



encinitas

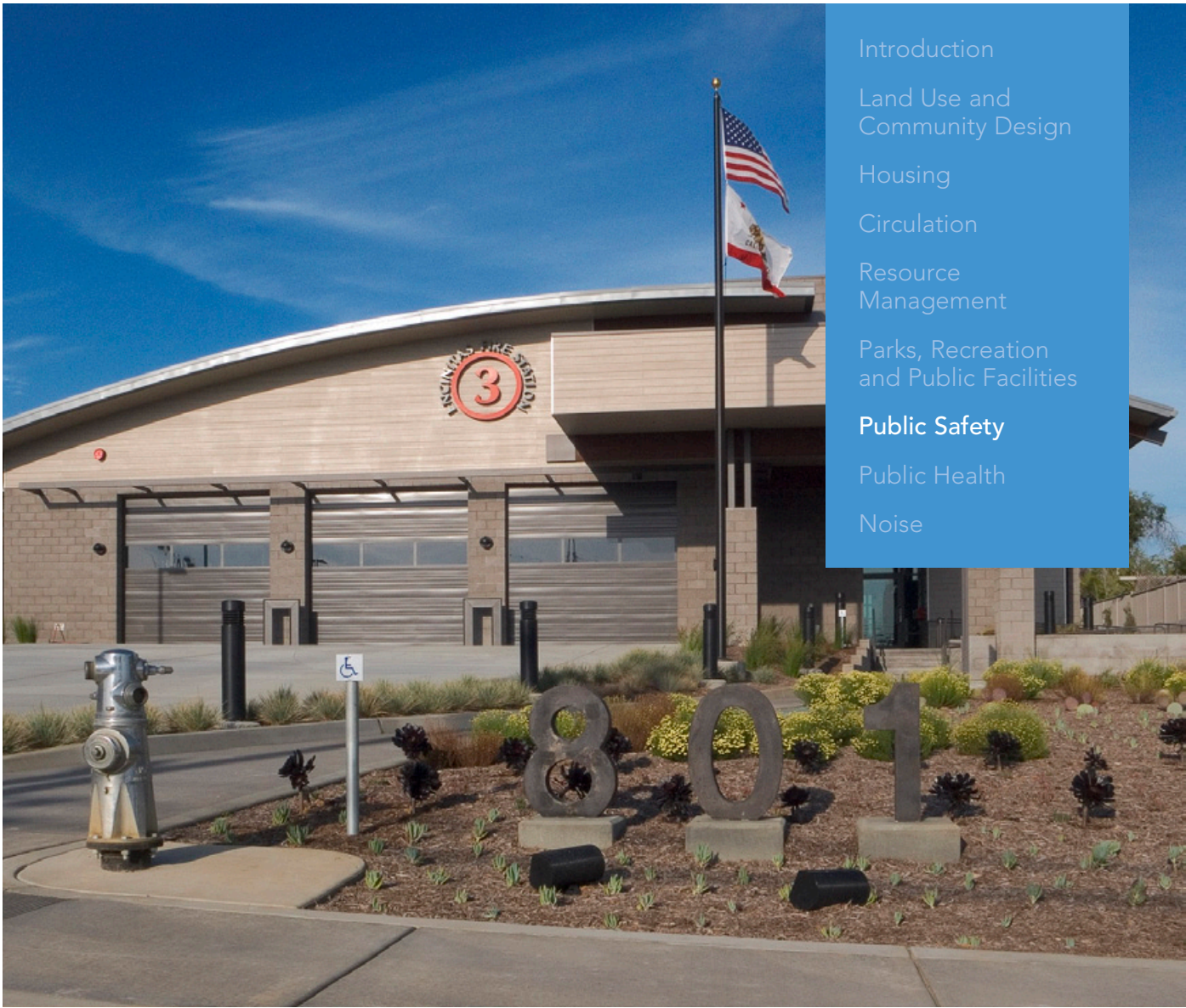
Public Safety



Table of Contents

I. Introduction	PS-2
II. Current Conditions	PS-10
III. Goals and Policies	PS-20
IV. Figures	PS-49

The Public Safety Element sets forth a comprehensive set of goals and policies to avoid and minimize the risks, potential property damage and human injury associated with natural and man-made hazards. In addition, the Element identifies the major hazards that might affect the city, the resources that are currently available to respond in the event of an emergency and the appropriate actions required to respond to a crisis.



- Introduction
- Land Use and Community Design
- Housing
- Circulation
- Resource Management
- Parks, Recreation and Public Facilities
- Public Safety**
- Public Health
- Noise

introduction

element purpose

The Public Safety Element is a guide for the community to identify and understand potential hazards in Encinitas. The Public Safety Element is one of the most important components of the City's General Plan in that it is directly concerned with reducing the loss of life, injury and property damage that might result from a disaster or accident. The Element is intended to protect the community from unreasonable risks from geologic hazards, flooding, fire, and hazardous and toxic materials.

This Element identifies goals and policies that will minimize the risks, potential property damage and human injury associated with natural and man-made hazards. Acceptable levels of risk are based on the nature of each hazard, frequency of exposure and the potential damage. In addition, the Element identifies the appropriate planning and/or actions that are needed to respond to a crisis and ways that hazards can be avoided. This report identifies 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.

By implementing public safety goals and policies, the City of Encinitas seeks to accomplish the following:

- Improve public safety through high quality emergency services;
- Minimize the loss and quickly recover from major disasters;
- Minimize undue demand for public safety services;
- Reduce injury and loss from natural hazards, including seismic hazards, tsunamis, flooding, sea level rise, unstable bluffs and slopes, wildfire, and hazardous materials; and
- Anticipate and avoid hazards resulting from climate change-related events.

element scope and organization

This Element represents a comprehensive approach to minimizing risk through emergency preparedness and prudent land use planning. Together, the goals and policies contained in this Element provide a framework for decision-making related to the general safety of the Encinitas community. The Public Facilities and Services, Infrastructure, Geotechnical, and Coastal Conditions portions of the General Plan Update Current Conditions Report (2010) contain the detailed technical background information that provides the foundation for the goals and policies of the Public Safety Element.

After this introduction, the Public Safety Element is organized into three main parts:

II. Current Conditions

III. Goals and Policies

IV. Figures

The current conditions section provides a summary of the existing hazards facing the community and the various public safety programs and agencies working to protect the community from hazards and disasters. The goals and policies section is based on opportunities and objectives identified by the community to guide programs and decisions to protect the community from hazards and disasters. These goals and policies address fire, law enforcement and emergency services; seismic safety; flooding; sea level rise; wildland fires; bluff and slope stability; hazardous materials; and climate adaptation.

public safety element

related general plan goals and policies



This Element, like the others, is closely related to the goals, policies and programs outlined in the other elements. Goals and policies contained in other elements are also important in addressing public safety issues. A number of goals and policies in the Housing Element, for example, are concerned with the rehabilitation of substandard housing units that present safety hazards to the occupants. The Land Use Element contains land use policies to ensure that development does not occur in areas that may be subject to flooding, landslides or other hazards. The efficiency of roadways in moving large numbers of people, a major focus of the Circulation Element, is even more important during emergency situations. The Element Relationship Matrix (Table PS-1) identifies key topics in the Public Safety Element that are addressed in other elements.

TABLE PS-1: ELEMENT RELATIONSHIP MATRIX

Public Safety Topic Area	Land Use and Community Design	Housing	Circulation	Resource Management	Parks, Recreation and Public Facilities	Public Health	Noise
Fire, Law Enforcement , Marine Safety and Emergency Services	X	X	X		X	X	
Seismic Safety	X	X		X			
Flooding and Sea Level Rise	X	X	X	X	X		
Wildland Fires	X	X		X		X	
Bluff and Slope Stability	X	X		X	X		
Hazardous Materials	X					X	
Climate Change-Related Hazards	X		X	X	X	X	

related plans and programs

There are a number of existing plans and programs which are directly applicable to the goals and objectives of this Element. Some of these plans and programs are enacted through federal and state legislation and are administered by federal, state and local agencies or special districts that have been delegated with powers to enforce federal and state law. Similarly, some of these plans and programs are enacted by local resolution or ordinance and are enacted through City and County efforts.

