

## **HAZARDOUS MATERIAL EXPOSURE**

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The handling and storage of hazardous materials, both household and industrial, has become a daily occurrence within urban areas. Many households and commercial and industrial establishments throughout Mission Viejo store and/or use hazardous materials in some capacity. When improperly stored and disposed of, these materials can result in a multitude of hazards for the community including fire, water contamination, illness, and death.

The Southern California Association of Governments (SCAG) with input from the Orange County Health Care Agency has prepared a Hazardous Waste Management Plan that encompasses a regional plan to dispose of, store, and reduce the risks associated with hazardous waste. The associated hazardous materials issues include accidental spillage of wastes, the transportation of wastes through populated areas, and disposal of wastes in a safe manner.

One of the greatest risks to a community from hazardous materials is during the transportation of materials from suppliers to users on freeways, streets, and railroads. The California Department of Transportation is the primary regulatory authority for interstate transport of hazardous materials, establishing safe handling procedures. The California Highway Patrol enforces the regulations regarding hazardous material transportation.

Hazardous materials such as petroleum and natural gas can also be transported through underground pipelines. These underground pipelines have the potential to rupture contaminating drinking water and causing fire. The California State Fire Marshal, Office of Liquid Pipeline Division, enforces and inspects underground pipelines. The Orange County Fire Authority (OCFA) has emergency response authority in the event of a ruptured pipeline.

The Orange County Fire Authority's other responsibilities include inventorying the distribution of hazardous materials. The OCFA has developed and implemented area emergency plans to respond to a hazardous material incident and requires businesses that handle hazardous materials to develop business emergency plans to deal with fire and the release of those materials.

The San Onofre Nuclear Generating Station (SONGS) is approximately 15 miles southeast of Mission Viejo. The nuclear power plant is located next to San Onofre State Beach, on Camp Pendleton U.S. Marine Corps Base. In 2013, Southern California Edison announced plans to permanently decommission SONGS due to design defects of the two steam generators. The SONGS Inter-jurisdictional Planning Committee (IPC) has committed to maintaining emergency response capabilities related to nuclear preparedness throughout the SONGS decommissioning process, and will continue the multi-agency partnership to accomplish this goal. As a part of the ongoing emergency planning, the IPC will retain the ability to receive information, independently monitor and assess conditions, and take actions to protect residents, visitors, and emergency workers. Although plans will vary by agency, these public safety capabilities include law enforcement, fire and medical, radiological monitoring, multi-agency coordination, and public information.

The Nuclear Regulatory Commission establishes an area around all nuclear power plants identified as an Emergency Planning Zone (EPZ). Extensive planning efforts within the SONGS EPZ are provided for emergency actions in the unlikely event of a serious emergency. The State of California has defined the area around and adjacent to the Emergency Planning Zone as the Public Education Zone. Mission Viejo falls within the Public Education Zone. For these reasons, the following goal and policies are established:

**GOAL 5: Protect the City's inhabitants from exposure to hazardous materials and wastes.**

**Policy 5.1:** Cooperate with the County and SCAG in implementation of its Hazardous Waste Management Plan.

**Policy 5.2:** Cooperate with railroad operations to ensure that hazardous materials transported by rail do not pose a threat to life or property.

**Policy 5.3:** Land uses involving the production, storage, transportation, handling, or disposal of hazardous materials shall be located a safe distance from other land uses that may be adversely affected by such activities.

**Policy 5.4:** Establish transportation routes for the conveyance of hazardous materials.

**(See figure PS-4 Hazardous Materials Map)**

## **FIRE**

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The City's urban fringe and rural residential areas are prone to wildland fire hazards. These areas are subject to both wild and urban fires due to the proximity to Cleveland National Forest. The region's natural vegetation is highly prone to wild fire, with the potential that a fire in the national forest could spread to developed areas of the City. The urbanized areas of the City are also subject to structural fires.

In July 1995 the State Department of Forestry and Fire Protection (Cal Fire) established Very High Fire Hazard Severity Zones (VHFHSZ) within the County of Orange, which generally included areas of a community in close proximity to undeveloped wildlands. As required by Cal Fire at the time, the City Council adopted the VHFHSZ in November 1995 via Ordinance No. 95-151.

