SAFETY

Most recently amended on January 12, 2010 by resolution 10-R-12725. Originally adopted on March 6, 1976 by resolution 76-R-5427. The Seismic Safety element, which has been merged into this element, was originally adopted on March 7, 1975 by resolution 75-R-5326.

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Overview

Beverly Hills takes pride in maintaining a safe environment for its citizens. The primary purpose of the Safety Element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from earthquakes, both urban and wildland fires, terrorism, floods, earthquakes, landslides, public health emergencies, and other natural and man-made disasters. This element specifically addresses fire, flood, geologic and seismic hazards, hazardous materials, noise, and natural and man-made disaster preparedness.

Wildland Fires

Wildland fires present a substantial hazard to life and property in areas of Beverly Hills that are built within or adjacent to hillsides and mountainous areas commonly referred to as the Wildland Interface. The area of the City north of Sunset Boulevard has been classified as the Very High Fire Hazard Severity Zone (VHFHSZ) as a result. Two factors contributing to the risk of a wildland fire igniting and spreading within the VHFHSZ include heavy vegetation adjacent to homes and residential lot densities, which increase the risk of fire-spread due to intense radiated heat as well as direct flame impingement on the homes. Burning homes, especially those with flammable wood roofs, can propagate the spread of a fire, particularly downwind during severe seasonal Santa Ana wind conditions.

Beverly Hills Fire Department

Urban Fires

Fires could also ignite in urbanized areas of the City because of a wildfire, earthquake, or some other phenomena. A disruption in the water system, causing a reduction in hydrant pressures, could allow a normally controllable structure fire to escape containment by firefighting forces and spread to adjoining buildings; or a fire that starts in the flatlands in severe winds might cause spot fires with flying brands and ignite other buildings downwind by igniting wood roofs or vegetation.


Beverly Hills High Fire Hazard Severity Zone

Beverly Hills maintains fire prevention and suppression plans and programs to prepare for and mitigate potential fire hazards. Mutual aid agreements with other agencies allow for increased equipment and staffing in emergencies. In addition, the City's Fire Code includes standards for building construction, renovations, and additions, and for the maintenance and clearance of vegetative growth.

Flood Hazards

Flash floods result from large and intense rainfalls that occur over short periods of time. The flooding would tend to occur in the winter

months when precipitation is greater, and can occur within several seconds to several hours, with little or no warning.


Coldwater Canyon Reservoir

Flooding may also result when water retention structures fail due to an earthquake. Portions of Beverly Hills are threatened by flooding from the City's Greystone Reservoir, and the City's five above-ground reservoirs and one partially below-ground reservoir. Damage to the structures caused by an earthquake, however, would probably be a minor breach, which would allow time for warning and reduction of the stored water in the reservoir. The City also lies in the inundation path of the Lower Franklin Canyon Reservoir which is located north of the City. In the event of a breach of this reservoir, the residential area north of Carmelita Drive would be exposed to immediate and severe danger. Below that point, the danger diminishes rapidly although flooding of most structures in this section of the inundation path would occur.

Geologic and Seismic Hazards

There are several active faults in or near the City of Beverly Hills, including the Hollywood and Santa Monica faults, which converge within the City, and the Newport-Inglewood Fault, located approximately 2 miles south of the City. Figure 1 identifies the regional faults affecting Beverly Hills. Figure 2 identifies areas within the City subject to seismic hazards. The City's proximity to active seismic faults makes it highly susceptible to geologic and seismic hazards, including expansive soils, subsidence, liquefaction, and landslides.

Liquefaction Hazard

Liquefaction is one of the most destructive secondary effects of seismic shaking. Liquefaction results from the loss of soil strength due to a sudden increase in pore water pressure during shaking. It occurs primarily in saturated and loose, fine to medium grained soils, in areas where the groundwater table is 50 feet or less below the surface. Liquefaction causes foundations of structures to move, leading to varying degrees of structural damage. In general, all of the South East area of Beverly Hills is underlain by recently deposited sediments that may include potentially liquefiable layers. If groundwater levels in this area rise to within 50-feet of the ground surface, the sediments would have a moderate to high susceptibility to liquefaction.

Expansive Soils Hazard

Soils that expand when exposed to water are considered expansive soils. Such expansion can cause structural damage to foundations and roads without proper structural engineering. Clay soils in Beverly Hills have potential for expansion and would swell and shrink with changes in moisture content.

Subsidence Hazard

Subsidence can occur as a result of excessive groundwater or petroleum withdrawals which cause the ground surface to sink. Subsidence produces cracks in pavements and buildings and may dislocate wells, pipelines, and water drains. Beverly Hills has experienced limited subsidence over the years; however, it is still a potential hazard within the City.