California Coastal Act. The California Coastal Act of 1976 was enacted to protect and maintain the overall quality of coastal environments and resources. The California Coastal Commission regulates development within portions of the Coastal Zone and oversees planning and land use efforts along the entire coastline. Every city within the coastal zone is supposed to prepare a Local Coastal Program (LCP). The Coastal Commission has prepared guidelines designed to assist local governments and Coastal Commission staff implement Coastal Act provisions. The City of Encinitas LCP was effectively certified by the California Coastal Commission on May 11, 1995 and the City assumed Coastal Permit authority on May 15, 1995. The City's LCP has two parts, a Land Use Plan and an Implementation Plan.

Local Coastal Program. Approximately two-thirds of the city is located within the Coastal Zone (see General Plan Introduction Figure I-3) and fall under California Coastal Commission jurisdiction. In compliance with the Coastal Act, the City has adopted and implemented a Local Coastal Program (LCP). The LCP Land Use Plan contains the City's policies related to coastal resources. The LCP Implementation Plan contains zoning ordinances and development related standards, zoning maps, specific plans, and other implementing actions such as special zone overlays for sensitive resource areas. The LCP is included within the General Plan as well as other provisions of the municipal code and specific plans. The goals of the LCP are to protect, maintain and enhance the Coastal Zone environment; ensure balanced utilization and conservation; maximize public access to and along the coast; prioritize coastal dependent and related development; and encourage coordinated state and local initiatives to implement beneficial programs and other educational uses.

Multihazard Functional Plan. Every city is required to prepare a Multihazard Functional Plan (otherwise known as an Emergency Operations Plan) to

address the jurisdiction's planned response in the event of emergency situations associated with natural disasters, technological incidents and nuclear defense operations. The Plan does not apply to day-to-day emergencies or the routine procedures utilized to respond to these emergencies. Rather, the Plan's focus is directed to large-scale disasters that will require extraordinary responses. Directives concerning the preparation of Multihazard Functional Plans (MFP) have been provided by the California Emergency Management Agency (formerly the Governor's Office of Emergency Services). The policies and measures indicated in the Public Safety Element were considered when the MFP was prepared for the City of Encinitas in 2004 and will also be considered when the MFP is updated every five years. The MFP also complies with the requirements of the California Standardized Emergency Management System (SEMS) and National Incident Management System (NIMS), both of which provide a framework for effectively managing large-scale disasters.

Multi-Jurisdictional Hazard Mitigation Plan. The Federal Disaster Mitigation Act of 2000 required that state and local jurisdictions develop and maintain plans to reduce hazards and ultimately protect communities from the effects of disasters in order to receive additional federal funding following a disaster. The law seeks to establish a balance between disaster response and disaster mitigation, or actions taken before an event. It encourages the investment of time, effort and funds to identify and perform measures designed to limit the negative effects of disasters on communities. Local plans must demonstrate that their proposed mitigation measures are based on a sound planning process that accounts for the risk to and the capabilities of the individual communities.

The Multi-Jurisdictional Hazard Mitigation Plan (HMP) is a countywide plan that was developed in 2004 by the County of San Diego and all eighteen (18) cities, including Encinitas. It identifies risks and ways to minimize damage from natural and man-made disasters. The HMP is a comprehensive resource document that serves many purposes such as enhancing public awareness, creating a decision tool for management, promoting compliance with state and federal program requirements, enhancing local policies for hazard mitigation capability, and providing for inter-jurisdictional coordination. It was approved by the Federal Emergency Management Agency (FEMA). As such, City Council adopted the HMP as an official plan of the City on April 14, 2004 and approved the HMP by resolution (Resolution 2004-20).

California Assembly Bill 2140 requires that jurisdictions adopt a local hazard mitigation plan in accordance with the Federal Disaster Mitigation Act of 2000 as part of the safety element of its general plan. Adoption into the general plan may be by reference or incorporation. The adopted HMP, as approved by the Federal Emergency Management Agency (FEMA), is incorporated by reference as part of Encinitas' Public Safety Element. The HMP is consistent with the goals of the Public Safety Element, as it is an umbrella document intended to provide mitigation related to all Element policies.

Shoreline Preservation Strategy. In 1993, the San Diego Association of Governments (SANDAG) adopted a Shoreline Preservation Strategy, aimed at protecting this region's shoreline as an environmental amenity and avoiding hazards to public safety. The Strategy includes general objectives and policies, and suggests more detailed strategies for shoreline preservation for identified subregional "littoral cells." Encinitas is within the Oceanside Littoral Cell system.

The Encinitas General Plan/LCP is intended to be consistent with, and to help aide implementation of, the objectives and policies of the Shoreline Preservation Strategy. Detailed actions and programs which may be pursued within Encinitas and immediately offshore to implement the Strategy must be monitored and checked for consistency with the goals and policies of this General Plan.

Beach Bluff Erosion Technical Report. In 1994, Zeiger/Kling Consultants, Inc. developed the Beach Bluff Erosion Technical Report for the City of Encinitas. This document provides a technical assessment of historical erosion and existing natural and man-made conditions along Encinitas.

Sand Compatibility Opportunistic Use Program (SCOUP). In 2009, the City of Encinitas certified and approved an Opportunistic Beach Nourishment program that identifies construction soils, monitors and delivers beach quality material to the Batiquitos and Moonlight Beach receiver sites. The City has obtained pre-approval and streamlined the permitting process to expedite the permitting process once beach quality material has been identified.

Hazardous Waste Management Plan (HWMP). Pursuant to State Assembly Bill 2948, Tanner (1986), the San Diego region, with the participation of the City of Encinitas, has prepared a comprehensive Hazardous Waste Management

Plan. The San Diego regional HWMP has been approved by the state, and must be implemented by actions of various jurisdictions and agencies in San Diego County. The HWMP has several goals related to the effective management of hazardous wastes: to reduce the amount of hazardous wastes produced in the region, to recycle and safely reuse such wastes, to further reduce their volume, and to provide for the safe treatment and storage of the amounts of hazardous wastes which must be produced. To accomplish these goals a broad variety of programs are established under the HWMP. Among these are requirements for the City to participate in the screening of land uses which may produce hazardous wastes and the enactment of zoning regulations dealing with facilities which store or treat hazardous wastes.

In order to ensure the public safety and in accordance with Section 25135.7(c) of the California Health and Safety Code, the City of Encinitas has established Chapter 30.57 of the Zoning Code to ensure that the City's locational and siting criteria under zoning for hazardous waste facilities are consistent with regulations found in the approved County HWMP.

In addition, the City will facilitate the screening of businesses for the use of hazardous materials in relation to criteria for such use as determined by the HWMP and the Hazardous Materials Management Division of the County Health Department. The City maintains on file a copy of the current San Diego regional HWMP.

County Department of Environmental Health (DEH). The DEH is the responsible agency to oversee the remediation of the pesticides when found on agricultural land at the time it converts to another use. A voluntary assistance plan is adopted by the DEH. They also review the final remediation program and issue a closure report.



current conditions

This section presents a summary of the existing conditions related to public safety in Encinitas. This section provides a baseline of existing conditions in the city to help users of the General Plan and the public at large understand the context of the goals and policies. Additionally, this section can help educate the public about potential hazards and disasters that the community may experience in the future.

fire, law enforcement, marine safety and emergency services

The Encinitas Fire Protection District was established in 1945 to meet the fire protection needs of the unincorporated communities of Encinitas, Leucadia and Cardiff-by-the-Sea. Upon the City's incorporation in 1986, the Encinitas Fire Protection District became a subsidiary district of the newly formed City and a full City service department in 1995. The Department provides the following services: fire suppression, fire prevention, medical aid, marine safety, search and rescue, lifeguard services, disaster preparedness, and community education. There are five strategically located fire stations in the City of Encinitas, which allow firefighters and paramedics to provide a timely response to emergencies and to respond efficiently to volume demand. Staffing consists of a total of 45 suppression personnel working in three shifts.

