CHAPTER 7 Safety Element

Introduction

Purpose and Scope

The purpose of the Safety Element is to include safety considerations in the planning and decision-making process by establishing policies related to future development that will minimize the risk of personal injury, loss of life, property damage, and environmental damage associated with natural and man-made hazards. The Safety Element addresses the County of San Diego's natural hazards and human activities that may pose a threat to public safety within the following topic areas:

- Wildfires
- Geological and Seismic Hazards
- Flooding
- Hazardous Materials
- Law Enforcement
- Airport Hazards

The Safety Element provides policy direction that supports laws and regulations related to safety hazards as well as policies that support the guiding principles established for this General Plan.

Guiding Principles for Safety

The Safety Element maps, goals, and policies support the Guiding Principles specified in Chapter 2 of the General Plan. Specifically, Guiding Principle 5 provides direction for the Safety Element to ensure that development accounts for physical constraints and the natural hazards of the land. The Safety Element supports this principle through numerous policies that locate development away from hazardous areas and ensure safety and security for all communities within the County. Goals and polices of the Safety Element protect residents and areas from wildland and urban fire, crime, hazardous materials incidents, flooding, earthquakes, and hazardous incidents from aircrafts.

Relationship to Other General Plan Elements

Several Safety Element policies are interrelated with mandated topics in the Land Use, Circulation, and Conservation and Open Space Elements. For example, Land Use Maps seek to minimize future development in hazardous areas. Policies to minimize the risks posed from wildland fires, found in the fire hazards section of the Safety Element, are also found in the Land Use and Conservation and Open Space Elements. In addition, policies associated with secondary access during a fire emergency are found in the Mobility Element. References to related policies are provided where appropriate within the Safety Element. It is important to remember, however, that policies in the Safety Element are tailored to address safety-related issues and referenced policies in other Elements should also be reviewed to determine environmental or other types of policies associated with similar locations or types of development.

Goals and Policies for Safety Element

Hazards Mitigation, Disaster Preparedness, and Emergency Response

CONTEXT

This section contains goals and policies that provide for the safety and protection of life and property from the occurrence of a natural or manmade hazard and apply generally to any potential hazardous event, which may be addressed further in other topic areas in this Element.

HAZARDS MITIGATION

On October 19, 2004, the Board of Supervisors adopted the Multi-Jurisdictional Hazard Mitigation Plan (HMP) in compliance with federal and State regulations intended to reinforce the importance of mitigation planning and emphasized planning for disasters before they occur. The HMP is a comprehensive assessment of natural hazards including coastal storms, erosion and tsunami, dam failure, earthquakes, floods, rain-induced landslides, liquefaction, structure/wildland fires, and manmade hazards, including technological and terrorism. The plan enhances public awareness and understanding, creates a decision tool for management, promotes compliance with State and Federal program requirements, enhances local policies for hazard mitigation capability, and provides inter-jurisdictional coordination of mitigation-related programming.

DISASTER PREPAREDNESS

Saving lives and the protection of life, the environment, and property are the primary goals of governmental public safety agencies in any emergency or disaster. Emergency plans provide the basis from which response and recovery operations are executed. The success of these plans depends largely, in part, on the collaboration of agencies and jurisdictions responsible for the development and maintenance of these plans.

The San Diego County Office of Emergency Services (OES) coordinates the overall County response to disasters. OES is responsible for alerting and notifying appropriate agencies when disaster strikes; coordinating all agencies that respond; ensuring resources are available and mobilized in times of disaster; developing plans and procedures for response to and recovery from disasters; and developing and providing preparedness materials for the public. OES and numerous regional partners have completed two important public safety preparedness plans related to disaster evacuations and recovery:

- The San Diego Operational Area Evacuation Plan—The Evacuation Plan is intended to be used as a template, as cities throughout the County continue to develop their individual evacuation plans. The Plan outlines procedures and organizational structures that can be used for a coordinated regional evacuation effort. Transportation routes and capacities are identified in addition to countywide shelter space and considerations for special needs populations.
- The San Diego Operational Recovery Plan—The Recovery Plan is designed to provide guidance to jurisdictions and organizations within the County of San Diego as they continue their own recovery planning. The plan addresses short and long-term restoration plans for communities impacted by disaster, including issues such as: debris removal, coordination of financial assistance

and housing, economic recovery, and measures to reduce or eliminate the effects of future incidents.

EMERGENCY RESPONSE

OES coordinates the overall County response to disasters, including alerting and notifying appropriate agencies, coordinating all responding agencies, ensuring resources are available and mobilized, developing response and recovery plans and procedures, and providing preparedness materials for the public. The Unified Disaster Council (UDC), the governing body of the Unified San Diego County Emergency Services Organization, is chaired by the Chair of the San Diego County Board of Supervisors and includes representatives from the 18 incorporated cities. OES serves as staff to the UDC and acts as a liaison between the incorporated cities, the State Office of Emergency Services and FEMA, as well as non-governmental agencies such as the American Red Cross.

GOALS AND POLICIES

GOAL S-1

Public Safety. Enhanced public safety and the protection of public and private property.

Policies

S-1.1 **Minimize Exposure to Hazards.** Minimize the population exposed to hazards by assigning land use designations and density allowances that reflect site specific constraints and hazards.

S-1.2 **Public Facilities Location.** Advise, and where appropriate require, new development to locate future public facilities, including new essential and sensitive facilities, with respect to the County's hazardous areas and State law.