In October 2011 Cal Fire requested cities adopt updated VHFHSZ maps. However, coordinating with both Cal Fire and the Orange County Fire Authority (OCFA), it was determined the City was exempt from the VHFHSZ, based on a provision of state law that exempts jurisdictions with vegetation management and building construction standards that are equivalent to or more restrictive than the state law requirements. Therefore, on July 2, 2013 the City Council repealed the VHFHSZ previously adopted with Ordinance 95-151; however, as requested by Cal Fire and OCFA at the time, the City adopted a Special Fire Protection Area (SFPA), to enable identification of the portions of the City most likely to be impacted by wildfire, in absence of the VHFHSZ.

The SFPA maps were meant as a local designation only, to enhance fire protection measures, and were not meant for other purposes such as real estate disclosures. However, the SFPA maps led

to confusion for property owners and the real estate community. As a result, the City again consulted with Cal Fire and OCFA, including attendance of Chief Tonya Hoover, State Fire Marshal with Cal Fire, and Chief Lori Smith, Fire Marshal with OCFA, at a March 2, 2015 City Council meeting. At the meeting, Chief Smith stated that the Codes the City had in place were adequate to exempt the City from the VHFHSZ maps, without need for the SFPA designation. Accordingly, the City Council adopted Ordinance 15-304, repealing the SFPA designation, and instead relying on the City's preexisting building codes to ensure public safety.

The City will continue to reduce the potential for dangerous fires by further coordinating with the Orange County Fire Authority (OCFA) to implement fire hazard education, fire protection, and fuel modification programs. In addition, the City will work closely with local water districts and OCFA to ensure that water pressure is adequate for fire fighting purposes.

For these reasons, the following goal and policies are established:

**GOAL 6: Protect the City's inhabitants from risk associated with fires.**

**Policy 6.1:** Continue to work closely with OCFA on educating residents and businesses regarding wildland fire hazards, including "Ready, Set, Go!" training from OCFA upon request of residents.

**Policy 6.2:** Implement and enforce established regulations for fire-resistant building materials for areas subject to wildland fire hazards.

**Policy 6.3:** Maintain mutual aid agreements with the County of Orange and surrounding cities for fire protection.

**Policy 6.4:** Work closely with the Orange County Fire Authority to establish and maintain a wildfire defense planning and weed abatement programs to reduce the danger of vegetation fires in or adjacent to the City.

**Policy 6.5:** Work closely with the OCFA to adopt and enforce the most current edition of the California Fire Code.

**Policy 6.6:** Establish a vegetation management program in brush areas.

## CRIME

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In 2013 the City of Mission Viejo was named the safest city in California and the ninth safest city in the United States by independent private research and publishing company, CQ Press. The CQ Press award is based on a city's reported crime rate in six basic categories: murder, rape, robbery, aggravated assault, burglary and motor vehicle theft. While this achievement is one to be proud of, continued diligence in deterring crime will ensure that the City continues to be the safest city in the state and one of the safest in the country. For these reasons, the following goals and policies are established:

**GOAL 7: Protect the City's inhabitants and businesses from criminal activity.**

**Policy 7.1:** Provide substantive levels of police service and protection.

**Policy 7.2:** Encourage development of programs and practices that incorporate crime prevention methods, techniques, and experience into the planning process and improve public awareness of ways to reduce criminal activity.

**Policy 7.3:** Continue to coordinate land use proposal reviews with Mission Viejo Police Services to assure that police patrol services are adequately addressed.

**Policy 7.4:** Continue to provide an effective approach and response to the removal and abatement of graffiti.

## WATER QUALITY

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Water is an essential resource for sustaining life. Therefore, the protection of this resource is a priority for the City of Mission Viejo. As mandated by the California Regional Water Quality Control Board, San Diego Region, cities in South Orange County are required to develop a program to control the discharge of pollutants. The program includes measures to prevent and treat pollutants from entering the watershed. For these reasons, the following goal and policies are established:

**GOAL 8: Protect the City's water quality and watersheds from risk associated with urban runoff.**

**Policy 8.1:** Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and where feasible slow runoff and maximize on-site infiltration of runoff.