In addition to fire suppression and prevention, the Encinitas Fire Department provides marine safety and disaster preparedness services. City lifeguards provide beach safety for four miles of Encinitas beaches and respond to calls for wildlife rescues, cliff rescues and other accidents in local lagoons and rivers. The City's Community Emergency Response Team (CERT) program trains volunteers in skills to assist in large-scale regional disasters. The city now has over 200 certified CERT volunteers which are ready and able to assist in emergency situations. Firefighters, working with the region's Hazardous Incident Response Team (HIRT), are responsible for identifying, mitigating and containing the release of hazardous materials and responding to chemically related emergencies in the city.

In an emergency or disaster, the City's Emergency Operations Center is activated. The mission of the Encinitas Emergency Operations Center (EOC) is to respond to catastrophic events by providing centralized management of the City's emergency response personnel, resources, facilities and mutual aid assistance given to the City. The EOC Director (the City Manager or their designee) will direct the strategic allocation and deployment of its resources and coordinate emergency response information, planning and operational priorities. Local schools, as well as the Encinitas Community Center, are available for use as emergency shelters in a disaster. The establishment of these shelters is coordinated through the County of San Diego and American Red Cross.

Emergency medical services are provided by local fire departments and San Diego Medical Services Enterprise (SDMSE) within the County of San Diego's County Service Area (CSA) 17. CSA 17 consists of Encinitas, Del Mar, Del Mar Heights and Solana Beach, as well as unincorporated areas of the County of San Diego such as Rancho Santa Fe and portions of Elfin Forest. The region is also served by Scripps Hospital, located in Encinitas.

The Encinitas Fire Department has automatic and mutual aid agreements with all of the surrounding cities and districts, including the City of Carlsbad to the north, the cities of Solana Beach and Del Mar to the south, and the Rancho Santa Fe district to the east.

These cities have a "boundary drop" program in which the Encinitas Fire Department's dispatch center (North County Dispatch Joint Powers Agency) tracks all agencies' apparatuses via the global positioning system and sends the closest engine to the incident regardless of city or district boundary.

Encinitas lifeguards are responsible for providing beach safety services. In addition, lifeguards frequently respond to calls for wildlife rescues, boating accidents, cliff rescues and accidents occurring in our local lagoons and rivers. Lifeguards monitor our beaches and waterways to ensure that visitors are supervised by individuals who are properly trained and equipped to perform lifesaving rescue functions.

The City of Encinitas contracts with the County of San Diego Sheriff's Department (Sheriff's Department) to provide police/law enforcement services to the city. The Sheriff's Department is the chief law enforcement agency in the County of San Diego, with approximately 4,000 employees, including sworn officers and professional support staff. The City of Encinitas has the second lowest crime rate of cities served by the Sheriff's Department.

In addition to the City of Encinitas, the Encinitas Sheriff's Station provides a wide range of municipal law enforcement services to the cities of Del Mar, Solana Beach and Rancho Santa Fe. Said services include the following:

- Helicopters;
- A bomb/arson squad;
- A special enforcement detail team;

- A canine unit;
- Modern crime lab facilities; and
- One of the nation’s most modern law enforcement radio communications networks.

Divisions providing day-to-day law enforcement at the Encinitas Sheriff’s Station include the following:

- Patrol: Investigates crimes and is responsible for apprehension of criminal offenders;
- Traffic: Responsible for traffic control and enforcement of the Vehicle Code;
- Investigations Unit: Includes detectives responsible for general crime cases against persons or property;
- Community Oriented Policing or COPPS Unit: Provides high-profile law enforcement;
- Crime Prevention Unit: Responsible for public education to reduce crimes;
- Community Service Officers: Provides parking enforcement, reporting on illegal activity and public information services;
- Explorer Program: A volunteer program for teens through the Sheriff’s Department that provides teens with exposure to possible careers in law enforcement and provides the Sheriff’s Department with volunteer support; and
- Senior Volunteer Program: A volunteer program in support of law enforcement operations that provides the Sheriff’s Department with volunteer support.

geologic hazards

The geologic diversity of Encinitas is strongly related to tectonic movement along the San Andreas and Rose Canyon fault zones and its broad zone of subsidiary faults that have shaped Southern California into a unique and diverse landscape. This, along with sea level fluctuations related to changes in climate, has resulted in a landscape that is also diverse in geologic hazards. Geologic hazards are generally defined as surficial earth processes that have

the potential to cause loss or harm to the community or the environment, such as earthquakes and strong ground shaking, slope failure, liquefaction, and tsunami and seiches. Additionally, given its rich geologic diversity and proximity to the ocean, the city is also at risk from a variety of geologic hazards such as slope and bluff failures, compressible soils, and expansive soils.

See Figure PS-1: Areas Susceptible to Geologic Hazards for a citywide overview of related conditions.

Earthquakes

Earthquakes are caused by the release of accumulated strain along crust factors. Because of this, it is impossible to know when (and to what extent) a seismic event will occur. The location of the city relative to large earthquake faults increases the potential of earthquake damage to structures and endangers community safety. Damage to structures and improvements caused by a major earthquake will depend on the intensity of the earthquake, the underlying soil and the quality of construction. In the past, the City has identified buildings that have been specifically noted as posing a risk to life because of their vulnerability to earthquake forces. The risks earthquakes pose to the built environment can be reduced by better planning before they happen and by improved emergency response following an event. The City should support efforts to monitor and update related hazard mitigation programs and policies to the benefit of Encinitas' inhabitants.

Liquefaction

Strong ground shaking can result in liquefaction. Liquefaction is a process where water-saturated granular soils transform from a solid to a liquid state during strong ground shaking causing the settlement to lose structure and stability. In turn, liquefaction threatens the sturdiness of the built and natural environment. Areas of Encinitas susceptible to liquefaction and related ground failure such as seismically induced settlement include areas along the coastline, including Batiquitos and San Elijo Lagoons. It is likely that residential or commercial development will never occur near those water resources, near the ocean beaches or the bottoms of stream channels. However, other structures, such as bridges, pipelines, roadways, major utility lines and park improvements that occupy these areas are vulnerable to damage from liquefaction if mitigation measures have not been included in their design.

Seismically Induced Slope Failure

Strong ground motions can also worsen existing unstable slope conditions, particularly if coupled with saturated ground conditions. Seismically induced landslides can overrun structures, people or property; sever utility lines; and block roads, thereby hindering rescue operations after an earthquake. Much of the area in eastern Encinitas, mapped by the California Geologic Survey as subject to ordinary landslide, is potentially vulnerable to seismically induced slope failure. In steep areas, strong ground shaking can cause slides or rock-falls in this material.

Tsunamis and Seiches

A tsunami is a sea wave generated by a submarine earthquake, volcanic eruption or large landslide. A seiche is a standing wave formed in lakes or lagoons due to earthquake vibrations. Though damaging tsunamis have occurred infrequently in California, they are a possibility that must be considered in coastal communities. A tsunami caused by a very large earthquake from a nearby fault zone will influence tidal action, and an earthquake force elsewhere on the Pacific Rim could reach the California coast many hours after the earthquake.

Encinitas is generally protected from most distantly generated tsunamis; however with offshore tidal action the city's coastal bluffs could be subject and vulnerable to induced slope failure and some inland areas may be impacted by water fluctuation. Tsunami and rogue waves are difficult to plan for as they are unpredictable. An impact analysis model was performed by the University of Southern California Tsunami Research Center, funded through the National Tsunami Hazard Mitigation Program. Figure PS-2: Flood and Inundation Hazards shows the limits of the maximum probable tsunami inundation in the Planning Area.

Unlike tsunamis, which can occur anytime, storm surges are associated with inclement weather. Given that during inclement weather a lot less people are expected to be at the beach, storm surges are more likely to impact residents and businesses than tourists. The most common problem associated with storm surges is flooding of low lying areas, including structures.

Slope Failures

Slope failures often occur as a result of interrelated natural conditions that create hazards where an adverse site condition exists. In most cases, another event or series of events, like heavy rainfall or irrigation, grading and/or changes to drainage patterns, trigger a subsequent event of earth movement such as mudflows, slumps or landslides. The city's remaining natural hillsides and coastal bluff areas are generally vulnerable to various types of slope failures, depending on location.