S-1.3 **Risk Reduction Programs.** Support efforts and programs that reduce the risk of natural and man-made hazards and that reduce the time for responding to these hazards.

S-1.4 **Multi-Jurisdictional Hazard Mitigation Plan.** Review and update the County's Multi-Jurisdictional Hazard Mitigation Plan every five years.

S-1.5 **Post-disaster Reconstruction.** Participate in the development of programs and procedures that emphasize coordination between appropriate public agencies and private entities to remove debris and promote the rapid reconstruction of the County following a disaster event and facilitate the upgrading of the built environment as expeditiously as possible.

GOAL S-2

Emergency Response. Effective emergency response to natural or human-induced disasters that minimizes the loss of life and damage to property, while also reducing disruptions in the delivery of vital public and private services during and following a disaster.

Policies

S-2.1 **Emergency Management System Training.** Conduct annual training sessions using adopted emergency management systems. Coordinate with other jurisdictions to execute a variety of exercises to test operational and emergency plans.

S-2.2 **Participation in Mutual Aid Systems.** Maintain participation in local, regional, State, and national mutual aid systems to ensure that appropriate resources are available for response and recovery during and following a disaster.

S-2.3 **Familiarity with National and State Response Plans.** Ensure that all relevant and pertinent County of San Diego personnel are familiar with the National Incident Management System, the National Response Plan, the State of California Master Mutual Aid Agreement, and any other relevant response plans consistent with their position in the County's Emergency Management Plan.

S-2.4 **Emergency and Disaster Education Programs.** Sponsor and support education programs pertaining to emergency/disaster preparedness and response protocols and procedures. Distribute information about emergency preparedness to community groups, schools, religious institutions, transient occupancy establishments, and business associations.

S-2.5 **Existing Development within 100-year Flood Zones.** Implement flood warning systems and evacuation plans for areas that are already developed within 100-year flood zones.

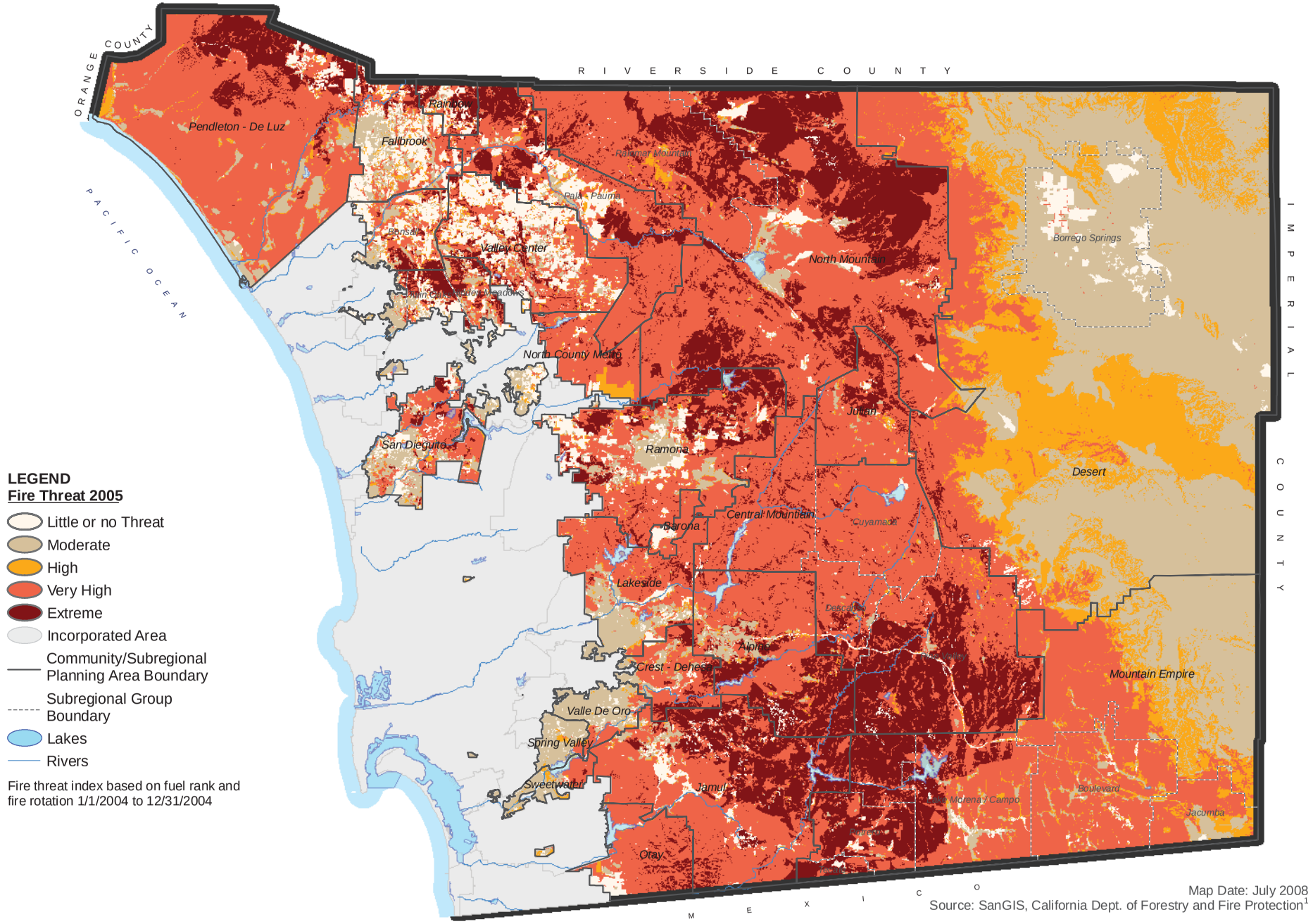
S-2.6 **Effective Emergency Evacuation Programs.** Develop, implement, and maintain an effective evacuation program for areas of risk in the event of a natural disaster.