Landslide Hazard

Landslides are often associated with earthquakes, but other factors may also influence their occurrence, including the slope, the moisture content of the soil, and the composition of the subsurface geology. The City's hillside areas, north of Sunset Boulevard, are susceptible to hillside slope failures during heavy rains. Heavy rains or improper grading may trigger a landslide.

Hazardous Materials


Hillside Areas north of Sunset Boulevard

A hazardous material is defined as any material that due to its quantity, concentration, physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released. Federal, State, and local agency databases maintain comprehensive information on the locations of facilities using large quantities of hazardous materials, as well as facilities generating hazardous waste. Hazardous materials and/or sites found in Beverly Hills include brownfield sites, toxic discharge, leaking underground fuel tanks, and household hazardous waste.

Disaster Preparedness

The City has developed two plans designed to implement programs to facilitate emergency management: the Emergency Operations Plan (EOP) and the Hazard Mitigation Action Plan (HMAP), described below.

Emergency Operations Plan (EOP)

The EOP addresses the City's planned response to emergency situations associated with all hazards such as natural and man-made disasters, technological incidents, and national security emergencies. The EOP does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies (i.e. routine police and fire response calls). Instead, the operational concepts reflected in the EOP focus on potential large-scale disasters which can generate unique situations requiring unusual emergency responses.

Beverly Hills Disaster Response Trailer

Some emergencies will be preceded by a build-up or warning period, providing sufficient time to warn the public and implement mitigation measures designed to reduce loss of life and property damage. Other emergencies occur with little or no advance warning, thus requiring immediate activation of the emergency operations plan and commitment of resources. All City departments must be prepared to respond promptly and effectively to any foreseeable emergency, including the provision and utilization of mutual aid.

An Emergency Operations Center (EOC) is a location from which centralized emergency management can be performed during a major emergency or disaster. The City's primary EOC and an alternate EOC are located within the City. The Director of Emergency Services has the authority to direct all EOC activity. The Director of Emergency Management is responsible for the City's overall Emergency Management policy and coordination.

The plan/program provides an overview of operational concepts, identifies components of the City's Emergency Management Organization within the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS), and describes the overall responsibilities of federal, state, and local agencies for protecting life and property and assuring the overall well-being of the population.

Hazard Mitigation Action Plan (HMAP)

The HMAP includes resources and information to assist City departments, residents, public and private sector organizations, and others interested in participating in planning for hazards. The HMAP provides a list of activities that may assist the City in reducing risk and

preventing loss from future hazard events. The strategies address multi-hazard issues, as well as activities for earthquakes, wildfires, terrorism, earth movements, flooding, and wind storms.

Terrorism

Terrorism is a continuing threat throughout the world and within the United States. In recent years, terrorism has taken on new form with the introduction of chemical, biological, and radiological weapons. The probability that an individual/location will be targeted by a terrorist is a function of the attractiveness of the target, potential for success, and potential for avoiding identification and capture.

Beverly Hills is an internationally known, high-profile community with strong political and economic ties, and is frequently the focus of political events, dignitary visits, demonstrations, and marches. It is routine for Heads of State to visit and conduct business within the City. These factors make the City an attractive potential target for terrorist activity. It is not possible to estimate the probability of a terrorist attack. However, based on law enforcement's role in combating terrorism, the City has identified critical sites and has assessed the vulnerability of these sites to a terrorist attack. Venues likely to suffer the impact of terrorism include government facilities, entertainment and cultural facilities, including the business district, and the popular hotels.

In Beverly Hills, the Police Department is the lead agency for the City response/crisis management. The City's Office of Emergency Management is responsible for consequence management.