Compressible Soils

Compressible soils underlie a significant part of the city, typically in the lowland areas, lagoons and in canyon bottoms. These are generally younger sediments like stream or tidal deposits of low density with variable amounts of organic materials. Under the added weight of fill embankments or buildings and vibration from vehicle traffic on roads, these sediments will settle, causing distress to improvements. Some older portions of the city may require remedial effort during development to correct this condition. Low density soils, if sandy in composition and saturated with water, will also be susceptible to the effects of liquefaction during a moderate to strong earthquake.

Expansive Soils

Some of the geologic units in the Encinitas area east of the I-5 Freeway, including both surficial soils and bedrock, have fine-grained (clay) soils that are moderately to highly expansive. These materials may be present at the surface or exposed by grading activities. Man-made fills can also be expansive, depending on the soils used to construct them. In new development grading can remove or lessen the effect of this condition, but in older buildings the effects must be mitigated by strategies to control moisture or by structurally altering the building in accordance with the Building Code.

Groundwater

No adverse regional groundwater conditions are known to exist in Encinitas. However, localized springs and seeps may exist in areas adjacent to highlands, caused predominantly by excess irrigation and rainfall infiltration, which may adversely affect buildings and other improvements. In highland areas near the coast, specifically west of the 120,000-year-old shoreline that roughly parallels

Vulcan Avenue, infiltration will likely result in more and larger seeps and springs in the coastal bluffs, accelerating erosion and bluff retreat. Infiltration in this coastal bluff area (roughly west of Vulcan Avenue) should be mitigated where possible, and excess water collected and discharged through the storm drain system.

flood hazards

Flood zones are geographic areas that FEMA has defined according to varying levels of flood risk. Each zone reflects the severity or type of flooding in the area. As shown in Figure PS-2, portions of the city are located within a FEMA 100-year or 500-year flood zone. The low-lying areas along the flood plains of Cottonwood Creek, Encinitas Creek and Escondido Creek, as well as their tributaries, can experience flooding during severe rain seasons. In addition, portions of the city are also within the inundation areas of Wohlford and Olivenhain Dams. Dam inundation areas are downstream areas subject to flooding or other effects during large storm events. Dam inundation areas are also subject to the uncontrolled release of an upstream reservoir as well as events leading to breaks in levees or dams. Figure PS-2 also shows the limits of the maximum probable dam inundation in the Planning Area. The areas of potential dam inundation are generally along Cottonwood Creek, Encinitas Creek and Escondido Creek; portions of tributary stream channels; and the low-lying areas near the coastal portions of the Planning Area.

fires

The City of Encinitas and its surrounding environs are at risk from both wildland and urban fires. The undeveloped areas of the city and those that contain significant brush coverage have experienced wildland fires in the past and will experience fires again. Large fires would have several indirect effects beyond those that a smaller, more localized fire would create. These may include air quality and health issues, road closures, business closures, and others that increase the potential losses that occur from this hazard. Extreme weather conditions such as high temperature, low humidity and/or winds of extraordinary force may cause an ordinary fire to expand into one of massive proportions. In addition, urban fires are possible from careless human activity, or in the event of an earthquake, subsurface gas explosion or hazardous material combustion.

hazardous materials

Hazardous materials can include toxic chemicals, radioactive materials, infectious substances and hazardous wastes. The State of California defines a hazardous material as a substance that is toxic, ignitable or flammable, or reactive and/or corrosive. A chemical emergency can occur anywhere hazardous materials are manufactured, stored or transported. Chemical plants are obvious sources of potential accidents. Less obvious are highways, railways and storage containers at places such as swimming pools or water and wastewater treatment facilities. Pipelines are another less visible source of potential accidents since they are generally buried in rights-of-way. In Encinitas, I-5 and the Burlington Northern Santa Fe Rail line travel through the city for its entire length. Both carry various types of chemicals. Pipelines also transport natural gas and liquid petroleum through the community to facilities in San Diego.

sea level rise and coastal erosion

Sea Level Rise and Sand Loss

Current projections for sea level rise extending out until at least 2050 would result in, at most, a 30 cm to 50 cm rise in sea level. The sand loss associated with this type of increase in Mean Sea Level (MSL) represents only a small fraction of sand loss that has occurred over the past 30 years. Thus, at least until 2050, proposed beach nourishment projects similar to the U.S. Army Corps of Engineers 50-Year Beach Restoration Project, the Regional Beach Sand Project No. 2 and other future projects that the City will pursue, should significantly mitigate for any sand loss associated with the current projections of sea level rise.

Coastal Erosion

Coastal erosion remains an ongoing and serious problem affecting the coastline. The city has a variety of coastal features ranging from replenished beach sands, near-shore waters like wetlands and lagoons, and steep bluffs. The loss of beaches has not only negatively affected the recreational quality of important resident and tourist destinations, but is primarily responsible for the accelerated coastal erosion that has plagued the city's coastline for the past 30 years. The rates of coastal bluff retreat, bluff-top erosion and beach erosion are dependent on the underlying geologic units and their different responses

to the weathering effects of water (including rain and waves), gravity and wind. Coastal erosion occurs as a result of natural processes such as long-shore drift, storm surge and sea level rise.

The City of Encinitas is committed to an ongoing beach nourishment program as the most effective means to enhance recreation opportunities along its shoreline, while preserving environmental resources, improving public safety and reducing storm damage potential. Human activities such as urban development are not intended to adversely affect California's coastline, but they often do. The protection of the beaches from coastal erosion, through effective structural devices and sand replenishment, provides more than just a wider beach; it serves to create a buffer zone that provides protection from tsunami run-up or storm surges, especially in areas where there are no dune deposits in front of residential/commercial development.

goals and policies



The goals and policies contained in this Element focus on reducing the risk associated with hazards where mitigation is possible and developing strategies that will be effective in the event of a disaster or accident.

The Public Safety goals and policies of the General Plan are organized under the following thematic headings:

- Fire, Law Enforcement, Marine Safety and Emergency Services
- Seismic Safety
- Flooding and Sea Level Rise
- Wildland Fires
- Bluff and Slope Stability
- Hazardous Materials
- Climate Change-Related Hazards

fire, law enforcement, marine safety and emergency services

Public safety services, facilities and personnel are key to protecting the community and property from crime, human generated accidents and natural disasters. Public safety personnel maintain emergency management and disaster response plans, coordinate response activities during events, and help administer medical aid following events. Additionally, public safety agencies establish response standards and procedures to minimize the loss of life and property should an accident occur. The following goals and supporting policies identify the steps and activities to be undertaken by the City to limit threats from human accidents and natural disasters.

GOAL 1: Provide excellent law enforcement and improved public safety through technology, education, training, facilities and equipment.

Policies

1.1 Facilities Planning. Identify the location of existing and proposed law enforcement and fire protection facilities, as well as their service boundaries.

1.2 Fire Inspection Program. Maintain an ongoing fire inspection program to reduce fire hazards associated with older buildings, critical facilities and public assembly facilities.

1.3 Public Safety Performance Improvements. Strive to continuously improve the performance and efficiency of fire, law enforcement, marine safety and emergency services.

1.4 Public Education Programs. Enhance public awareness and participation in crime prevention, marine safety and hazard avoidance by developing and expanding educational programs that address personal safety awareness and actions to take in case of an emergency.

1.5 Emergency Management Procedures and Response Plans. Maintain strategic emergency management plans and procedures and periodically review response plans to reduce life and property loss.

fire, law enforcement, marine safety and emergency services

1.6 Emergency Level of Service Standards. Provide and regularly update standards and level of service guidelines that assure quality of life and protection of life and property from preventable losses.

1.7 Administrative and Equipment Capacity. Maintain adequate levels of staffing, facilities, materials and equipment to provide a timely response to demands for public safety services and meet the needs of a demographically changing community.

1.8 Agency Cooperation. Cooperate with and support in every way possible current federal, state and county agencies responsible for the enforcement of health, safety and environmental laws.

1.9 Mutual Aid Agreements. Continue working closely with nearby public safety and emergency management agencies to develop and maintain mutual support programs and coordinate emergency management procedures, such as mutual aid agreements.

1.10 Multihazard Functional Plan. Maintain the Multihazard Functional Plan as a policy of the City of Encinitas, including consideration of vulnerable populations in the planning process.