Fire Hazards

CONTEXT

In the County of San Diego, fire hazards represent a high level threat to personal injury and property damage. Because most of the unincorporated County is located within very high or extreme fire threat areas, avoiding high threat areas is not possible (Figure S-1 [Fire Threat]). Comparing structural loss data from CAL FIRE of the 20 largest California wildland fires by structural loss between 1923-2008, San Diego County accounted for over 34 percent of the total destroyed structures statewide.

Between 1967 and 2007 San Diego County experienced more than 9,000 destroyed dwellings from wildland fires. The topography, geographic, and climatic conditions within our region lead to the overall regional fire problem. Over half of the land acreage of the unincorporated county is public land owned by the federal government, state government, or local government. Therefore, policies focus on minimizing the impact of wildfires through land use planning techniques and other mitigation measures. Key issues addressed in this section are as follows:



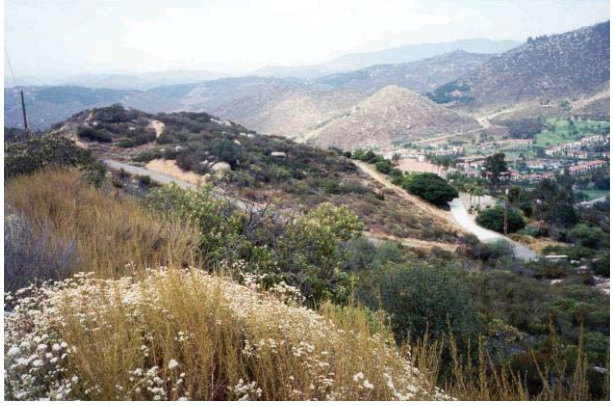
FIRE THREAT

San Diego County General Plan

Figure S-1

Defensible Space: Defensible space refers to a separation zone between wildlands and structures where fuel, including natural and ornamental vegetation, man-made combustible materials, and ancillary structures, is managed or modified to minimize the spread of fire to the structure and allow space for defending structures from burning vegetation. This separation is important to improving the survivability of structures in a wildland fire event and is most readily maintained when planned for as part of project design. For optimal protection against wildfires, structures should also be "hardened" to make them more ignition resistant.

- *Wildland/Urban Interface:* The wildland/urban interface refers to areas where structures and other human developments meet or intermingle with undeveloped wildland. Much of the unincorporated County is located within the wildland/urban interface.
- *Strategic Vegetation Management:* Outside of defensible space around structures, reducing, thinning, or otherwise modifying the amount of vegetation (fuel) may reduce the risk of wildfire within conifer forests as well as through strategic fuel breaks near the wildland-urban interface in low-wind conditions.


Wildland/urban interface in Bonsall

- *Access/Egress Routes:* Require development to include multiple access/egress routes when necessary to ensure adequate safety.
- *Funding Fire Services:* Existing funding for fire services is limited and variable. Full-time funding for fire services is crucial for assuring long-term commitment of adequate coverage.
- *Travel Time Standards:* The minimum travel time standards to respond to a fire hazard or medical emergency facilitate the ability to identify future fire facility needs and to determine public service requirements for proposed development. Travel time standards indicate that expectations for service levels are different in urbanized areas than in rural areas.
- *Multiple Fire Protection Districts*: Providing a coordinated response to large wildland fires is a challenge in the County where the responsibility for fire prevention and suppression is vested in a number of local, State, and federal agencies.
- *Multi-Story Structural Fires*: The ability of rural fire protection districts to safely fight structural fires with multiple stories may be an issue in rural locations when higher density multi-family residential developments are needed to provide affordable housing or alternate housing types, since the rural fire protection districts simply do not have the resources to fight multi-story structure fires.
- *Building and Site Design*: Requiring the hardening of structures with ignition resistant materials and the location of structures to minimize the risk from wildland fires.

During the past several years, the County instituted a number of safety-related programs and policies to reduce the risk of fire hazards. From 2004 to 2006, the County created the County Fire Enhancement Program to assist under-funded rural fire agencies. On June 25, 2008 the Board of Supervisors created the San Diego County Fire Authority, bringing together volunteer fire companies, fire districts, and CAL FIRE under the banner of regional coordination with local control. Policies in this section address the preceding issues and provide a framework that supports previously implemented programs and policies.

GOALS AND POLICIES

GOAL S-3

Minimized Fire Hazards. Minimize injury, loss of life, and damage to property resulting from structural or wildland fire hazards.

Policies

S-3.1 **Defensible Development.** Require development to be located, designed, and constructed to provide adequate defensibility and minimize the risk of structural loss and life safety resulting from wildland fires.

S-3.2 **Development in Hillsides and Canyons.** Require development located near ridgelines, top of slopes, saddles, or other areas where the terrain or topography affect its susceptibility to wildfires to be located and designed to account for topography and reduce the increased risk from fires.