**Policy 8.2:** Implement pollution prevention methods supplemented by pollutant source controls and treatment. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to

minimize the transport of urban runoff and pollutants offsite and into a municipal separate storm sewer system (MS4).

- Policy 8.3:** Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones. Encourage land acquisition of such areas.
- Policy 8.4:** Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.
- Policy 8.5:** Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of structural and non-structural best management practices to mitigate the projected increases in pollutant loads and flows.
- Policy 8.6:** Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.
- Policy 8.7:** Reduce pollutants associated with vehicles and increasing traffic resulting from development. Coordinate local traffic management reduction efforts with Orange County Transportation Authority's Congestion Management Plan.
- Policy 8.8:** Ensure post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the maximum extent practicable.

## RELATED GOALS AND POLICES

The goals and policies contained in the other elements are also important in addressing public safety issues. A number of goals and policies contained in the Conservation and Open Space Element are concerned with development restrictions in areas subject to environmental constraints that might affect both persons and property. The Housing Element also contains policies that underscore the importance of ensuring that housing is both safe and decent. Other elements containing policies that serve to support the aims expressed in this Element are identified in Table PS-1: Public Safety Policies by Element.

**TABLE PS-1  
PUBLIC SAFETY BY ELEMENT**

ISSUE AREA	POLICIES BY ELEMENT							
	Land Use	Housing	Circulation	Conservation /Open Space	Noise	Public Facilities	Economic Development	Growth Management
Protect community from geologic hazards	2.8, 2.9, 4.1-4.3	2.4, 4.2, 3.8		1.3, 3.1, 3.4		1.1, 1.2, 1.4		
Reduce the risk of seismic hazards	2.8, 2.9, 4.1-4.3	2.4, 3.8				1.1, 1.2, 1.4		
Protect community from flood hazards	2.8, 2.9, 4.1-4.3	2.4, 3.8		3.4		1.1, 1.2, 1.4, 6.1-6.3		
Develop a disaster preparedness plan		3.8, 4.1	1.1-1.13, 4.1-4.7, 5.4			1.1-1.4		
Protect community from hazardous materials exposure	2.8, 2.9, 4.1-4.3	2.4, 3.8		3.4		1.1, 1.2, 1.4, 7.1-7.4		
Protect community from fire Hazards	2.8, 2.9, 4.1-4.3	2.4, 3.8				1.1, 1.2, 1.4		
Protect Community from crime	2.1, 2.2, 2.5	3.8, 4.1	1.8			1.1-1.4		1.5
Protect community's water quality and watersheds from risk associated with urban runoff.	2.8, 2.9, 4.3	2.4, 3.8		1.1, 1.2		5.1-5.6, 6.1-6.3		

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## **THE PUBLIC SAFETY PLAN**

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This section of the Public Safety Element includes an assessment and discussion of emergency preparedness planning needed both to provide everyday safety and emergency services, and to respond to major disasters. This section serves as a supplement to the City's Emergency Operations Plan (EOP), which identifies appropriate actions to be taken by City staff in response to an emergency. In addition, the Plan identifies standards needed to ensure that an adequate level of emergency service is provided in the future.

### **INTRODUCTION AND SCOPE OF THE PLAN**

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A broad variety of public safety services are provided by several public agencies. Most significant are fire response and safety as provided by the Orange County Fire Authority and law enforcement services by the Orange County Sheriff's Department. Other City departments provide day-to-day services related to public safety. The Public Works Department is responsible for the maintenance of streets, flood control, and some aspects of public safety. Also, the Public Works Director coordinates health related activities during major disasters and is responsible for guiding the construction and engineering of disaster response and recovery operations.

The City's Building Services Division is responsible for the enforcement of construction codes for safety. Other agencies involved in public safety service having jurisdiction or public safety services within the City include the California Highway Patrol, the State/National Guard, and the County Health Care Agency and its branches. Service from these outside agencies should continue to be available, somewhat independent of the City's planned development and control. Therefore, the following sections concentrate primarily on services provided by the Orange County Fire Authority or the Orange County Sheriff's Department.

An earthquake, or even a more localized incident such as a chemical spill, may force the evacuation of thousands of people. Thousands of others may require emergency shelter and medical treatment. The Emergency Response and Action section of this Element identifies emergency evacuation routes and emergency shelters.

