

## **10. Public Safety Element**

<b>Table of Contents</b>	<b>page</b>
Introduction	10-1
Summary of Existing Conditions Report	10-2
Goal PS1: Geology and Soils	10-6
Goal PS2: Faulting and Seismicity/Structural Hazards	10-6
Goal PS3: Petroleum Resources/Hazardous Materials and Wastes	10-8
Goal PS4: Water and Soil Contaminants	10-10
Goal PS5: Flood and Inundation	10-10
Goal PS6: Urban Fire Hazard	10-11
Goal PS7: Emergency Preparedness	10-13

## 10. Public Safety Element

---

### Introduction

California Government Code Section 65302 (g) specifies that every city and county shall prepare a general plan that includes a "safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, groundshaking, ground failure, tsunami, seiche, and dam failure; slope instability, . . . subsidence and other geologic hazards...; flooding, and wild land urban fires." The safety element was made a mandatory part of the general plan pursuant to Assembly Bill SB 271 (Chapter 1104, 1975). When the requirements for the element took effect in 1976, legislation required that general plan policies address fire safety, flooding, and geologic hazards. In 1984, adoption of AB 2038 (Chapter 1009, Stats.) expanded the list of public safety element issues to include seismic safety which had previously been considered in the seismic safety element.

The Public Safety Element goals, objectives, and policies contained herein are in part derived from the information contained within the Public Safety Element Existing Conditions Report. The Existing Conditions Report documents existing conditions and identifies the major issues that are addressed in this Element. This Element addresses hazards associated with geology and seismicity, flooding, fire, petroleum storage, and hazardous materials. Hazardous materials are discussed in more detail within the Hazardous Materials and Waste Management Element of the El Segundo General Plan.

### Purpose and Authority

The purpose of the Public Safety Element is to reduce death, injuries, property damage, and economic and social dislocation resulting from natural and man-made hazards such as urban fire, flooding, mudslides, earthquakes, and hazardous incidents.

The Public Safety Element enables the City to assess the potential risk of natural or man-made hazards and design measures to reduce personal and property damages which may result from a disastrous event. The Element should also be used to avoid or minimize

exposure to potential hazards by providing data and policy input for the development of the Land Use Element.

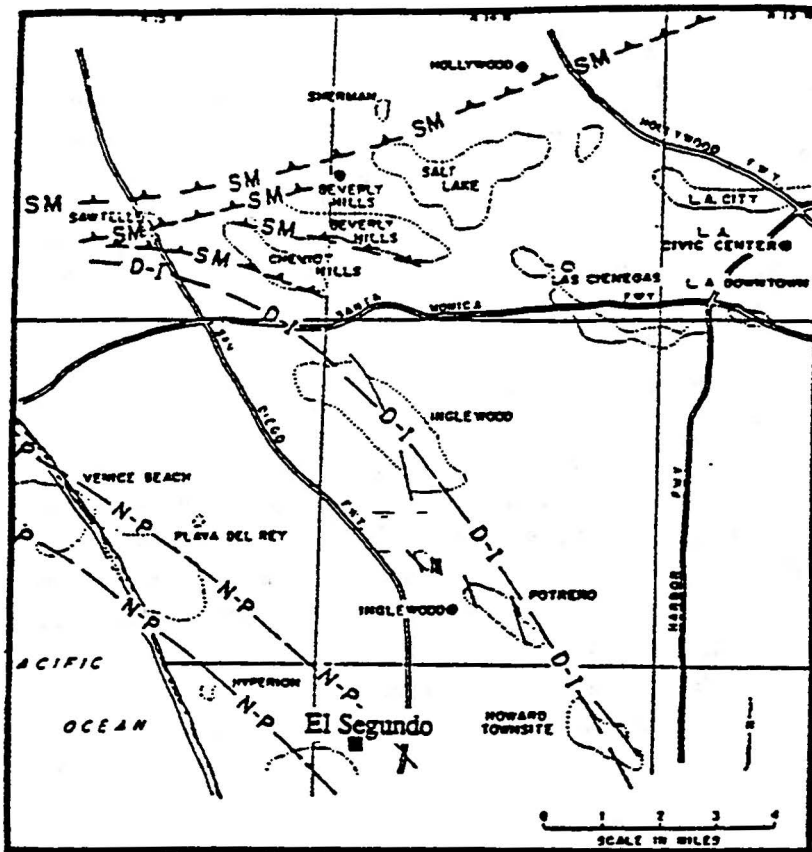
This Public Safety Element has been prepared to meet the content requirements stipulated by California Government Code Sections 65300 and 65302 (g). It has been prepared according to Chapter III (Safety Element) of the 1990 Office of Planning and Research General Plan Guidelines. Although the basic objective of the Element is "to reduce death, injuries, property damage, and disruption of economic and social life," other social, economic, political, and aesthetic factors must be considered and balanced with safety needs. The Public Safety Element, therefore, is consistent with the other elements of the General Plan, including the Housing, Economic Development, Land Use, Circulation, Conservation, and Open Space Elements.