S-3.3 **Minimize Flammable Vegetation.** Site and design development to minimize the likelihood of a wildfire spreading to structures by minimizing pockets or peninsulas, or islands of flammable vegetation within a development.

S-3.4 **Service Availability.** Plan for development where fire and emergency services are available or planned.

S-3.5 **Access Roads.** Require development to provide additional access roads when necessary to provide for safe access of emergency equipment and civilian evacuation concurrently.

S-3.6 **Fire Protection Measures.** Ensure that development located within fire threat areas implement measures that reduce the risk of structural and human loss due to wildfire.

Mitigation measures include, but are not limited to, the use of ignition resistant materials, multiple ingress and egress routes, and fire protection systems.

S-3.7 **Fire Resistant Construction.** Require all new, remodeled, or rebuilt structures to meet current ignition resistance construction codes and establish and enforce reasonable and prudent standards that support retrofitting of existing structures in high fire threat areas.

GOAL S-4

Managed Fuel Loads. Managed fuel loads, including ornamental and combustible vegetation.

Policies

S-4.1 **Fuel Management Programs.** Support programs and plans, such as Strategic Fire Plans, consistent with state law that require fuel management/modification within established defensible space boundaries and when strategic fuel modification is necessary outside of defensible space, balance fuel management needs to protect structures with the preservation of native vegetation and sensitive habitats.

North Mountain wildfire area

S-4.2 **Coordination to Minimize Fuel Management Impacts.** Consider comments from CAL FIRE, U.S. Forest Service, local fire districts, and wildlife agencies for recommendations regarding mitigation for impacts to habitat and species into fuel management projects.

S-4.3 **Forest Health.** Encourage the protection of woodlands, forests, and tree resources and limit fire threat through appropriate fuel management such as removal of dead, dying, and diseased trees.

GOAL S-5

Regional Fire Protection. Regional coordination among fire protection agencies.

Policies

S-5.1 **Regional Coordination Support.** Advocate and support regional coordination among fire protection and emergency service providers.

S-5.2 **Fire Service Provider Agreements.** Encourage agreements between fire service providers to improve fire protection and to maximize service levels in a fair, efficient, and cost effective manner.

Combined fire and Sherriff station in Pine Valley

S-5.3 **Reassessment of Fire Hazards**. Coordinate with fire protection and emergency service providers to reassess fire hazards after wildfire events to adjust fire prevention and suppression needs, as necessary, commensurate for both short and long term fire prevention needs.

GOAL S-6

Adequate Fire and Medical Services. Adequate levels of fire and emergency medical services (EMS) in the unincorporated County.

Policies

S-6.1 **Water Supply.** Ensure that water supply systems for development are adequate to combat structural and wildland fires.

S-6.2 **Fire Protection for Multi-Story Development.** Coordinate with fire services providers to improve fire protection services for multi-story construction.

Multi-story structures are associated with densities of 15 to 30 dwelling units per acre– particularly in areas within the County Water Authority (CWA) boundary. Design features may include safe zones and increased building design features.

S-6.3 **Funding Fire Protection Services.** Require development to contribute its fair share towards funding the provision of appropriate fire and emergency medical services as determined necessary to adequately serve the project.

S-6.4 **Fire Protection Services for Development.** Require that new development demonstrate that fire services can be provided that meets the minimum travel times identified in Table S-1 (Travel Time Standards from Closest Fire Station).

Travel times are calculated using accepted methodology based on the travel distance from the fire station to the farthest dwelling unit of the development. Fire stations must be staffed year-round, publicly supported, and committed to providing service. These do not include stations that are not obligated by law to automatically respond to an incident. Travel time is based on standards published by the National Fire Protection Association. Travel time does not represent total response time, which is calculated by adding the travel time to the call processing time and to the turnout/reflex time. Generally, the call processing and turnout/reflex time would add between two to three minutes to the travel time. It is not known if any county has formally adopted NFPA 1710 and/or 1720 as a standard. Total Response Time (NFPA 1710/1720) is calculated as time the Public Safety Answering Point (PSAP) receives the emergency call, transfers it to fire communications, the alarm is processed and transmitted to responders, responders "turnout", plus travel time to the scene to initiate action. The use of response time for determining adequate service is problematic in the unincorporated County because it is subjective and varies from department to department, station to station and work shift to work shift. Reflex time (the amount of time from when the call is received by the station to when the engine leaves the station) can vary from one to three minutes. The use of travel time, as calculated by using NFPA 1142, allows us to be consistent across the County in determining adequate response, regardless of the district.
Table S-1 establishes a service level standard for fire and first responder emergency medical services that is appropriate to the area where a development is located. Standards are intended to (1) help ensure development occurs in areas with adequate fire protection and/or (2) help improve fire service in areas with inadequate coverage by requiring mitigation for service-level improvements as part of project approval.

Table S-1 Travel Time Standards from the Closest Fire Station*

Travel Time	Regional Category (and/or Land Use Designation)	Rationale for Travel Time Standards**
5 min	■ Village (VR-2 to VR-30) and limited Semi-Rural Residential Areas (SR-0.5 and SR-1) ■ Commercial and Industrial Designations in the Village Regional Category ■ Development located within a Village Boundary	In general, this travel time standard applies to the County's more intensely developed areas, where resident and business expectations for service are the highest.
10 min	■ Semi-Rural Residential Areas (> SR-1 and SR-2 and SR-4) ■ Commercial and Industrial Designations in the Semi-Rural Regional Category ■ Development located within a Rural Village Boundary	In general, this travel time provides a moderate level of service in areas where lower-density development, longer access routes and longer distances make it difficult to achieve shorter travel times.
20 min	■ Limited Semi-Rural Residential areas (>SR-4, SR-10) and Rural Lands (RL-20) ■ *All* Commercial and Industrial Designations in the Rural Lands Regional Category	In general, this travel time is appropriate for very low-density residential areas, where full-time fire service is limited and where long access routes make it impossible to achieve shorter travel times.