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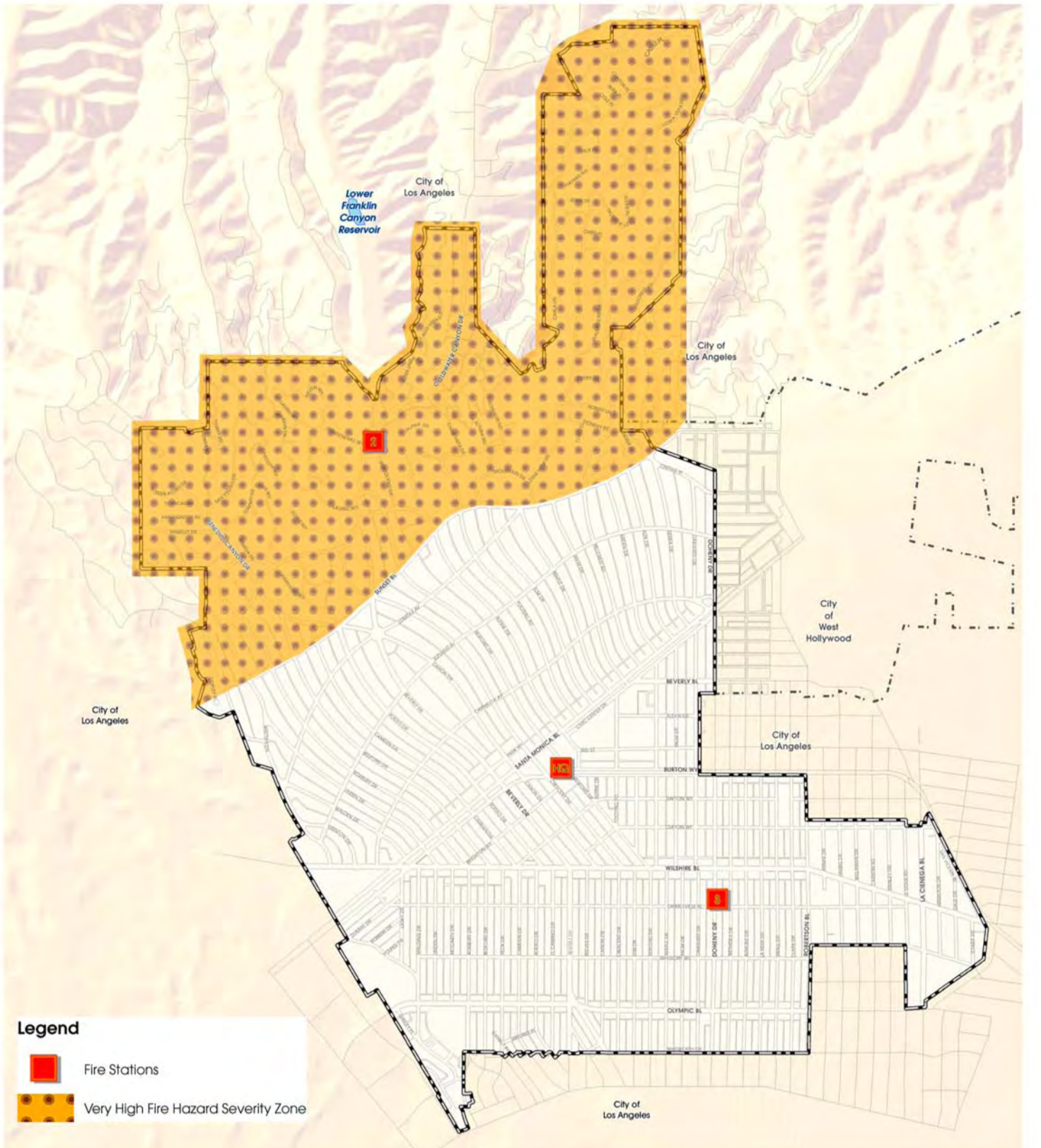
FIRE HAZARD SEVERITY ZONE