An emergency preparedness strategy will assist existing efforts by public officials in improving public readiness. The emergency operations procedures described in the City's EOP outline the responsibilities of City and contract County personnel in the event of disaster. As indicated, this information serves as a basis for future emergency preparedness planning in the City.

Emergency planning and preparedness, as considered in this Element, consists of three main components:

1. Potential public safety hazard areas and assessment;
2. Hazards mitigation; and
3. Emergency response and action.

Potential natural and man-made hazards have been identified in the Risk of Upset Section of the Master Environmental Assessment (MEA). The MEA contains supporting data and background material needed to assess the level of risk in the City. Hazards mitigation is accomplished by a number of goals and policies contained in the Element, which reduce the likelihood of environmental upset or the damaging effects that might result from a disaster or accident.

## POTENTIAL PUBLIC SAFETY HAZARD AREAS AND ASSESSMENT

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Mission Viejo is recently developed and structures were built under modern building codes using current construction techniques to minimize damage resulting from seismic shaking. Structures in the City meet local, County, and State construction codes and should withstand the level of shaking experienced in the area. Developments were planned and built in accordance with modern planning techniques to avoid placement of structures in potentially hazardous areas such as land subject to landslides and flooding.

Figure PS-1 indicates the location of the potential hazardous areas in the City that could pose a public safety threat. Hazardous areas include those areas that may be threatened by flooding, fire, explosion from a major railroad accident or line eruption, or those areas that contain unstable earth conditions. **Figure PS-1** illustrates the areas within the City that are subject to seismic shaking in the event of a major seismic event along the Newport-Inglewood Fault or the San Andreas Fault. The levels of intensity described by the figure are defined in **Table PS-2** by the Modified Mercalli Intensity Scale. Areas that would sustain the worst damage as a result of seismic shaking include steeply sloped areas that may be susceptible to landslides. Fire damage from a seismic event would also pose a safety hazard to residential areas should utility lines rupture following an earthquake, igniting surrounding structures.

The City's Public Safety Technical Report and Risk of Upset Section of the City's Master Environmental Assessment, as technical appendices to this Element, describe the major environmental hazards and their associated risks. Unstable geologic and soil conditions and areas that contain steep slopes over 30% grade present developmental constraints that could pose a risk to building safety. Wildland fire-prone areas occur in the undeveloped areas outside of the City; however, a major fire could threaten nearby homes in eastern Mission Viejo. Because the City is located along two major transportation corridors (Interstate 5 and the OCTA Metrolink Railroad right-of-way), potential hazards are associated with hazardous materials that may be transported

along these routes. Flooding hazards also pose a threat to those areas located within a dam inundation area or within a 100-year floodplain.

## HAZARD MITIGATION

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Certain planning practices will be considered when assessing development proposals within areas where hazardous risks are associated. The City's Zoning and Building Codes and the policies contained within this Element serve to reduce or avoid risks associated with the placement of development within hazardous areas. The State Building Codes designate Mission Viejo as being within climate zone 8, having a maximum wind speed of 85 mph, and wind exposure as 'C'. The Building Codes reference modern design standards from the American Society of Civil Engineers (ASCE 7) requiring that all buildings be designed to resist earthquake ground motions based on ground-acceleration maps developed by the US Geological Survey (USGS). These designations help designer's design and the City of Mission Viejo Building Department approve structures that will hold up against specific regional impacts.

The City has adopted the International Code Council (ICC) international family of codes. The ICC codes contain nationally utilized standards including fire safety requirements for minimum roadway width and minimum building clearance. The City has been developed under modern public safety codes for building construction and essentially no deficiencies associated with fire equipment access exist.

Because Mission Viejo has been recently developed, few hazards associated with development of sensitive areas exist. The City is mainly concerned with emergency preparedness and responsiveness in case of major disaster.