Table S-1 Travel Time Standards from the Closest Fire Station*		
Travel Time	**Regional Category (and/or Land Use Designation)**	**Rationale for Travel Time Standards****
>20 min	■ Very-low rural land densities (RL-40 and RL-80)	Application of very-low rural densities mitigates the risk associated with wildfires by drastically reducing the number of people potentially exposed to this hazard. Future subdivisions at these densities are not required to meet a travel time standard. However, independent fire districts should impose additional mitigation requirements on development in these areas.

* The most restrictive standard will apply when the density, regional category and/or village/rural village boundary do not yield a consistent response time standard.

** Travel time standards do not guarantee a specific level of service or response time from fire and emergency services. Level of service is determined by the funding and resources available to the responding entity.

S-6.5 **Concurrency of Fire Protection Services.** Ensure that fire protection staffing, facilities and equipment required to serve development are operating prior to, or in conjunction with, the development. Allow incremental growth to occur until a new facility can be supported by development.

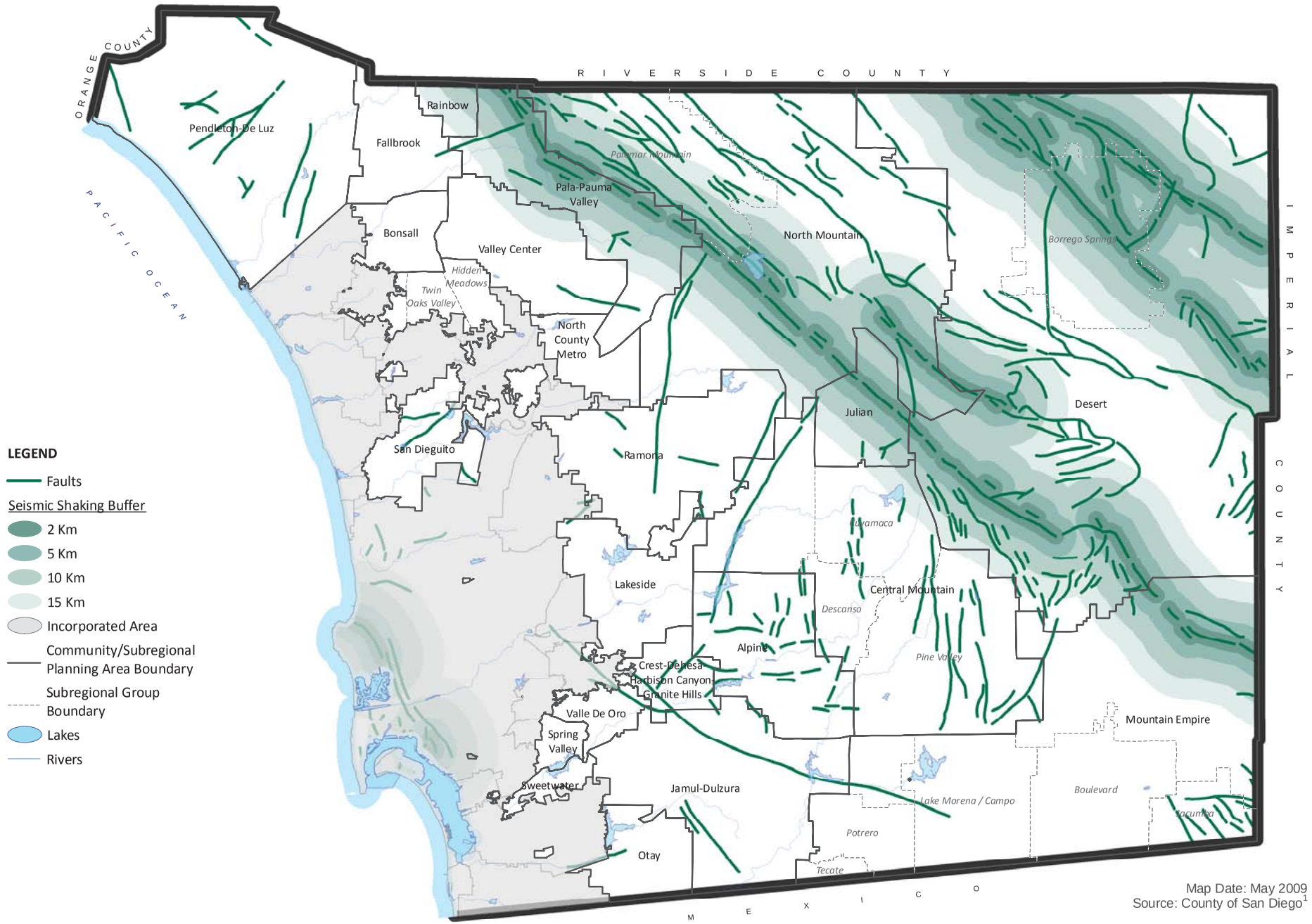
Geological Hazards

CONTEXT

Natural geologic processes that represent a hazard to life, health, or property are considered geologic hazards. Natural geologic hazards affecting people and property in County of San Diego include earthquakes, which can cause surface fault rupture, ground shaking, landslides, and liquefaction; expansive soils; weathering; and mass wasting phenomena, such as landslides and rockfalls (See Figure S-2 [Faults and Near Source Shaking Zones], Figure S-3 [Landslide Susceptibility], and Figure S-4 [Expansive Clays]). Although it is not possible to prevent or mitigate all geologic hazards, their destructive effects can be reduced to acceptable levels or avoided through careful planning and project siting and design.