## Summary of Existing Conditions Report

The City of El Segundo is located in a region of historic seismic activity. Active faults known to exist in the vicinity include the San Andreas, Newport-Inglewood, San Fernando, Sierra Madre, and Verdugo Faults (Exhibit PS-1). Certain areas of the City with high groundwater tables underlain by sand dune formations have a high potential for liquefaction (the transference of soils from a solid state to a liquid state). These areas parallel the coastline in the extreme western portion of the City along Vista Del Mar and in the eastern portion of the City running generally from Aviation Boulevard northwest to Imperial Highway just west of Sepulveda Boulevard. Liquefaction of soils during an earthquake can cause severe damage due to ground and/or slope failure. Given these factors, the greatest potential for property damage, injury, and loss of life in the City would most likely result from structural failure and collapse due to groundshaking during a seismic event. To prevent and reduce damage from earthquakes, it is essential that the structural integrities of older or poorly designed buildings are assessed, and that steps are taken to strengthen or remove hazardous structures.

Flooding within the region can be earthquake-induced or can result from intense rainfall. The City of El Segundo is not at risk from flooding during a 100-year storm and there are no major dams or waterways located near the City. Thus, the potential for flood hazard is most specifically related to localized flooding that may result from inadequate storm drains during periods of heavy rainfall. Localized flooding due to an inadequate storm drain system could result in property damage and cause the disruption of traffic within the City.

# Faults and Oilfields of Southwest Los Angeles

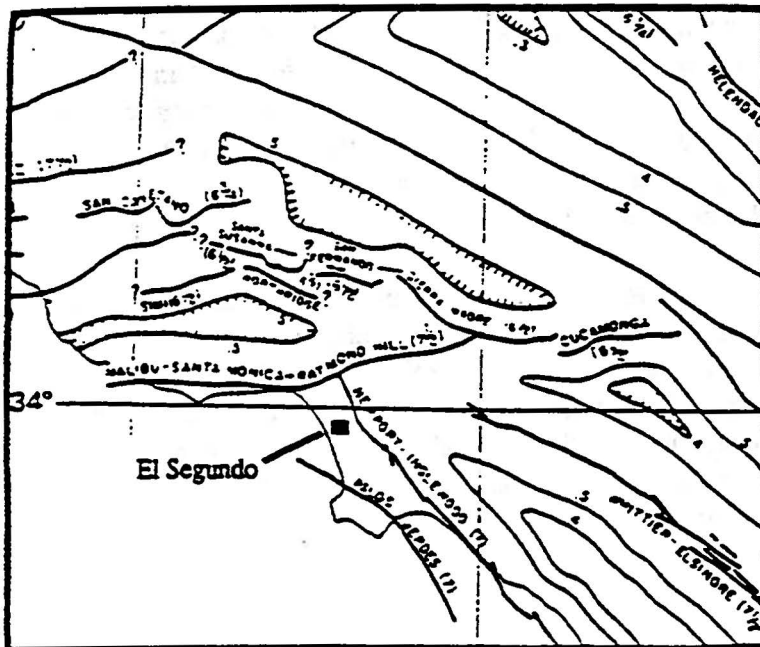


## LEGEND

- SM — Santa Monica Fault Zone
- D-I — Dominguez-Inglewood "Branch" of the Newport-Playa Del Rey Trend
- N-P — Newport-Dominguez-Playa Del Rey Trend
- H-T — Huntington Beach-Wilmington-Torrance Series of Anticlines
- Oil Fields