**TABLE PS-2**

<b>MODIFIED MERCALLI INTENSITY SCALE</b>	
<b>MAGNITUDE ON RICHTER SCALE</b>	<b>Effects At Different Levels of Intensity</b> <i>Intensity Scale of 1931 (abridged)</i>
<b>Below 3.0</b>	<b>I.</b> Not felt except by a very few under especially favorable circumstances.
<b>3.0-3.9</b> <b>Distance Felt:</b> <b>(approx. miles) 15</b>	<b>II.</b> Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing. <b>III.</b> Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibration like passing of truck. Duration estimated.
<b>4.0-4.9</b> <b>Distance Felt:</b> <b>(approx. miles) 30</b>	<b>IV.</b> During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Standing motorcars rocked noticeably. <b>V.</b> Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed.
<b>5.0-5.9</b> <b>Distance Felt:</b> <b>(approx miles) 70</b>	<b>VI.</b> Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
<b>6.0-6.9</b> <b>Distance Felt:</b> <b>(approx miles) 125</b>	<b>VII.</b> Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motorcars. <b>VIII.</b> Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Persons driving motorcars disturbed.
<b>7.0-7.9</b> <b>Distance Felt:</b> <b>(approx miles) 250</b>	<b>IX.</b> Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken. <b>X.</b> Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
<b>8.0-9.8</b>	<b>XI.</b> Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bend greatly. <b>XII.</b> Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.

Source: California Department of Conservation, Division of Mines and Geology, 1997.

## **EMERGENCY RESPONSE AND ACTION**

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Sound planning practices have been exercised during Mission Viejo's development to ensure that adequate services are provided for more common emergencies such as crime incidents, traffic accidents, fires, and emergency medical care. Figure PS-5 identifies the location of the fire stations and the major hospital in the City. Mission Viejo contracts with the County of Orange for its fire and police protection needs. Information concerning fire service and police protection is included in the City's Public Facilities Element.

The City's EOP designates the proper procedures that are to be followed in the case of a major emergency. Emergency procedures include knowledge of the facilities within the City that are available for emergency assistance. The City has designated City Hall as the Emergency Operations Center (EOC). The EOC functions as the location for centralized direction and control of emergency organizations for the general public.

During a disaster, the City coordinates shelter operations with the American Red Cross organization. One of the essential functions of the American Red Cross is to help disaster victims by providing safe shelter, food and essential relief supplies. The City of Mission Viejo has pre-established emergency shelters within the City that offer emergency first aid, disseminate information, and serve as a community information center where individuals can leave messages for friends and relatives.

An emergency response is also required in the case of a nuclear incident threat. The potential for such a threat increases with the volume and variety of radioactive materials potentially generated, stored, or transported in Mission Viejo and surrounding areas. As outlined in the City's EOP, the City's reaction to a nuclear incident may involve various local, special district, State and Federal agencies. The EOP identifies the actions necessary for the proper response to a potential nuclear threat as well as the local agency responsibilities.

## **HAZARDOUS MATERIALS PLAN**

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Emergency response procedures in the case of a disaster involving hazardous materials are outlined in the City's Emergency Operations Plan and the County's Hazardous Waste Management Plan. Such emergency procedures are directed by the County's Fire Incident Command System. The City will cooperate and assist in emergency operations as required under their EOP. Policies contained in this Element serve to protect the City's inhabitants from hazardous waste disasters through implementation of the City's EOP and the County's Hazardous Waste Management Plan. The City also has adopted a Hazardous Waste Facility Siting ordinance to establish uniform standards in order to control the location, design, and maintenance of hazardous waste facilities. The City's zoning code also contains restrictions on the placement of hazardous waste facilities.