Of the geological hazards, seismic hazards pose the highest potential for causing widespread damage. All of San Diego County is located within Seismic Zone 4 (Sec. 1629.4.1 of the *California Building Code* [CBC]), which is the highest Seismic Zone and, like most of Southern California, is subject to ground shaking. Active faults in the region include segments of the San Jacinto, Elsinore, and Rose Canyon fault zones. Seismic hazard policies listed below reflect State law and adopted guidelines including the CBC, *Alquist-Priolo Earthquake Fault Zoning Act*, and the State's Guidelines for Evaluating and Mitigating Seismic Hazards in California (Special Publication 117).

Landslide risks vary across the County's diverse landscape. Landslides consist of masses of rock, earth, or debris that move down a slope. Types of slope failures include rock falls, rotational (deep) slips, and shallow debris flows. Landslides can be caused by human activities such as grading, irrigation of slopes, and mining activity. Landslides also occur as a result of natural conditions such as earthquakes, heavy precipitation, weak rock/soil character, seepage of groundwater, and topography. Areas within the County subject to the greatest risk of landslides include properties on or below steep slopes. In order to reduce landslide hazards to public health and safety, land use policies are incorporated into this Element that serve to avoid



FAULTS & NEAR SOURCE SHAKING ZONES

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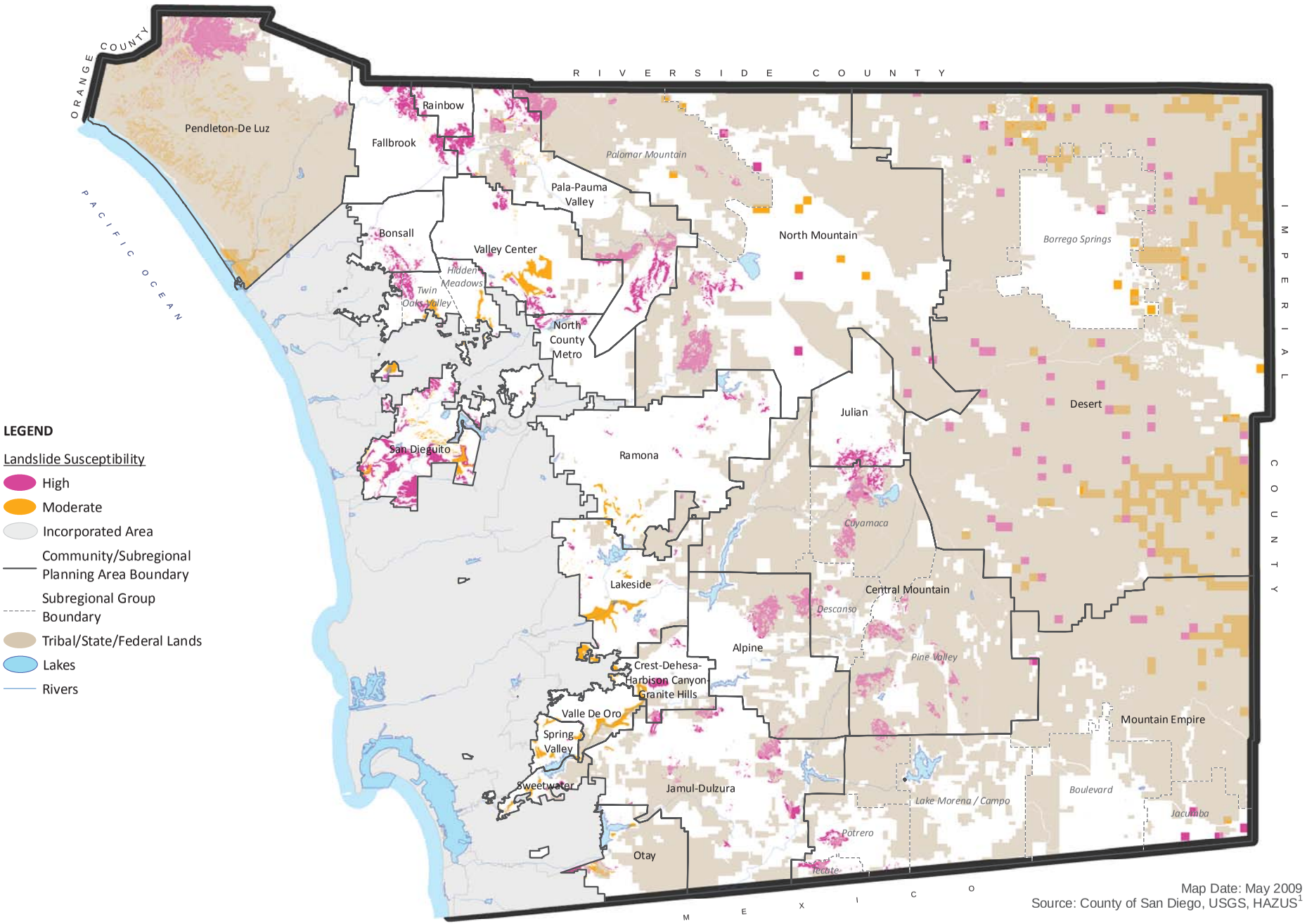
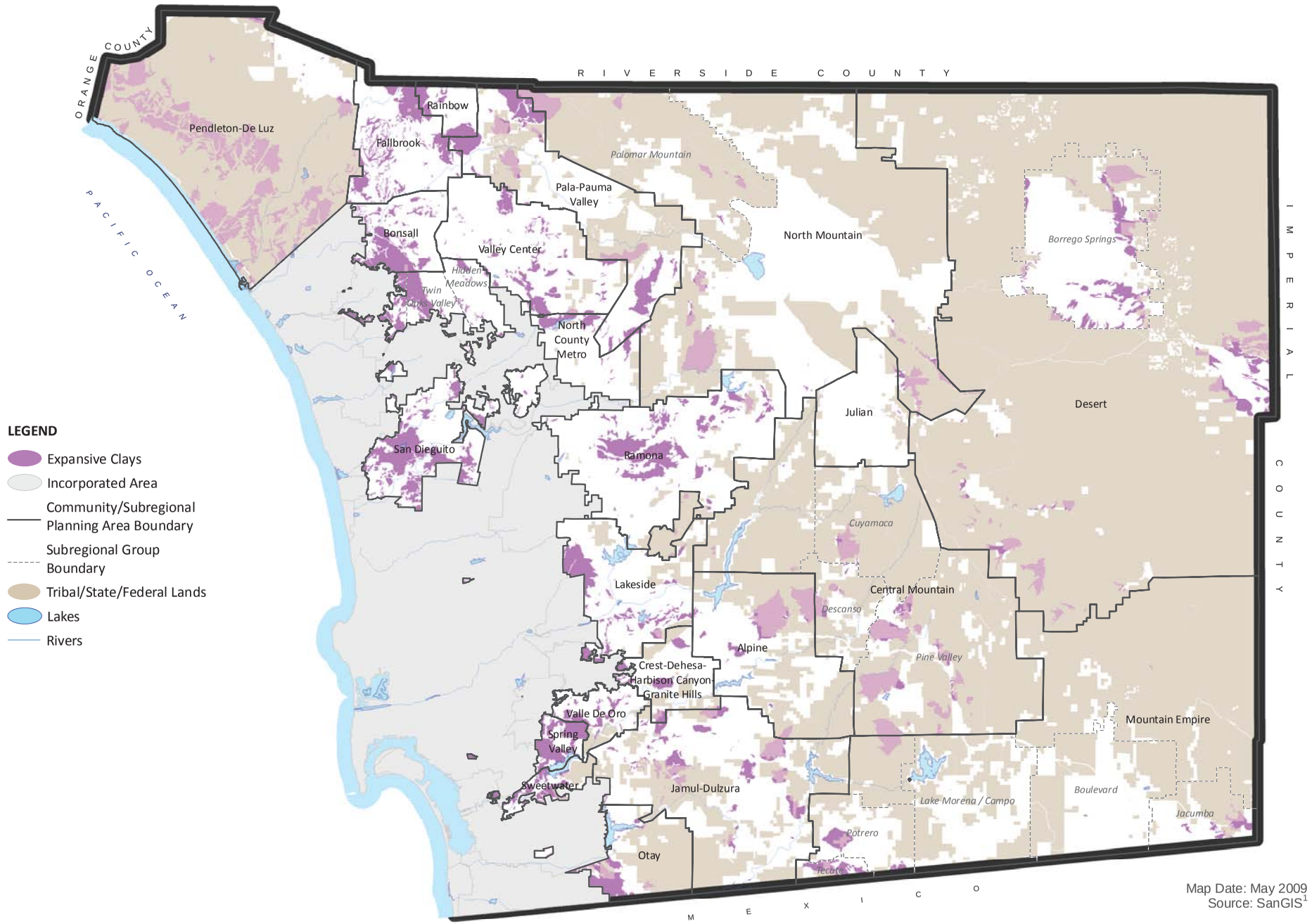
Figure S-2



LANDSLIDE SUSCEPTIBILITY

San Diego County General Plan

Figure S-3



EXPANSIVE CLAYS

San Diego County General Plan

Figure S-4

development in hazardous areas or require engineering solutions that mitigate dangers to proposed structures and to off-site lands.

GOALS AND POLICIES

GOAL S-7

Reduced Seismic Hazards. Minimized personal injury and property damage resulting from seismic hazards.

Policies

S-7.1 **Development Location.** Locate development in areas where the risk to people or resources is minimized. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.

S-7.2 **Engineering Measures to Reduce Risk.** Require all development to include engineering measures to reduce risk in accordance with the California Building Code, Uniform Building Code, and other seismic and geologic hazard safety standards, including design and construction standards that regulate land use in areas known to have or potentially have significant seismic and/or other geologic hazards.

S-7.3 **Land Use Location.** Prohibit high occupancy uses, essential public facilities, and uses that permit significant amounts of hazardous materials within Alquist-Priolo and County special studies zones.

S-7.4 **Unreinforced Masonry Structures.** Require the retrofitting of unreinforced masonry structures to minimize damage in the event of seismic or geologic hazards.