SOURCE: CALIFORNIA DIVISION OF MINES; SR114, 1974

# Regional Fault Map



## LEGEND

- CUCAMONGA 6 1/2 Active/Potentially Active Fault With Expected Magnitude
- 3 Bedrock Acceleration

SOURCE: CALIFORNIA DIVISION OF MINES; SP42, 1988

CITY OF EL SEGUNDO • GENERAL PLAN

# Fault Map

exhibit

**PS-1**

Along the City's coastal areas, tsunamis and seiches associated with seismic events could cause devastating damage. The coastal portion of the City and adjacent portions of the City of Los Angeles are identified by the State as tsunami hazard areas, and as a result, there is the potential for damage to Edison and Chevron facilities, and the Hyperion Treatment Plant. Residential portions of the City are located above the potential hazard area and are not at high risk.

Due to the urban setting of El Segundo, the potential for wildland fire hazards are extremely limited. As a result, fire safety in the City is primarily focused on commercial, industrial, and residential areas. The main fire hazards of concern are those associated with industrial facilities using large amounts of flammable or toxic materials, high-rise buildings, public gathering places, older buildings with substandard electrical and heating systems, and residential neighborhoods interspersed with untreated wood shingle roofs. An overriding consideration for fire protection in the City is the maintenance of both adequate access for fire and emergency response as new areas develop, and adequate response times as traffic congestion increases.

The main document addressing emergency preparedness in the City is the Emergency Operations Plan (EOP). The Plan is applied during emergency situations involving natural disaster (fire, earthquake, flood, storm, or tsunami), major accidents (transportation, industrial, and nuclear), civil disturbances, pollution episodes, epidemics, and war emergencies. The EOP provides a basis for operations and for managing critical resources during emergencies, delineation of lines of authority and responsibility, and procedures for requesting interagency and private assistance.

Exhibit PS-2 outlines the level and scope of risk for various hazards that could occur locally, citywide, or regionally. The probability of hazardous events occurring in the City of El Segundo are set at low, moderate, and high. A probability of 20 percent or less is considered "low probability or unlikely," a probability of 20 to 60 percent is considered "moderate or likely," and a probability of 60 percent or higher is considered "high or very likely."

Hazard	Level of Risk			Scope of Risk		
	Low	Moderate	High	Local	City-wide	Regional
<b>Earthquake</b>						
Surface	•					•
Liquefaction		•				•
Ground shaking			•		•	
Slope failure		•		•		
Tsunami	•			•		
Seiche	•			•		
<b>Flooding</b>						
Local ponding		•		•		
100-Year flood	•			•		
<b>Fire</b>						
Industrial			•	•		
Chemical			•	•		•
Gas main		•			•	
Subsurface	•			•		
High-rise		•		•		
Wildland	•					•
<b>Major Accident</b>						
Industrial		•		•		•
Major road		•		•		•
Aircraft		•		•		
Railway		•				•

## Goal PS1: Geology and Soils

Protect the public health and safety and minimize the social and economic impacts associated with geologic hazards.

**Objective PS1-1** It is the objective of the City of El Segundo to reduce exposure to potentially hazardous geological conditions through land use planning and project review.

### **Policy PS1-1.1**

Continue to review proposals for new development and for the expansion of existing development in areas of potential geological hazards.

#### ***Program PS1-1.1A***

The City shall review projects to ensure that slope design considers the potential effects of high rainfall, private sewage systems, landscaping irrigation, and possible runoff from adjacent future development.

### **Policy PS1-1.2**

Enforce, monitor, and improve development standards which place the responsibility on the developer, with advice from qualified engineers and geologists, to develop and implement adequate mitigation measures as conditions for project approval.