1.11 Multi-Jurisdictional Hazard Mitigation Plan. Maintain the Multi-Jurisdictional Hazard Mitigation Plan as a policy of the City of Encinitas and continue to identify the locations of potential hazards and assess the vulnerabilities of the city's population, critical facilities and infrastructure to hazards using the latest technologies, such as Geographic Information Systems (GIS) and hazard studies.

1.12 Emergency Management Program Implementation. Maintain ongoing implementation of the emergency management program, and expand as necessary, to ensure that emergency shelters and emergency evacuation and response routes are provided and clearly identified.

1.13 Emergency Response and Evacuation Routes. Identify the anticipated emergency response routes and evacuation procedures in the event of a tsunami, dam failure, flooding, wildfire and other large evacuation events.

fire, law enforcement, marine safety and emergency services

1.14 Early Warning Systems. Maintain the early warning systems for all hazards, where practical, and regularly consider new technology and procedures to improve the capability of the early warning system.

GOAL 2: Be prepared for and quickly recover from major disasters to minimize loss.

Policies

2.1 Disaster Recovery. In the event of a major disaster, facilitate the support and recovery of the community through techniques such as the establishment of local recovery centers, debris removal, permit and inspection streamlining, and working closely with state and federal emergency management agencies.

2.2 Disaster Recovery Plan. Prepare and regularly update a disaster recovery plan to address heavy search and rescue, major medical response, hazardous material response, emergency shelter, traffic and utility impacts, and debris removal and disposal.

2.3 Interdepartmental Recovery Coordination. Support ongoing interdepartmental coordination on disaster recovery contingency planning to ensure continuity of City operations, so the community will be provided with swift and effective disaster recovery efforts.

2.4 Community Disaster Preparedness Education. Support educational programs for staff, citizens, businesses, consortiums and neighborhood groups addressing the following:

- Emergency response;
- Disaster preparedness protocols and procedures;
- Disaster risk education; and
- Self-sufficiency and emergency planning to be self-sufficient in an emergency.

fire, law enforcement, marine safety and emergency services

GOAL 3: Minimize demand for public safety services through building design.

Policies

3.1 Public Safety through Design. Utilize the development review process to promote methods of building and public space design that discourage unlawful activity, with the following key strategies:

- Increase “eyes on the street” through building and public space design;
- Improve the ability of residents and businesses to easily survey common areas and shared spaces; and
- Promote the use of “defensible space” in building design, with transitions between public space and private building space.

3.2 Public Safety Design Criteria. Provide criteria in the Zoning Ordinance or Design Guidelines related to preventing crime and improving emergency response through appropriate physical design solutions.

3.3 Building Materials. Provide the public with guidance on the specification of building materials that help prevent loss from accidents and disasters.

3.4 Fire Safety and Monoxide Detector Systems. Require new residential and commercial construction to provide smoke detectors and fire sprinkler systems to minimize life and property loss and reduce the impact of development on service levels, pursuant to currently adopted codes and ordinances. Residents must have carbon monoxide detectors in their homes.

3.5 Protecting Critical Facilities. Consider and prioritize strategies for protecting critical infrastructure and facilities from potential terrorist activities.

3.6 Self-Sufficiency. Persuade and educate residents and businesses to be self-sufficient and administer crime prevention methods through building design.

3.7 Emergency Services Access. Require and maintain setbacks, easements and accesses necessary to ensure that emergency services can readily and efficiently function with available equipment.

fire, law enforcement, marine safety and emergency services

GOAL 4: Ensure new development does not impact the City to provide public safety services.

Policies

4.1 Development Impacts on Public Safety. Through the development review process, maintain and provide adequate safety service levels to meet the increased demand from new development. Focus new growth in areas already served by adequate fire, law enforcement and emergency services.

4.2 Congestion Impacts on Response Times. Evaluate the effects of new development and incremental increases in development density and resulting effect of traffic congestion on emergency response times, and require development to contribute to the cost of such services, facilities and/or equipment.

4.3 Maintaining Community Character. When making physical improvements to the transportation system to improve multi-modal capacities and emergency response, balance the improvements with community character of the city and with the community's overall vision for Encinitas in 2035, as expressed in the General Plan.

4.4 Safe and Balanced Circulation System. Address the efficiency and design of the circulation system to accommodate all users, including emergency access, through Fire Department review in the development review process.

4.5 Roads and Emergency Evacuation. Evaluate the impact of physical improvements reducing roadway capacities on emergency evacuation.

seismic safety

Protecting life and property from earthquakes and related seismic hazards, while balancing property rights and preservation of historic resources, is an important priority for Encinitas. Through improved understanding of hazards, expanded protection programs and increased public education, the City will strive to reduce the risk of living in a seismically active region. The following goals and policies establish steps and actions for Encinitas to continue its efforts at reducing risks to the community from seismic activities near the city. The California Government Code Sections 8871.5 through 8875.9 addresses building earthquake safety.

GOAL 5: Reduce injury and loss from seismic hazards.

Policies

5.1 Reduce Earthquake Structural Risks. Observe and apply effective seismic, geologic and structural considerations and measures to reduce earthquake structural risk through building and construction codes.

5.2 Monitor Existing Structures. Identify existing structures for seismic and structural safety, including those structures in the city constructed of unreinforced masonry, structures constructed of partially unreinforced masonry and “soft-story” buildings.

5.3 Programs for Structural Safety. Based on health and safety need, undertake necessary programs to assure reasonable structural safety.

5.4 Seismic Retrofitting. Support and encourage the seismic retrofitting and strengthening of essential facilities such as hospitals and schools to minimize damage in the event of seismic or geologic hazards.

5.5 Balancing Seismic Retrofit and Preservation. Work with the community to identify approaches for seismic retrofit of historic buildings that maintain historic appearance and integrity, including building preservation, rehabilitation and restoration. The following principles should guide seismic retrofits of historic structures or buildings:

- Historic materials should be preserved and retained to the greatest extent possible and not replaced wholesale in the process of seismic strengthening;
- New seismic retrofit systems, whether hidden or exposed, should respect the character and integrity of the historic building and be visually compatible with it in design; and
- Seismic work should be “reversible” to the greatest extent possible to allow for future use of improved systems and traditional repair of remaining historic materials.

5.6 Citywide Hazard Maps. Maintain updated citywide maps showing faults and geologic hazards. See Figure PS-1 of this Element for the most recent city-wide map of related conditions.

5.7 Community Planning Considerations. Ensure that current and future community planning includes consideration of seismic and other geologic hazards.

5.8 Geologic Investigations. Require submission of geologic and seismic reports, as well as soils engineering reports, in relation to applications for development permits whenever seismic or geologic problems are suspected.

5.9 Lifeline Utility Systems Review. Regularly review local lifeline utility systems such as gas, water, power and telecommunication utilities, to ascertain their vulnerability to disruption caused by seismic or geologic hazards, and implement measures to reduce any vulnerability.

5.10 Lifeline Utility Systems Planning. Plan for the continued function of critical facilities following a major seismic or geologic hazard to help prevent major problems during post-disaster response such as evacuations, rescues and major clean-up operations.

5.11 Community Earthquake Preparedness. Encourage earthquake preparedness and associated educational programs within the community for both residents and businesses.

5.12 Earthquake Emergency Procedures. Include and periodically review and update emergency procedures for earthquake in the City's emergency operation plan.

5.13 Protection of Essential Facilities. Ensure that existing essential facilities that have been built in or on seismic and geologic hazards are upgraded and maintained in order to prevent and reduce loss.

GOAL 6: Minimize damage and loss from tsunamis.

Policies

6.1 Protecting Inundation Areas. Identify flood hazard areas and provide appropriate land use regulations and recommended actions for infrastructure facilities, private development and other areas that are subject to tsunami inundation. See Figure PS-2 of this Element for the most recent citywide map of related conditions.

6.2 Updating Inundation Maps. Regularly review local and distant tsunami inundation maps for Encinitas and adjacent coastal communities as new information becomes available to identify susceptible areas and plan evacuation routes.