Source: City of Beverly Hills,

Figure S1

Feet
0 900 1,800 3,600

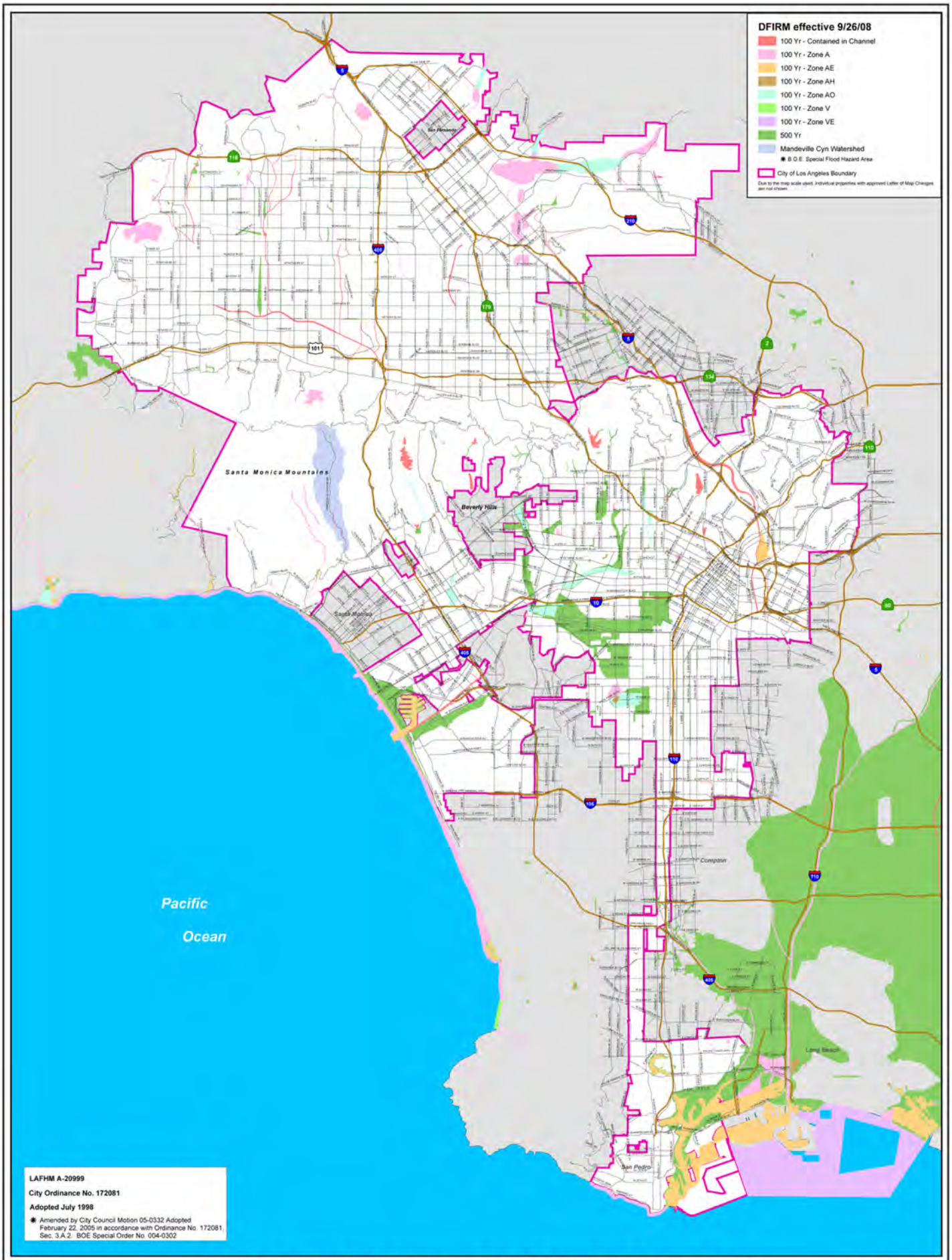


Figure S2 **LOS ANGELES FLOOD HAZARD MAP (LAFHM)**

CITY OF LOS ANGELES

Prepared by GIS Mapping, Bureau of Engineering, Dept. of Public Works - 04-06-2009

ANTONIO R. VILLARAIGOSA

GARY LEE MOORE, P.E.