#### ***Program PS1-1.2A***

The City shall review projects to ensure that adequate geotechnical investigation has been completed in areas susceptible to landsliding and debris flows and in areas where collapsible or expansive soils occur, and to approve only those which mitigate these hazards to the satisfaction of the City Engineer.

#### ***Program PS1-1.2B***

The City shall review projects to ensure that adequate geotechnical investigation has been completed in areas underlain by the Oceano group of soils, and to approve only those which mitigate any hazards to the satisfaction of the City Engineer.

## Goal PS2: Faulting and Seismicity/Structural Hazards

Minimize injury and loss of life, property damage, and social, cultural and economic impacts caused by earthquake hazards.

**Objective PS2-1** It is the objective of the City of El Segundo that the City promote

effective response to seismic disasters and maintenance of structurally safe facilities.

**Policy PS2-1.1**

Continue to cooperate with and support federal, state, and county agencies in the development and enforcement of regional and local health and safety laws and environmental controls, e.g., implementation of SB 547 (Alquist).

***Program PS2-1.1A***

The City shall continue to enforce the Uniform Building Code.

**Policy PS2-1.2**

The City shall assist in the prevention of structural damage in areas with a high potential for liquefaction, landslides, and mudslides by requiring geotechnical studies for new development to mitigate potential impacts.

***Program PS2-1.2A***

The City shall require geotechnical evaluation of the potential for seismically induced landslide, mudslide, and liquefaction in areas where such hazards have been identified.

***Program PS2-1.2B***

The City shall require all critical, emergency, and high-occupancy buildings, facilities, and structures containing hazardous materials proposed for development or expansion to be subject to special structural review to insure that hazardous conditions are adequately mitigated based on the most current seismic design standards for these types of facilities.

**Policy PS2-1.3**

Insure adequate public safety and the preservation and reuse of historic buildings by continuing to enforce requirements for structural strengthening of older brick and masonry buildings.

***Program PS2-1.3A***

The City shall amend zoning/building codes to require that old structures built before enactment of seismic codes meet basic standards before any changes in use or occupancy level.

**Policy PS2-1.4**

Identify potential high-risk inundation coastal areas and manage them to reduce risk.

***Program PS2-1.4A***

The City shall require that proposals for construction or expansion of large and critical facilities which are located in tsunami and



coastal inundation areas to assess the risk of inundation and provide adequate flood mitigation measures as conditions for project approval.

## **Goal PS3: Petroleum Resources/Hazardous Materials and Wastes**

**Reduce threats to public health and safety from hazardous materials, especially threats induced by earthquakes and accidental leaks and spills.**

**Objective PS3-1** It is the objective of the City of El Segundo that the City insure safe and prudent use of hazardous materials, and reduce the quantity of hazardous materials handled within the City.

### **Policy PS3-1.1**

Review proposed development projects involving the use, storage, and disposal of hazardous materials with the intent of minimizing the probability and magnitude of a hazardous event.

#### ***Program PS3-1.1A***

The City shall enforce local, state, and federal laws such as the 1984 amendments to the Federal Resource Conservation and Recovery Act, through review of projects proposing to use, store, or dispose of hazardous materials and wastes. The City shall also require compliance with the business plan, and onsite emergency response plans before project approval with intent to ensure the following:

- a. preparation and maintenance of a hazardous materials inventory as required by existing codes;
- b. preparation of a site plan showing on-site hazardous materials storage as required by existing codes;
- c. preparation and maintenance of on-site adequate emergency response equipment;
- d. implementation of environmental audits for tracking hazardous materials during and after use;
- e. preparation of plans for monitoring, inspection, and record keeping to verify control efforts;

- f. provision for treatment or control of all unauthorized emissions, discharges, or releases through the best available technology; and,
- g. that plans are developed and implemented for training of personnel to safely manage and use hazardous materials and wastes.

**Policy PS3-1.2**

Promote the safe transportation of hazardous materials.

***Program PS3-1.2A***

The City shall establish a system to monitor the transportation and disposal of hazardous wastes or access the existing State system.