**(See figure PS-5 Emergency Facilities)**

**Legend**

- City Boundary
- Lakes
- ▨ Earthquake - Induced Landslides
- ▤ Liquefaction



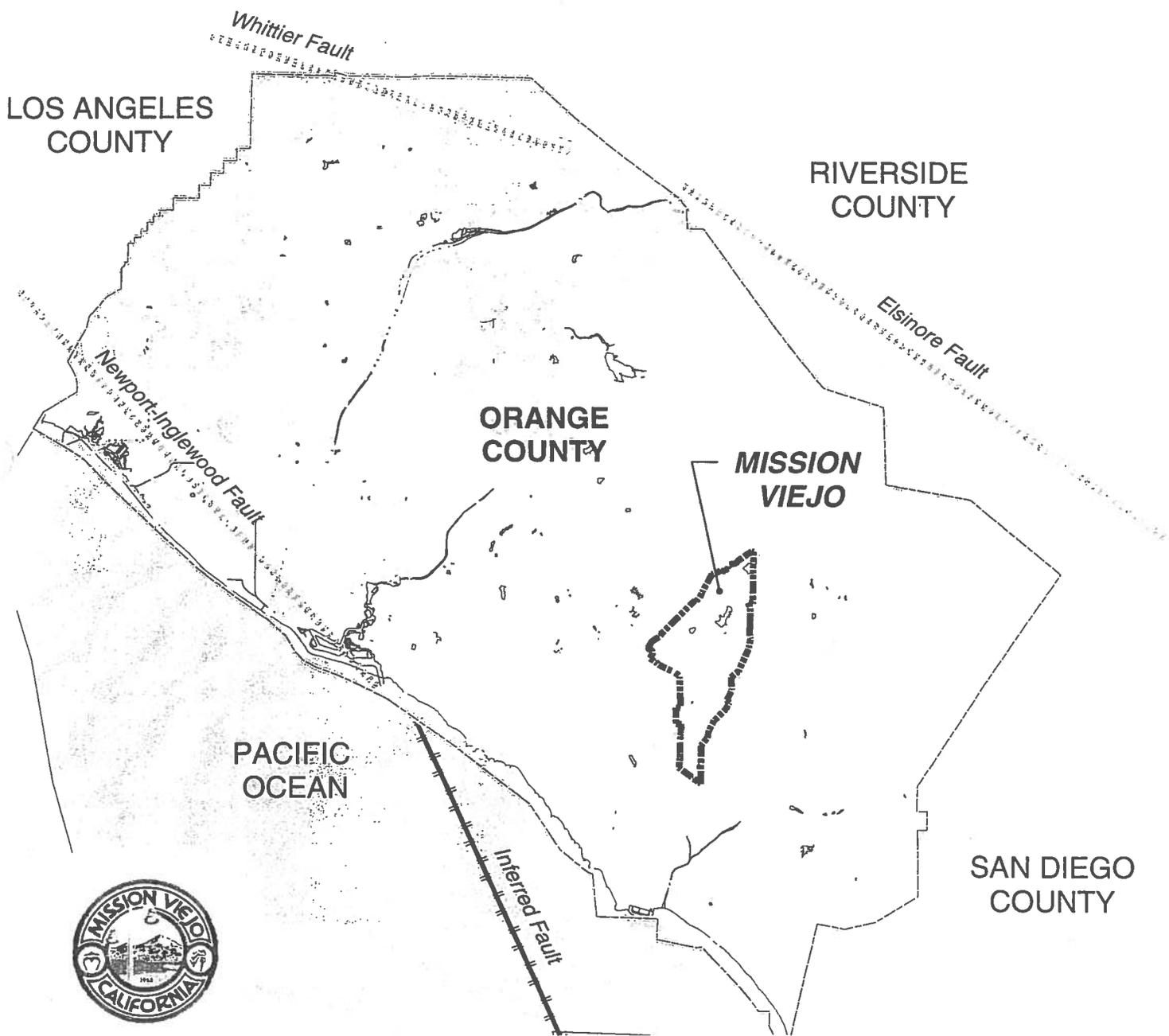
**FIGURE PS-1**  
**CITY OF MISSION VIEJO**  
**SEISMIC HAZARD ZONES**

Source: California Department of Conservation



**Legend**

- ▬▬▬▬ Mission Viejo City Boundary
- ▬▬▬▬ Orange County Boundary
- ⋯⋯⋯ City Boundaries
- ▬▬▬▬ Faults
- ▬▬▬▬ Inferred Fault Location