REGIONAL FAULT MAP

Beverly Hills General Plan

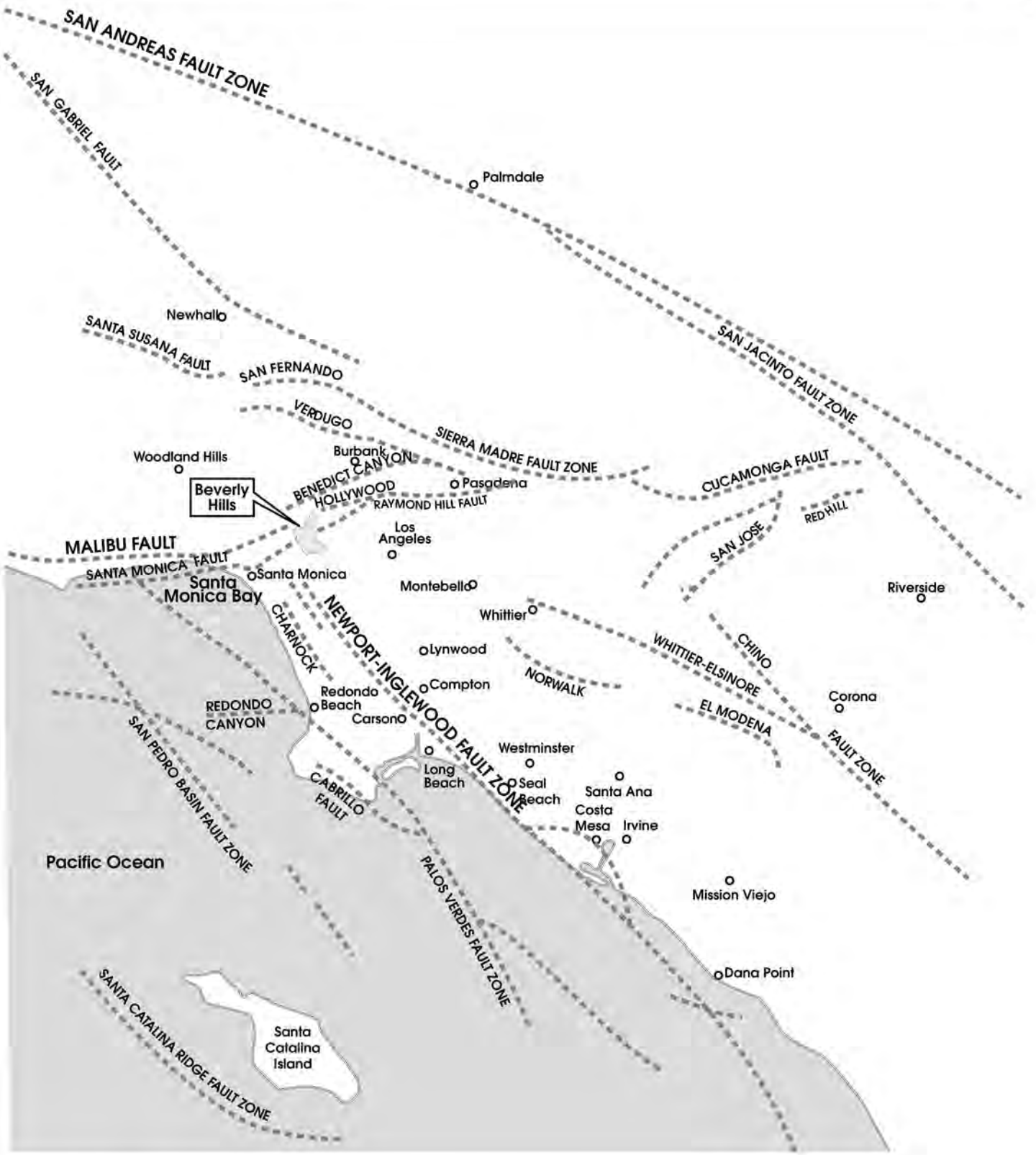


Figure S3

Source: CDMG OFR 93-03, 1993; USGS MFI-512, 1985

Miles
0 5 10 20

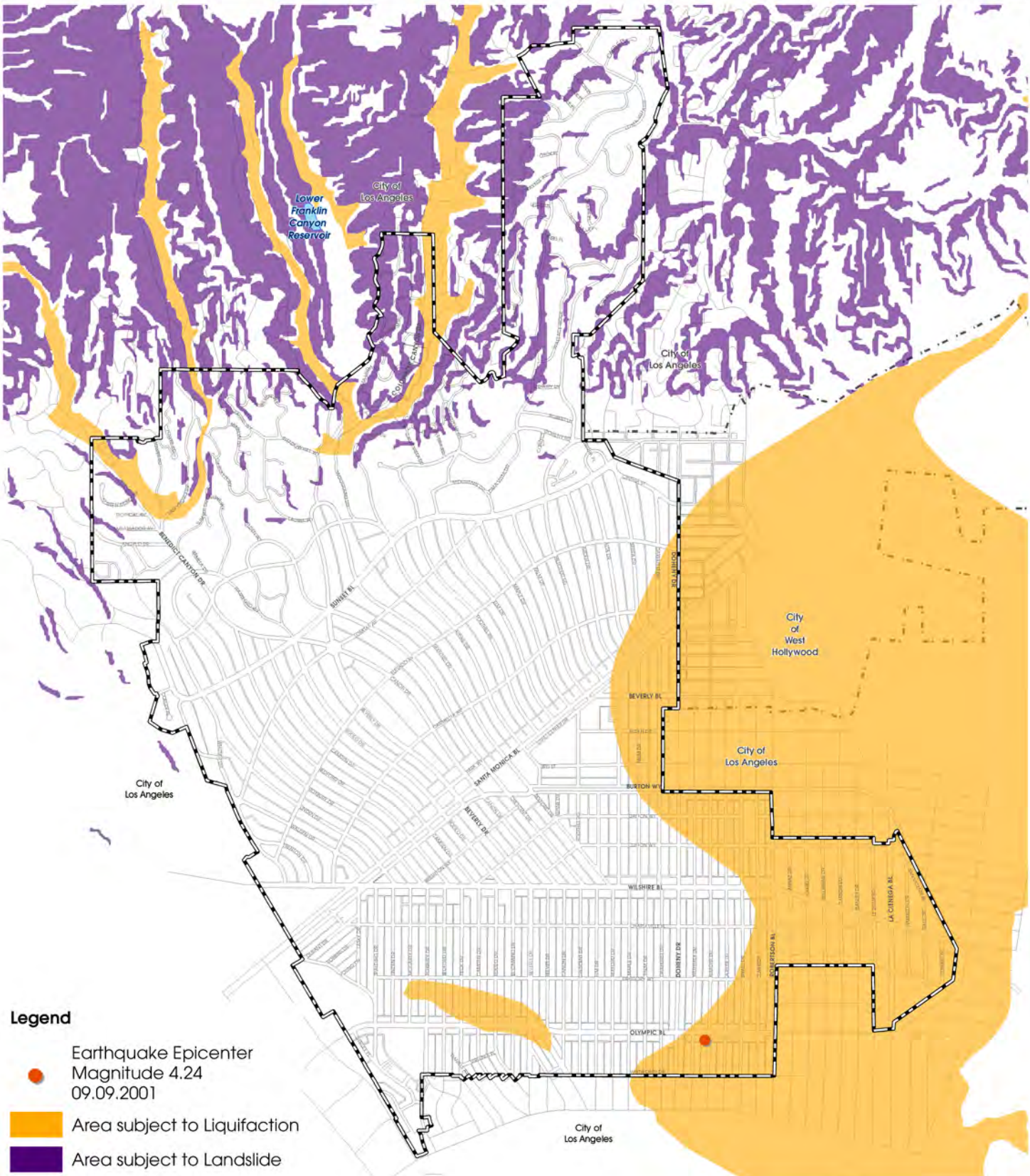


Figure S4

Source: PBS&J, 2008

Feet
0 1,000 2,000

Goals and Policies

S 1 Protection of Life and Property. The protection of human life and property from the risks of wildfires and urban fires.

S 1.1	**Water Supply Reliability.** Improve water supply reliability and capacity to fight wild fires and structure fires in the Zone 9 area, the Coldwater Canyon area, and other areas contiguous to the City, such as City of Los Angeles and Franklin Canyon Reservoir. (Imp. 3.2, 6.1)
S 1.2	**Property Maintenance.** Continue to require property owners to conduct regular maintenance on their properties to reduce the fire danger and maintain a fire-safe landscape. (Imp. 2.4, 5.3)
S 1.3	**Brush Clearance.** Conduct annual inspections and enforcement of the expanded requirement of 200 feet of brush clearance to increase defensible space around structures in the Very High Fire Hazard Severity Zone. (Imp. 1.3, 2.4)
S 1.4	**Hazard Mitigation Action Plan.** Review and evaluate annually for progress in implementing the City's Hazard Mitigation Action Plan, and revise as needed for compliance with local, State and Federal requirements every five years. (Imp. 1.3, 6.1)
S 1.5	**Fire Hazard Mitigation.** Require that fire hazard mitigation strategies, such as accelerating the 2013 compliance year for replacement of all non-Class A roofs in the VHFHSZ, are implemented and that effective public outreach and education is provided. (Imp. 1.3, 2.4, 8.1)

Goals and Policies

S 2 Fire Department Service. An efficient, well-equipped, and responsive fire department that offers maximum feasible personal safety and protection from loss of life and property caused by wildfires and urban fires.

S 2.1 **Fire Protection Service.** Continue to research and implement methods for modernizing and improving the efficiency and effectiveness of the Fire Department in responding to fires, suppressing fires, and mitigating fire hazards. (Imp. 6.1)