**Policy PS3-1.3**

Improve the plans and capabilities for responding to hazardous material incidents.

***Program PS3-1.3A***

The City shall investigate the feasibility of establishing an emergency cleanup fund with a special levy for businesses which handle hazardous materials. Such a fund would ensure minimum lag time between accidental spills and leaks and cleanup.

***Program PS3-1.3B***

The City shall strengthen the enforcement capabilities for hazardous waste generator inspection and industrial wastewater treatment audits.

***Program PS3-1.3C***

The City shall consider and explore the feasibility of providing financial and/or tax incentives for the prudent use and management of hazardous materials.

***Program PS3-1.3D***

The City shall implement a program to identify specific industries, industrial groupings, and/or pollutant waste streams for priority attention. Top priority shall be given to facilities that handle EPA code "P" pesticides and all substances classified as acutely hazardous on the EPA list.

**Policy PS3-1.4**

Continue to encourage source reduction, substitution, and recycling.

***Program PS3-1.4A***

The City shall establish or support establishment of a special hazardous waste technology center for small businesses. The primary aim will be to provide information and advice to small businesses to help them evaluate their specific opportunities for waste reduction and inventory control. The assistance may be provided at the plant or shop and may be separated from or integrated into a compliance inspection.

**Policy PS3-1.5**

Encourage improved, timely communications between businesses and emergency response agencies regarding hazardous materials prior to and during incidents.

***Program PS3-1.5A***

The City shall periodically review and inspect the training and equipment of hazardous materials emergency response teams with the objective of evaluating potential usefulness during an incident.

**Goal PS4: Water and Soil Contaminants**

**Prevent exposure of people, animals, and other living organisms to toxic water and soil contaminants.**

**Objective PS4-1**

Monitor industries and activities in and around the City to prevent and reduce the contamination of water and soil.

**Policy PS4-1.1**

It is the policy of the City of El Segundo to use its best efforts to protect residents, visitors, and the environment of the City from the effects of toxic water and soil contaminants by identifying major sources in and around the City and by promoting compliance with all federal, state, regional, and local regulations.

**Policy PS4-1.2**

It is the policy of the City of El Segundo to draft and implement ordinances or take other actions, where deemed appropriate by the City Council in its discretion, to restrict and/or reduce water and soil contamination from sources in and around the City.

**Goal PS5: Flood and Inundation**

**Protect public health, safety, and welfare from natural and man-made flood and inundation hazards.**

**Minimize injury, loss of life, property damage, and economic and social disruption caused by flood and inundation hazards.**

**Objective PS5-1** It is the objective of the City of El Segundo that the City improve flood control systems and provide adequate protection in areas subject to inundation.

**Policy PS5-1.1**

Continue the construction of flood control facilities to protect areas threatened by potential flooding.

***Program PS5-1.1A***

The City shall amend the building, fire, electrical, plumbing, and mechanical code design, construction, and use standards to ensure that the threat of fire hazard and hazardous materials releases is adequately mitigated in coastal high-risk inundation areas, including provisions requiring the following:

- a. Where feasible, flammable and hazardous materials/waste should be stored in anchored watertight containers or storage tanks, and be protected from impacts by debris contained in flood torrents; and,
- b. Fuel lines and electrical ignition sources (such as fuse boxes) should be protected from impact by flood debris.

***Program PS5-1.1B***

The City shall, in cooperation with the City of Los Angeles, develop, maintain, and inform the public of evacuation procedures in the event of failure of the primary sewage reservoir or related equipment or facilities of the Hyperion Wastewater Plant.

**Policy PS5-1.2**

Continue to monitor and improve the effectiveness of existing flood control systems to ensure that there is adequate capacity to protect existing and proposed development from stormwater runoff.

***Program PS5-1.2A***

The City shall ensure the adequacy of flood control system capacity with more frequent monitoring, maintenance, repair, or modification of flood channels, culverts, and storm drainage systems.

## **Goal PS6: Urban Fire Hazard**

**A fire safe community.**

**Objective PS6-1** It is the objective of the City of El Segundo that the City minimize

threats to public safety and protect property from wildland and urban fires.