**FIGURE PS-2**  
**CITY OF MISSION VIEJO**  
**FAULT MAP**



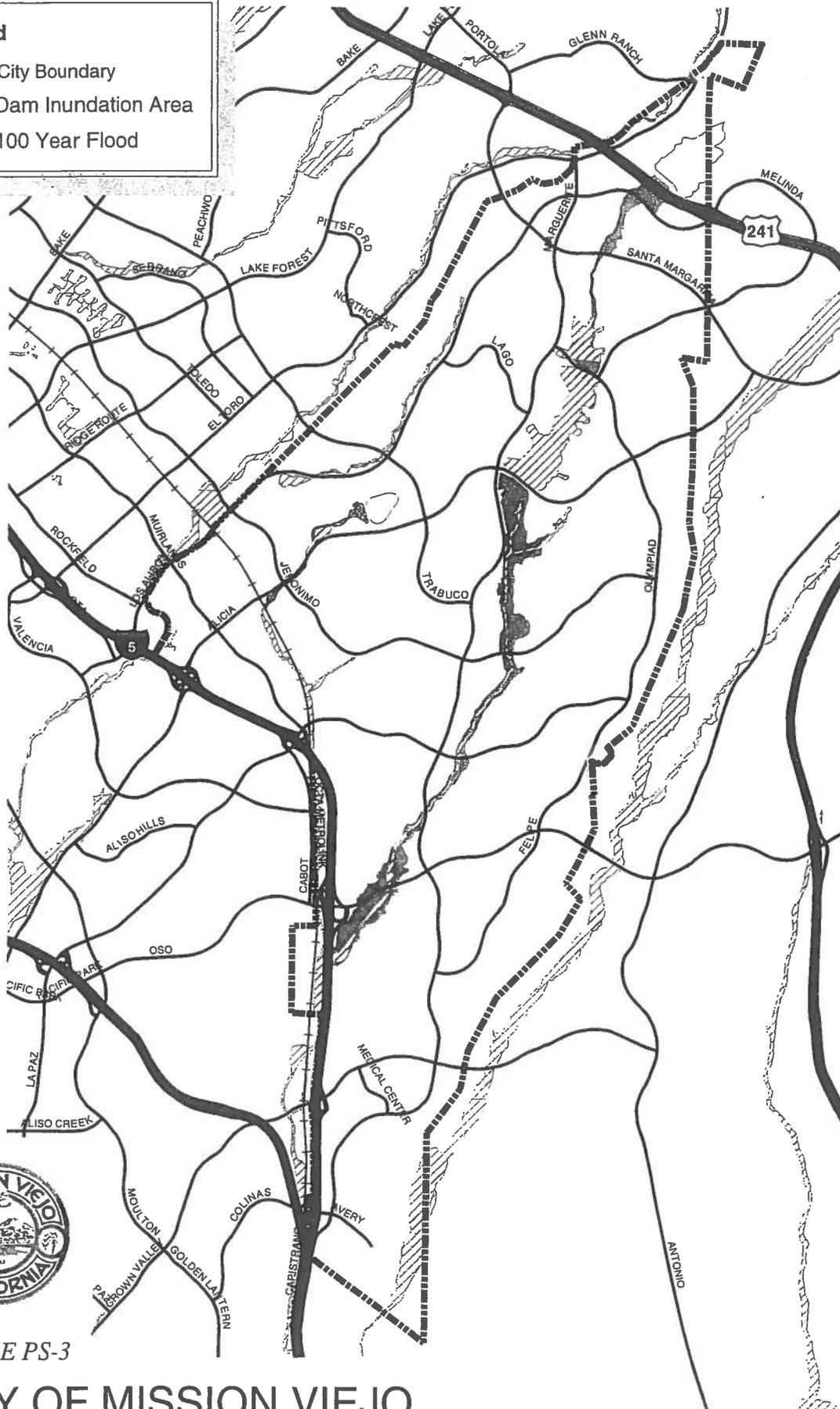
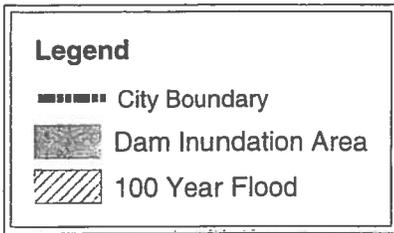


FIGURE PS-3

# CITY OF MISSION VIEJO FLOOD HAZARD ZONES

Source: Federal Emergency Management Agency



**Legend**

- ▬ City Boundary
- 10" Inactive Petroleum Pipeline
- ▣▣▣▣ 16" Petroleum Pipeline
- ▣ Major Gas Line (SCG)