S 2.2 **Fire Protection Capability.** Maintain and expand the amount of firefighting equipment and personnel necessary for adequate initial response to fire emergencies in all buildings and areas in the City, including high-rise buildings and natural areas. Support and maintain mutual aid agreements to supplement those forces. (Imp. 6.1, 7.1)

S 2.3 **Emergency Management Exercises.** Conduct periodic fire related emergency management exercises with City personnel and surrounding jurisdictions. (Imp. 1.3, 7.1)

S 3 Existing and New Development and Redevelopment. All existing and new development and redevelopment address the provision of fire protection in a proactive and preventative manner.

S 3.1 **Safety Standards.** Continue to regularly update and enforce the City's building and fire codes to reflect the highest and best available standards for fire safety design as well as recommendations set forth by the "Fire Wise" assessment and Joint Wildland Interface Task Force. (Imp. 2.4)

Goals and Policies

S 3.2 **Impacts of New Development.** Assess the impacts of significant increases in development density and intensity, and subsequent impacts on traffic congestion, water infrastructure capacity, fire hazards, and emergency response times. (Imp. 2.1, 2.2)

S 3.3 **Fire Protection Services.** Require that new development and re-development of structures provide adequate fire safety features and responder access so as not to cause a reduction of fire protection services below acceptable, safe levels. (Imp. 2.4)

S 3.4 **Fire Department Access.** Design private and public access drives and roadways to preserve and maintain Fire Department access to properties. (Imp. 2.4)

S 3.5 **Fire Protection for New and Existing Buildings.** Require all new residential and commercial buildings, all substantial renovations, and all existing buildings having five-stories or exceeding a height of 55-feet, to be equipped with an automatic fire extinguishing system. (Imp. 2.4)

S 4 Protection from Flood Hazards. To reduce the potential risk of flood hazards to human life and public and private property.