6.3 Regional Response Participation. Participate in any regional effort to develop and implement workable response plans that the City's emergency services can adopt immediately for evacuation in case of a tsunami warning.

6.4 Protection from Wave Run-up. Protect residents, visitors and property from potential wave run-up with the following measures:

- Maintain beach width as critical protection against tsunami run-up for structures in low-lying areas;
- Prepare and periodically update comprehensive wave run-up and impact reports for shoreline and coastal bluff areas subject to wave action;

seismic safety

- To the extent feasible, require all new or remodeled structures on a beach or coastal bluff to be sited outside areas subject to coastal hazards (such as sea level rise, beach or bluff erosion, and inundation) at any time during the full projected economic life of the development; and
- Regulate the construction of non-recreation uses or structures on coastal stretches with high predicted storm wave run-up to minimize risk of property damage, encouraging or requiring new or remodeled structures in areas susceptible to storm surges and wave run-up to raise floor elevations.

6.5 Tsunami Education. Develop and implement a tsunami educational program for residents, visitors and people who work in susceptible areas.

flooding and sea level rise

The community wishes to develop in a manner that allows continued enjoyment of the extensive water features of the area while minimizing associated flood and flood-related hazards. The General Plan balances public safety and risk reduction and property rights by establishing development standards, limiting development in flood prone areas, and developing a master plan for drainage and flood control.

Another important aspect of community planning is for coastal cities to anticipate and/or avoid the negative impacts of sea level rise on public and private property. The General Plan seeks to minimize the potential damage of a rising sea level through identification of hazards and the protection of development and critical infrastructure.

The following goals and policies provide the City with a series of policies for reducing flood-related risks to life and property and a framework for monitoring change in sea level and responding to any associated increased risks.

GOAL 7: Reduce threat of flood hazards to the community.

Policies

7.1 Preserving Floodways and Flood Plains. Prohibit development, grading and filling in drainage courses, floodways and flood plains and comply with the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP) requirements. Limited exceptions may be allowed for the following:

- When finding that strict application of this policy would preclude any reasonable use of property (one residential dwelling unit per legal parcel or equivalent extent of development under non-residential zoning);
- Circulation Element roads;
- Necessary water supply projects;
- Necessary public facilities;

flooding and sea level rise

- Flood control projects where no other method for protecting existing structures in the flood plain is feasible, and where such protection is necessary for public safety or to protect existing development;
- Projects where the primary function is fish and wildlife habitat enhancement;
- Limited reconfiguration of the flood plain in previously degraded areas, provided the City determines that such reconfiguration is incidental to the improvement of an overall storm water system and the reconfigured system is substantially based on natural channels with vegetation to accommodate stormwater management;
- Other vital public facilities when no other feasible alternatives exist and when disruption to the natural flood plain, floodway or drainage course is minimal; and
- Other improvements compliant with FEMA's National Flood Insurance Program (NFIP) requirements.

7.2 Protection from Flood Hazards in other Areas. Study and provide publicly available information about specific flood-prone areas where flooding could occur during moderate and/or major storms. Grading and/or development in urban areas which may be subject to inundation due to reasons such as inadequate drainage may be permitted upon review by the City to ensure the following:

- Said improvements are designed in such a manner as to protect habitable spaces;
- Improvements provide reasonable drainage infrastructure; and
- Said improvements will not adversely impact flood water level on adjacent properties. Displacement of flood water due to grading or development may also be restricted if drainage conveyance system is undersized.

7.3 Essential Public Facilities. Locate essential public facilities, such as hospitals and fire stations, outside of flood hazard areas.

flooding and sea level rise

7.4 Citywide Flood Protection. Reduce flood damages and losses through the following strategies:

- Flood plain management regulations;
- Flood plain mapping and construction of drainage infrastructures;
- Flood hazards awareness;
- Providing studies needed for flood plain management program; and
- Developing plans for flood hazard emergency response.

7.5 Mitigating Flood Hazards. Future development in flood hazard areas shall ensure that flooding concerns have been addressed prior to development. When flood or drainage improvements are warranted as provided by other flooding and sea level rise policies in this section, require that developers mitigate flood hazards in areas identified as subject to periodic flooding prior to actual development.

7.6 Mitigating Flood-Related Hazards. Require construction design within and adjacent to potential flood hazard areas to accommodate large flood and debris flows.

7.7 No Adverse Impact in Flood Plain Management. Ensure that the actions of one property owner do not adversely impact the rights of other property owners, as measured by increased flood peaks, flood velocity and erosion and sedimentation.

7.8 Master Plan for Drainage and Flood Control. Develop and implement a master plan for drainage and flood control to protect residents, workers and visitors from all flood hazards, including dam and tsunami inundation. (Coastal Act/30236)

7.9 Maintain available information on flood hazard areas. Include available flood hazard maps in the Geographic Information Systems (GIS) to define at-risk areas and other flood-prone areas, where flooding could occur during a moderate and/or a major storm.

flooding and sea level rise

7.10 Site Design. Ensure that developments are sited and designed to avoid isolation from essential services in the event of flooding, with a focus on the following strategies:

- Proper design and placement of development;
- Watershed management;
- Low impact development and stormwater strategies such as retention, filtration and evapotranspiration; and
- Similar measures to decrease run-off.

7.11 Development Standards. Establish and implement development standards for flood control and drainage improvements and the maintenance of such improvements, based on the 50- or 100-year storm. Standards should be consistent with this General Plan's vision and policies for maintaining community character, while also respecting the site's environmental characteristics and the maintenance of natural or natural-appearing drainage courses.

7.12 Education. Promote public education programs that increase public knowledge and support for safe developments in flood hazard areas and prepare the public for flood hazard emergency response.

7.13 Flood Insurance. Cooperate with the Federal Emergency Management Agency to make affordable flood insurance available to Encinitas residents through the National Flood Insurance Program.

GOAL 8: Avoid and mitigate risks connected with sea level rise.

Policies

8.1 Identification of Hazard Areas. Identify and continually update mapping data which shows areas of the city that are vulnerable to sea level rise. See Figure PS-2 for the most recent citywide map of related conditions.

flooding and sea level rise

8.2 Protection of Development. Inventory all existing and planned infrastructure and land development within vulnerable areas identified through other flooding and sea level rise policies of this Element for its capacity to accommodate projected sea level rise over the life expectancy of the infrastructure and development.

8.3 Siting and Design. Take anticipated future changes in sea level into account when siting and designing new shoreline development and shoreline protective devices. In particular, consider the acceleration of the historic rate of sea level rise. Development shall be set back a sufficient distance landward and elevated to a sufficient foundation height to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected economic life of the structure.

8.4 Protection of Critical Infrastructure. Establish a long-term retreat strategy for critical City infrastructure that needs to be relocated due to sea level change.

8.5 Adaptation Strategy. Identify and evaluate the risks/impacts with sea level rise and develop a strategy to adopt to changing conditions over time.

wildland fires

As a community nestled into the beautiful coastal foothills of San Diego County, Encinitas is particularly interested in effective wildland fire prevention. Through appropriate construction standards and site maintenance and avoidance strategies, wildland fire risk can be effectively reduced. The following goal and policies provide the City with steps for reducing the risks associated with wildland fires.

GOAL 9: Minimize risk of wildfire hazards to the community.

Policies

9.1 Code Standards and Maps. Adopt, amend or maintain the Very High Fire Hazard Severity Zone Map and applicable Wildland Urban Interface Code Standards through periodic updates.

9.2 Hazards Data. Continue to utilize complete data on wildland and urban fire hazards.

9.3 Database Maintenance. Maintain a database of parcels in wildland interface areas or fire hazard severity zones.

9.4 Reducing Wildfire Hazards. Apply hazard reduction and other methods to reduce wildfire hazards to existing and new development in wildland interface areas and fire hazard severity zones.

9.5 Development Review. Consider the following issues during City review of development projects:

- The severity of natural fire hazards;
- Potential damage and risk;
- Adequacy of fire protection and emergency response ; and
- Mitigation measures consistent with this General Plan Public Safety Element and the General Plan vision.

wildland fires

9.6 New Development Locations. As appropriate, site and design new development to avoid the need to extend fuel modification zones into sensitive habitats.