**Policy PS6-1.1**

Review projects and development proposals, and upgrade fire prevention standards and mitigation measures in areas of high urban fire hazard.

***Program PS6-1.1A***

The City shall periodically, with advice from the Fire Department, review existing City zoning codes to determine if stricter height limitations, additional clearance around structures for fire protection, and other safety considerations are necessary to meet recent changes in fire prevention and suppression standards.

**Policy PS6-1.2**

Continue efforts to reduce fire hazards associated with older buildings, high-rise buildings, and fire-prone industrial facilities, and maintain adequate fire protection in all areas of the City.

***Program PS6-1.2A***

The City shall continue to inspect older buildings, multi-story structures, and fire-prone industrial facilities for fire safety.

***Program PS6-1.2B***

The City shall continue to require fire protection systems and devices for all large condominiums and townhouse complexes, high-rise structures and other large developments.

***Program PS6-1.2C***

The City shall continue to require that all property be maintained in compliance with the fire code.

***Program PS6-1.2D***

The City shall continue to provide an effective fire/life safety public education program.

***Program PS6-1.2E***

The City shall continue to require that all streets, roads, and other public ways, be designated by name and sign, distinctly marked and clearly visible.

***Program PS6-1.2F***

The City shall continue to maintain current, accurate, and consistent address mapping and posting for all structures in the City.

***Program PS6-1.2G***

The City shall encourage and assist the school district in overall fire education programs using displays and demonstrations of the more involved aspects of fire safety (i.e., major contributing factors to fire hazard and the relationship of fire to human safety).

**Policy PS6-1.3**

Coordinate and improve mutual aid agreements.

***Program PS6-1.3A***

Continue to participate in and improve mutual aid agreements with other jurisdictions.

**Goal PS7: Emergency Preparedness**

**Protect public health, safety, and welfare, and minimize loss of life, injury, property damage, and disruption of vital services, resulting from earthquakes, hazardous material incidents, and other natural and man-made disasters.**

**Objective PS7-1**

It is the objective of the City of El Segundo to improve the preparedness of the City for emergency situations.

**Policy PS7-1.1**

It is the policy of the City of El Segundo that the City maintain and enhance its emergency services and ensure the availability and effectiveness of such services in the event of a disaster.

***Program PS7-1.1A***

The City shall periodically review and assess the locational and engineering integrity of existing disaster relief equipment and structures.

***Program PS7-1.1B***

The City shall periodically review and reevaluate the City's Emergency Operations Plan, to ensure adequate evacuation routes and street widths, emergency services, equipment, shelters, and all other major needs that could arise in the event of a disaster.

***Program PS7-1.1C***

Ensure that water distribution and supply facilities are adequate to supply emergency fire-flow needs.

**Policy PS7-1.2**

Promote development of public education programs and workplace self-help groups to improve emergency preparedness.

***Program PS7-1.2A***

The City shall continue to prepare informational packets to increase public awareness of emergency preparedness.

**Policy PS7-1.3**

Continue to encourage critical facilities to maintain and regularly update emergency response plans identifying procedures for safety, disaster control, and evacuation.

***Program PS7-1.3A***

Identify emergency response objectives, contingency plans, and hazard-reduction programs to reduce hazards for critical facilities, and hazardous buildings with special rescue, fire suppression, evacuation, or medical requirements.

**Policy PS7-1.4**

Continue to strengthen the City's capability to respond to earthquake and non-earthquake induced emergencies.

***Program PS7-1.4A***

The City shall support, encourage, and assist in establishing community programs which volunteer to assist police, fire, and civil defense personnel after a disaster.

**Policy PS7-1.5**

Continue to improve hazard prediction and early warning systems.

**Policy PS7-1.6**

Continue to strengthen emergency communication systems and facilitate cooperation between the media and other emergency response agencies.

***Program PS7-1.6A***

The City shall, in cooperation with the telephone company and industrial facilities, establish an Emergency Notification System providing quick, no-cost readily accessible service for reporting fires and other emergencies by the general public.