S 4.1 **Flood Mitigation Design.** Require that new development incorporate sufficient measures to mitigate flood hazards, including the design of onsite drainage systems linking with citywide storm drainage, gradation of the site so that runoff does not impact adjacent properties or structures on the site, and elevation of the structures above any flooding elevation. (Imp. 2.3, 3.4)

Goals and Policies

S 4.2 **Permeable Surface Area.** Require the use of permeable surfaces for new development and redevelopment, including alleys and driveways for residential, commercial, and City properties. (Imp. 2.1)

S 4.3 **Storm Drain Clearance.** Research and implement new technologies to prevent trash and debris from entering storm water drains. (Imp. 3.4)

S 4.4 **Hazard Mitigation Action Plan.** Ensure that the City's Hazard Mitigation Action Plan is evaluated annually and revised every five years, that the current mitigation strategies addressing flood hazards are implemented where feasible, and that effective public outreach and education is included. (Imp. 1.3, 8.1)

S 4.5 **Reservoirs Assessment.** Develop and maintain a program for periodically assessing, monitoring, and maintaining the structural integrity of reservoirs. (Imp. 3.2)

S 4.6 **Facility Use or Storage of Hazardous Materials.** Require that all new facilities storing, using, or otherwise involved with substantial quantities of on-site hazardous materials within flood zones comply with standards of elevation, anchoring, and flood proofing, and that hazardous materials be stored in watertight containers. (Imp. 1.3, 2.1, 2.4, 3.2)

S 5 Protection from Geologic Hazards. To reduce the known level of risk to loss of life, personal injury, public and private property damage, economic and social dislocation, and disruption of vital community services that would result from earthquake damage or other geologic disturbance

Goals and Policies

S 5.1 **Safety Standards.** Require new development and redevelopment to be in compliance with seismic and geologic hazard safety standards, including design and construction standards that regulate land use in areas known to have or to potentially have, significant seismic and/or other geologic hazards. (Imp. 2.2, 2.4)

S 5.2 **Building and Fire Codes.** Continue to update the City's building and fire codes once every three years, or whenever the State updates the California building and fire codes, to reflect the highest and best available standards for seismic design and performance of buildings and to conform to State requirements. (Imp. 2.4)

S 5.3 **Reinforce Existing Buildings.** Continue to require upgrade of unreinforced masonry (URM) buildings to address any structural and nonstructural seismic deficiency of existing buildings. (Imp. 2.4)

S 5.4 **Other Un-reinforced Masonry Buildings.** Develop and implement a program for property owners to reinforce and strengthen other "at risk" buildings in the City to minimize loss of life and property damage in the event of seismic or geologic hazards. (Imp 1.3, 2.4)

S 5.5 **Hazard Mitigation Action Plan.** Review and evaluate annually progress in implementing the City's Hazard Mitigation Action Plan, and revise as needed for compliance with local, State and Federal requirements every five years. Ensure that mitigation strategies addressing seismic and geologic hazards are implemented where feasible, and that effective public outreach and education is included. (Imp. 1.3)

Goals and Policies

S 5.6 **Assistance Programs.** Develop assistance programs for senior citizens who own single-family homes to seismically retrofit their homes per current safety standards. Assistance programs should include maintaining lists of approved contractors, outreach to senior citizens and education efforts. (Imp. 6.1, 8.1)

S 6 Protection from Hazardous Materials. To ensure that the health, safety and general welfare of residents, visitors and the overall natural environment is protected to the maximum extent feasible from harmful exposure to hazardous materials

S 6.1 **Inter-jurisdictional Coordination.** Continue to coordinate with and support the Los Angeles County Certified Unified Program Agency (CUPA), the Los Angeles County Fire Department, and their Health & Hazardous Materials Division (HHMD) in carrying out inspections, emergency response, enforcement, and site mitigation oversight of hazardous materials and waste. (Imp. 7.1)

S 6.2 **Hazardous Waste Collection.** Conduct frequent and convenient household hazardous waste round-ups. (Imp. 6.1, 7.1)

S 6.3 **Educate Residents and Businesses.** Educate residents and businesses on methods of reducing or eliminating use of hazardous materials, using safer non-toxic equivalents and proper disposal of household hazardous materials such as medications, batteries and e-waste. (Imp. 8.1)

S 6.4 **Hazardous Materials Regulation.** Enforce current laws requiring all users, producers, and transporters of hazardous materials and waste to clearly identify the materials that they store, use, produce, or transport, and to notify the appropriate City, county, State, and federal agencies in the event of a violation. (Imp. 7.1, 7.2)

Goals and Policies

S 6.5 **Known Areas of Contamination.** Require proponents of projects in known areas of contamination from oil operations or other uses to perform comprehensive soil and groundwater contamination assessments at their expense, in accordance with American Society for Testing and Materials standards, and if contamination exceeds regulatory action levels require the proponent to undertake remediation procedures prior to grading and development under the supervision of the Los Angeles County Environmental Health Division, County Department of Toxic Substances Control, or Regional Water Quality Control Board (depending upon the nature of the identified contamination). (Imp. 7.1, 7.2)