9.7 Adequate Water Supply and Water Protection. Ensure that new development provides for emergency vehicle access and fire-flow water supply in accordance with applicable fire safety regulations.

9.8 Construction Standards. In areas identified as susceptible to brush or wildfire hazard, provide construction standards to reduce structural susceptibility and increase protection. For new development, require onsite detection and suppression, including automatic sprinkler systems.

9.9 Retrofitting. Encourage owners of non-sprinklered properties in wildland interface areas and fire hazard severity zones to retrofit their buildings and include internal fire sprinklers.

9.10 Brush Clearance. In areas of native or significant brush, require brush clearance around structures for fire safety of not less than a 50-foot perimeter but not more than a 100-foot perimeter, as provided by the Resource Management Element . New development near or within environmentally sensitive habitat areas and habitat buffers shall be sized, sited and designed to minimize the impacts of fuel modification and brush clearance activities on habitat and neighboring property.

bluff and slope stability

Managing coastal hazards is a key component of the General Plan and Local Coastal Program. While damage from slope failures in Encinitas has been relatively small compared with other hillside communities or coastal bluff communities, bluff erosion has been a significant issue for patrons of the city's coastline, as illustrated by the presence of numerous seawalls. Engineering solutions to coastal hazards typically have impacts on coastal resources. Therefore slope stability, hazard avoidance and reducing risk to life and property is still an important priority for the community. Through engineering and architectural design solutions, these hazards can be addressed and mitigated. The following goal and policies provide the City with tools to reduce risks associated with bluff and slopes.

GOAL 10: Reduce risks from unstable bluffs and slopes.

Policies

10.1 Shoreline Preservation Strategy. Adopt the Shoreline Preservation Strategy as a policy of the City of Encinitas.

10.2 Posting Hazards. Maintain adequate signage to warn the public of the dangers generally associated with bluff collapse to help minimize public and private risks inherent in the ongoing existence of unprotected, unstable natural bluffs and the less significant, transient risks associated with construction and maintenance of bluff retention devices.

10.3 Hazard Education. Continue to inform the public about bluff and slope stability hazards, hazard avoidance and disaster response.

10.4 Bluff Preservation. Preserve the city's coastal and inland bluffs as a natural resource and avoid risk to life and property through responsible and sensitive bluff-top development.

10.5 Sediment Supply. Advance a regional management approach to sediment supply that accepts the value of beaches and works to improve them.

bluff and slope stability

10.6 Construction Standards. Adopt standards and requirements for grading and construction to mitigate the potential for bluff failure and seismic hazards. New development should neither create nor contribute significantly to erosion, geologic instability or significantly alter natural landforms along coastal bluffs and cliffs.

10.7 Hazard Avoidance. Follow the principle of hazard avoidance as the primary approach to managing coastal hazards. All new beachfront and blufftop development shall be sized, sited and designed to minimize risk from wave run-up, flooding, and beach and bluff erosion hazards without requiring a shoreline protection structure at any time during the life of the development.

10.8 Geotechnical Studies. Require that any improvement constructed in an area with a slope of more than 25 percent and in other areas where soil stability is at issue to submit soils and geotechnical studies to the City for review and approval. These studies shall document that the proposed development will not adversely affect hillside or soil stability and that no future protective measures will be required. (Coastal Act/30253)

10.9 Geologic Hazard Abatement District. Consider the establishment of Geologic Hazard Abatement Districts to encourage local cooperation in preventing or mitigating coastal hazards.

10.10 Development in Hillside/Inland Bluff Overlay Zone. Restrict development in those areas where slope exceeds 25 percent as specified in the Hillside/Inland Bluff Overlay zone regulations of the Zoning Code. Encroachment into slopes as detailed in the Hillside/Inland Bluff Overlay may range from 0 percent to a maximum of 20 percent, based on a sliding scale of encroachment allowances reflective of the amount of the property within steep slopes; upon the discretionary finding that there is no feasible alternative siting or design which eliminates or substantially reduces the need for such encroachment; that the bulk and scale of the proposed structure has been minimized to the greatest extent feasible; that such encroachment is necessary for minimum site development; and that the maximum contiguous area of sensitive slopes shall be preserved. Within the Coastal Zone and for the purposes of this section, "encroachment" shall constitute any activity which involves grading, construction,

bluff and slope stability

placement of structures or materials, paving, removal of native vegetation (including thinning, pruning and/or removal for brush management purposes) or other operations which would render the area incapable of supporting native vegetation or being used as wildlife habitat.

Exceptions to this policy may be made upon the finding that strict application of this policy would preclude any reasonable use of property (one dwelling unit per legal parcel). Exceptions may also be made for the following:

- Development of Circulation Element roads, local public streets, and private roads and driveways which are necessary to access the more developable portions of a site on slopes of less than 25 percent grade; and
- Development of other vital public facilities, but only to the extent that no other feasible alternatives exist and minimum disruption to the natural slope is made.

10.11 Hazardous Development Prevention. Rely on the Coastal Bluff and Hillside Inland Bluff Overlay Zones to prevent future development or redevelopment that will represent a hazard to its owners or occupants, and which may require structural measures to prevent destructive erosion or collapse. (Coastal Act/30240/30251/30253)

10.12 Bluff Erosion Reduction. Provide for the reduction of unnatural causes of bluff erosion, as detailed in the Zoning Code, by:

- Only permitting public access stairways and prohibiting private stairways, and otherwise discouraging climbing upon and defacement of the bluff face;
- Improving local drainage systems to divert surface water away from the bluff;
- Studying the underground water system and looking for potential solution to bluff instability/erosion caused by such water;
- Reducing the infusion of ground water from domestic sources through, among other actions, requiring the removal of existing irrigation systems within forty feet of the bluff edge and prohibiting the installation of such systems in new development;

bluff and slope stability

- Pursuant to the Coastal Bluff Overlay Zone, permitting bluff repair and erosion control measures on the face and at the top of the bluff that are necessary to repair human caused damage to the bluff, and to retard erosion which may be caused or accelerated by land based forces such as surface drainage or ground water seepage, providing that no alteration of the natural character of the bluff shall result from such measures, where such measures are designed to minimize encroachment onto beach areas through an alignment at and parallel to the toe of the coastal bluff; where such measures receive coloring and other exterior treatments; and provided that such measures shall be permitted only when required to serve coastal dependent uses or to protect existing principal structures or public beaches in danger from erosion; and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply;
- Requiring new structures and improvements to existing structures to be set back 25 feet from the inland bluff-top edge, and 40 feet from coastal bluff-top edge with exceptions to allow a minimum coastal bluff-top setback of no less than 25 feet. For all development proposed on coastal bluff-tops, a site specific geotechnical report shall be required. The report shall indicate that the coastal bluff-top setback will not result in risk of foundation damage resulting from bluff erosion or retreat to the principal structure within its economic life and with other engineering evidence to justify the coastal bluff-top setback;
- On coastal bluffs, exceptions to allow a minimum setback of no less than 25 feet shall be limited to additions or expansions to existing principal structures which are already located seaward of the 40 foot coastal bluff-top setback, provided the proposed addition or expansion is located no further seaward than the existing principal structure; is set back a minimum of 25 feet from the coastal bluff-top edge; and the applicant agrees to remove the proposed addition or expansion, either in part or entirely, should it become threatened in the future;
- In all cases, all new construction shall be specifically designed and constructed such that it could be removed in the event of endangerment and the applicant shall agree to participate in any comprehensive plan adopted by the City to address coastal bluff recession and shoreline erosion problems in the city;

bluff and slope stability

- This does not apply to minor structures that do not require a building permit, except that no structures, including walkways, patios, patio covers, cabanas, windscreens, sundecks, lighting standards, walls, temporary accessory buildings not exceeding 200 square feet in area and similar structures shall be allowed within five feet from the bluff-top edge; and
- Permanently conserving the bluff face within an open space easement or other suitable instrument. (Coastal Act/30210/30235/30240/30251/30253)

Standards for the justification of preemptive erosion control devices and limits on location of shoreline devices shall be as detailed in the Coastal Bluff Overlay Zone of the Zoning Code.