**Hazardous Material Transportation Routes:**

- △△ I-5
- +++ OCTA

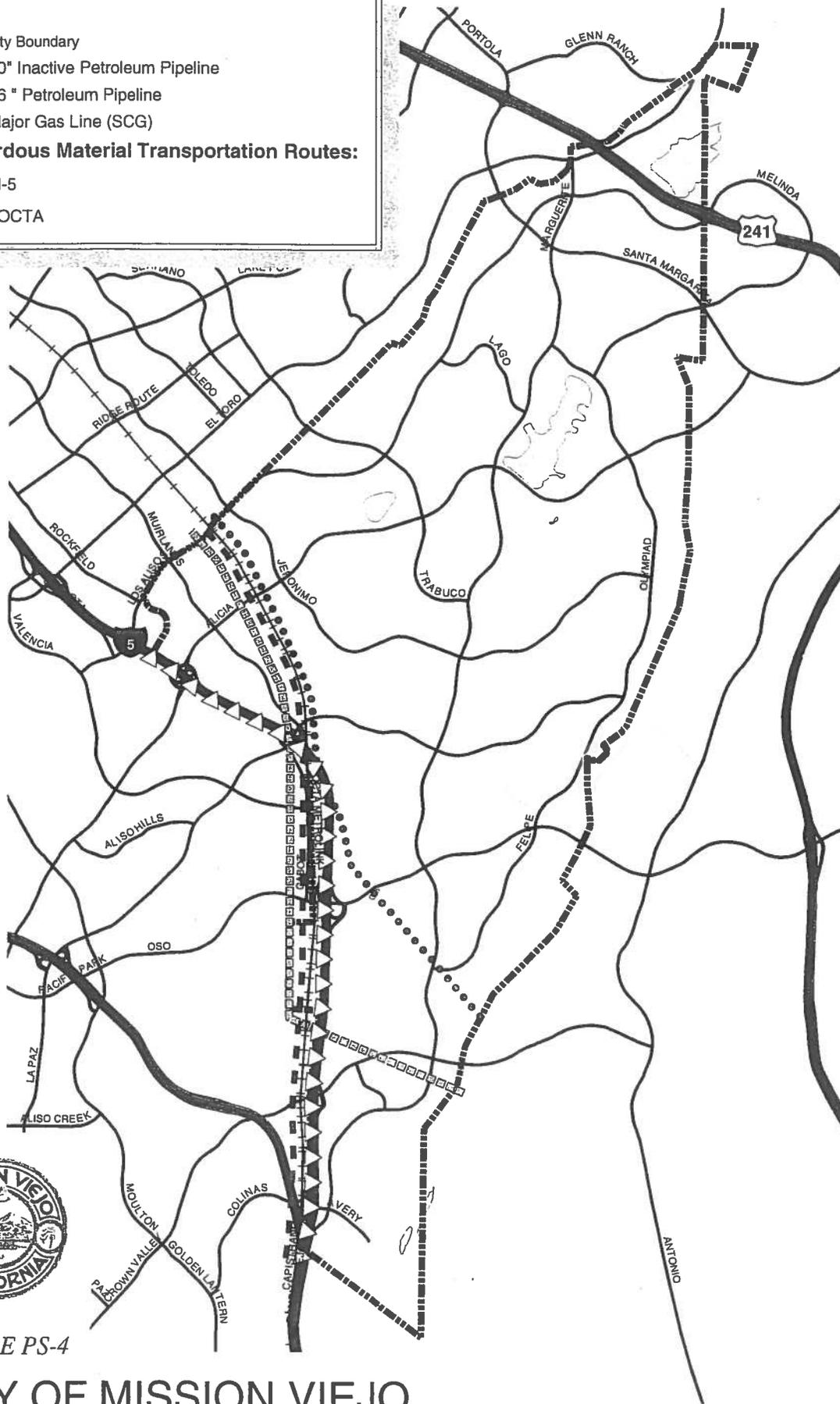


FIGURE PS-4  
**CITY OF MISSION VIEJO  
 HAZARDOUS MATERIALS MAP**





FIGURE PS-5  
 CITY OF MISSION VIEJO  
 EMERGENCY FACILITIES MAP