S 6.6 **Siting of Sensitive Uses.** For uses that generate or use hazardous materials, develop and implement strict land use controls, performance standards, and structure design standards, including development setbacks from sensitive uses such as schools, hospitals, day care facilities, elder care facilities, residential uses, and other sensitive uses. (Imp. 2.2)

S 7 Preparation for Natural or Manmade Disasters. A city that has a strengthened and maximized potential to prepare for, mitigate against, respond to, and recover from natural or human-induced disasters and multi-disasters, and to minimize the loss of life and damage to life, property, and the environment.

S 7.1 **Emergency Operations Center.** Maintain the Emergency Operations Center (EOC), ensuring that the City has a functional EOC that meets Federal and State guidelines. (Imp. 1.3, 6.1)

S 7.2 **Emergency Operations Plan.** Review and update the City's Emergency Operations Plan on an annual basis and submit the plan to the State for approval every five years. (Imp. 1.3)

Goals and Policies

S 7.3	**Hazard Mitigation Action Plan.** Review and evaluate annually for progress in implementing the City's Hazard Mitigation Action Plan, and revise as needed for compliance with local, State and Federal requirements every five years. Submit the plan to the State for approval every five years. Ensure that effective public outreach and education are a component of the plan. (Imp. 1.3)
S 7.4	**Emergency Funding.** Review and update regularly plans and procedures that allow the City to declare a disaster area and receive its fair share of Federal and State emergency funds in the event of a serious emergency or disaster. (Imp. 1.3, 4.2)
S 7.5	**Joint Effort in Emergency/Disaster Management.** Ensure that emergency disaster management is the mutual responsibility of all City Departments and a variety of stakeholders, including the Citizen Corp Program, Beverly Hills Unified School District, private schools, local residents, and the business community. (Imp. 7.1, 7.3)
S 7.6	**Mutual Aid Systems.** Maintain participation in local, regional, State, and national mutual aid systems. (Imp. 1.3, 7.1)
S 7.7	**Emergency Drills and Exercises.** Conduct emergency drills and exercises throughout the City to test the effectiveness of emergency operation plans. Collaborate with other agencies, jurisdictions, and stakeholders on a regular basis. (Imp. 1.3)
S 7.8	**Emergency Management Systems Training.** Conduct training sessions using Incident Command System (ICS), State Emergency Management System (SEMS) and National Incident Management System (NIMS) to ensure that all staff are familiar with these systems and other relevant plans consistent with their role as disaster service workers. (Imp. 1.3, 7.1)

Goals and Policies

S 7.9 **Training and Equipment.** Ensure that all law enforcement, fire, health, and emergency agencies of the City are trained and equipped for emergency awareness and operations in the event of a terrorist attack. (Imp. 1.3, 6.1, 7.1)

S 7.10 **Funding for Training Programs.** Pursue funding in support of inter-agency training. (Imp. 4.2, 4.3)

S 7.11 **Public Notification and Evacuation.** Ensure that the City's emergency preparedness plans provide for efficient and orderly notification and evacuation on a citywide basis. (Imp. 1.3, 8.1)

S 7.12 **Public Education Programs.** Sponsor and support public education programs pertaining to emergency disaster preparedness, mitigation response, and recovery protocols and procedures. Distribute information to stakeholders, residents, businesses, community-base organizations, faith-based organizations, schools, businesses and other groups. (Imp. 8.1)

S 7.13 **Risk Assessment of Critical Facilities.** Perform a risk assessment of critical City facilities, and perform upgrades as necessary to improve security levels, including Information Technology infrastructure such as communication, "smart city" infrastructure improvements, and disaster recovery capability. (Imp. 1.3)

S 7.14 **Post-disaster Reconstruction.** Participate in the development of programs and procedures that emphasize coordination between appropriate public agencies and private entities to remove debris and promote rapid reconstruction following a disaster event. (Imp. 1.3, 7.1, 7.2)

S 7.15 **Disaster Technology Communication Systems.** Evaluate and upgrade as necessary the technology and communication systems that first responders and others use to coordinate disaster response. Coordinate communications with Beverly Hills Unified School District, regional, State and Federal entities. (Imp. 1.3, 7.1, 7.2)

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Amendments

Date	Resolution	Description
March 6, 1976	76-R-5427	Adoption of Safety element
March 7, 1975	75-R-5326	Adoption of Seismic Safety element
January 12, 2010	10-R-12725	Broad range of amendments updating the element to include local desires and State requirements. Amendment merged the Seismic Safety element into the Safety element

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