10.13 Coastal Bluff Recession and Shoreline Erosion. Develop and adopt a comprehensive plan, based on the Beach Bluff Erosion Technical Report (2004), to address the coastal bluff recession and shoreline erosion problems in the city. Said plan shall include, at minimum, components that deal with all the factors affecting the bluffs in Encinitas. These include, but are not limited to:

- Minimum bluff-top setback requirements for new development/redevelopment;
- Alternatives to shore/bluff protection such as beach sand replenishment;
- Removal of threatened portions of a residence or the entire residence or underpinning existing structures;
- Addressing bluff stability and the need for protective measures over the entire bluff (lower, mid and upper);
- Impacts of shoreline structures on beach and sand areas as well as mitigation for such impacts;
- Impacts of groundwater and irrigation on bluff stability; and
- Visual impacts of necessary/required protective structures.

Until such time that a comprehensive plan is submitted to, reviewed and approved by the Coastal Commission as an amendment to this Local Coastal Program by November 17, 1995, then no additions or expansions to existing structures shall be permitted on coastal bluff-top lots except for minor additions

bluff and slope stability

or expansions that comprise no greater than a 10 percent increase above the existing gross floor area or 250 square feet whichever is greater; provided such additions/expansions are located at least 40 feet from the coastal bluff-top edge; the addition/expansion is constructed in a manner so that it could be removed in its entirety; and the applicant agrees, in writing, to participate in any comprehensive plan adopted by the City to address coastal bluff recession and shoreline erosion problems in the city. In addition, until such a comprehensive plan is approved by the City of Encinitas and the Coastal Commission as an amendment to the LCP, the City shall not permit the construction of seawalls, revetments, breakwaters, cribbing or similar structures for coastal erosion except under circumstances where an existing principal structure is imminently threatened and, based on a thorough alternatives analysis, an emergency coastal development permit is issued and all emergency measures authorized by the emergency coastal development permit are designed to eliminate or mitigate adverse impacts on local shoreline sand supply.

10.14 Sand Replenishment. Coordinate with appropriate agencies to fund and establish a program for periodic sand nourishment of beaches which are vulnerable to wave damage and erosion. Beach nourishment programs should include measures to minimize adverse biological resource impacts from deposition of material, including measures such as timing of placement or seasonal restrictions and identification of environmentally preferred locations for deposits.

hazardous materials

Many of the products we use in everyday living contain substances that are harmful to the environment. The production and use of these goods often result in toxic byproducts that need to be disposed so that the detrimental effects can be reduced or eliminated altogether. Hazardous materials and substances are a direct result of our technology and high standard of living, and a balance needs to be found between economic prosperity and the well being of the environment. The following goal and supporting policies recognize that these materials need to be handled in a responsible manner to ensure the safety of the public and the environment.

GOAL 11: Make every effort to protect Encinitas residents and workers from exposure to hazardous materials and wastes and the transport of such materials.

Policies

11.1 Hazardous Waste Management Plan. Implement the Hazardous Waste Management Plan (HWMP) as a policy of the City of Encinitas. Ensure that the implementing policies and regulations are kept up to date and consistent with the regional HWMP.

11.2 Development of Hazardous Waste Facilities. In order to protect the health and safety of the residents of Encinitas and surrounding communities, control the development of hazardous waste facilities as required in Chapter 30.57 of the Municipal Code.

11.3 Hazardous Waste Facilities Review. Review the construction of hazardous waste facilities in accordance with development standards defined in the Land Use and Community Design Element, State of California law, Municipal Code, and the County Hazardous Waste Management Plan.

11.4 Siting Facilities. Require land uses involved in the production, storage, transportation, handling or disposal of hazardous materials to be located a safe distance from land uses that may be adversely impacted by such activities. (Coastal Act/30250)

hazardous materials

11.5 Hazardous Materials Mitigation and Response Programs. Require commercial and industrial facilities to participate in a hazardous materials and wastes mitigation and response program.

11.6 Regional Program Participation. Participate in programs to reduce the amounts of hazardous wastes being generated in the San Diego region, as provided in the adopted San Diego County Hazardous Waste Management Plan.

11.7 Regional Cooperation. Cooperate with the efforts of the County Department of Health, Hazardous Waste Management Division to inventory and properly regulate land uses involving hazardous wastes and materials.

11.8 Enforcement of Disclosure Laws. Cooperate with the enforcement of disclosure laws requiring all users, producers and transporters of hazardous materials and wastes to clearly identify such materials at the site and to notify the appropriate local county, state and/or federal agencies in the event of a violation.

11.9 Transporting Hazardous Materials. Restrict the transport of hazardous materials to identified truck routes as established by Circulation Element policies and implementation actions.

11.10 Coordination with Other Agencies. Coordinate with the North County Transit District (NCTD), the California Department of Transportation (Caltrans) and other agencies to ensure that hazardous materials transported by rail or by freeway through the city do not present a threat to life or property in Encinitas.

hazardous materials

11.11 Project Coordination. If investigation of the environmental history of a site reveals the presence of contaminated soils, and/or if a site investigation of existing soil, groundwater, and sediment and surface conditions identify hazardous materials, the City shall coordinate with the appropriate agencies throughout the development review process to achieve the following:

- Ensure remediation of hazardous materials is in compliance with county, federal and other applicable standards;
- Prevent or minimize any impacts associated with future construction (handling and exposure) and/or on-site use operations; and
- Communicate with the surrounding neighborhood from initial investigation/studies through the grading permit/remediation process, consistent with Land Use compatibility policies.

11.12 Education. Educate residents and businesses about how to reduce or eliminate the use of hazardous materials and products, including safer non-toxic equivalents.

climate change-related hazards

Reducing the risks of climate change related hazards, like all other natural hazards, is a very important priority for the community. By identifying and monitoring possible and changing hazardous conditions, the community can avoid hazards resulting from a changing climate. With little knowledge of exactly how weather patterns will change, the following goal and policies will help the City monitor, track and respond to changing hazards.

GOAL 12: Anticipate and avoid hazards resulting from climate change.

Policies

12.1 Monitor Climate Change Related Hazards. Monitor and regularly assess climate vulnerabilities and periodically review the effectiveness of existing plans, programs, codes and ordinances in protecting health and safety.

12.2 Climate Action Planning. Continue to monitor and update, as necessary, the City's Climate Action Plan to achieve greenhouse gas emissions reductions and reduce consumption and waste.

12.3 Adaptation and Reducing Vulnerabilities. As appropriate, explore options for urban planning and hazard avoidance in response to climate change.

12.4 Integrated Adaptation Planning and Multi-level Governance. Work to understand and respond to global climate change, developing an adaptation program that addresses at least the following topics as they relate to climate change:

- Disaster risk management;
- Hazard assessment;
- Preparedness measures;
- Adaptation of existing urban and developed areas to climate change;
- Impacts on land use and spatial planning;
- Health and environmental effects; and
- Other adaptation strategies.

climate change-related hazards

12.5 Fire Hazard Monitoring. Regularly monitor and evaluate fire hazard assessment and protection criteria in light of changing climatic conditions and possible increased risk of wildfires.

12.6 Flood Monitoring. Regularly assess flood risk, sea level rise, tsunami inundation and associated vulnerability of infrastructure and public and private property, and consider strategies for responding to vulnerabilities.

12.7 Hazard Abatement. Develop a strategy for hazard abatement which requires that structures identified as located in hazardous areas are brought into conformance with acceptable levels of risk.

12.8 Heat Island Reduction. Encourage heat island reduction measures to be implemented throughout the city to the extent feasible, including but not limited to the following:

- Shade from tree canopy;
- Shade from structures such as canopied walkways, vined pergolas or other structures;
- Solar-reflective paving;
- Open-grid (reduced) paving;
- High-reflective and/or vegetated roofs; and
- Preservation of natural areas and pervious surfaces.

12.9 Temporary Shelters. Plan for and locate well distributed, easily accessible “cool” shelters to provide at-risk members of the community protection during extreme heat events.

figures



List of Figures

- | | |
|--|-------|
| Figure PS-1: Areas Susceptible to Geologic Hazards | PS-51 |
| Figure PS-2: Flood and Inundation Areas | PS-53 |