S-7.5 **Retrofitting of Essential Facilities.** Seismic retrofit essential facilities to minimize damage in the event of seismic or geologic hazards.

GOAL S-8

Reduced Landslide, Mudslide, and Rock Fall Hazards. Minimized personal injury and property damage caused by mudslides, landslides, or rock falls.

Policies

S-8.1 **Landslide Risks.** Direct development away from areas with high landslide, mudslide, or rock fall potential when engineering solutions have been determined by the County to be infeasible.

S-8.2 **Risk of Slope Instability.** Prohibit development from causing or contributing to slope instability.

Flood Hazards

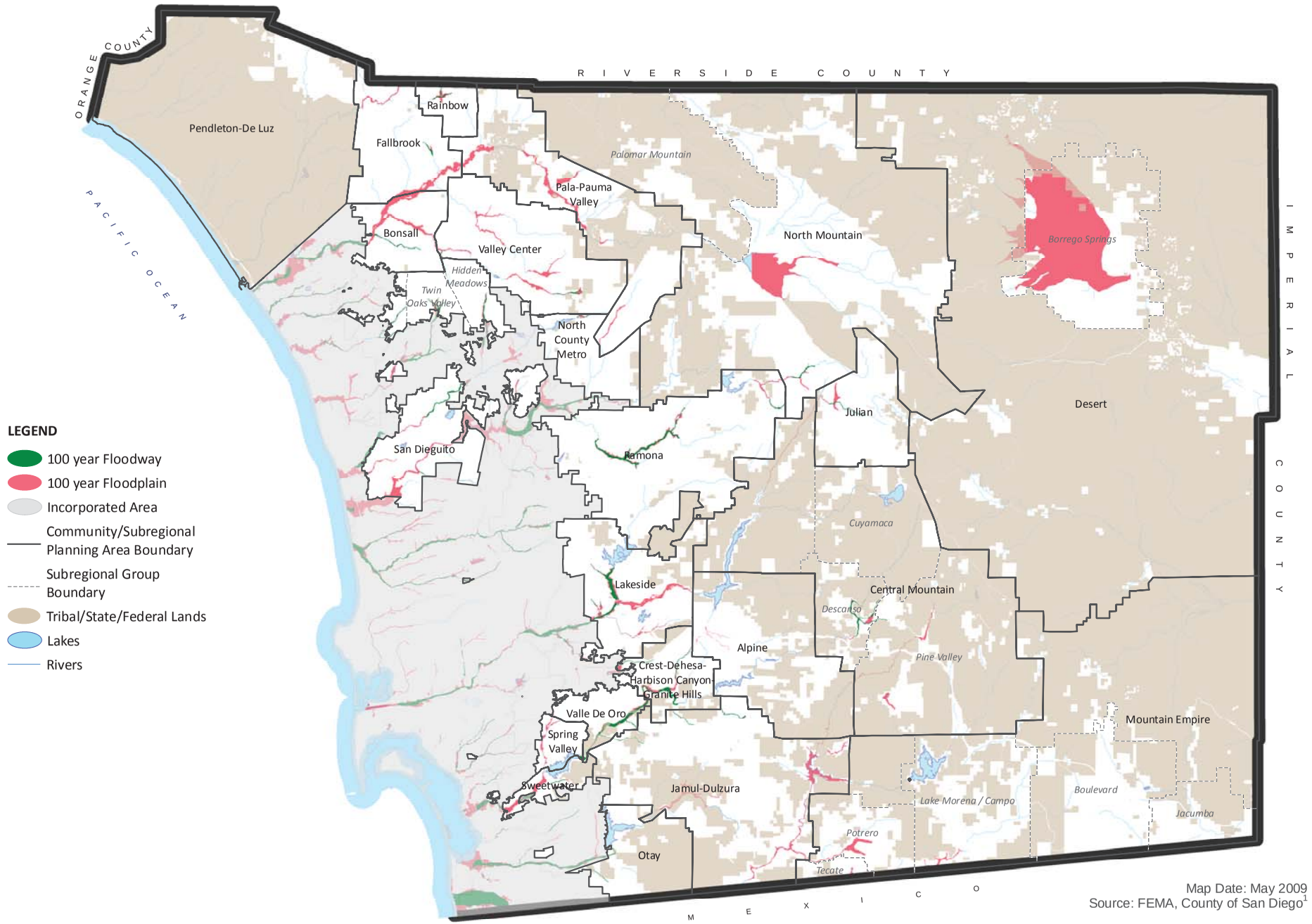
CONTEXT

Flooding is a persistent or temporary condition of partial or complete inundation of normally dry land areas. Flooding is commonly associated with the overflow of natural rivers or streams, but can also occur near stormwater diversion facilities, or in low-lying areas not designed to transport or infiltrate water at any time. The potential for flooding in San Diego County is high. Storm events are the most common cause of flooding, and areas most prone to flooding are mapped by the State, federal agencies, and the County.

Nearly every community planning area (CPA) or subregion in the unincorporated County has studied areas subject to flood inundation, (although there are also known flood hazard areas in the County that have not been studied). The County of San Diego publishes maps showing studied 100-year floodplain and floodway boundaries, and 100-year floodwater surface elevations (where available), or floodplain hazard areas. These areas are mapped as 100-year floodplains in Figure S-5 (Floodplains).[1] *Floodplains* are relatively flat areas of low lands adjoining and including the channel of a river, stream, watercourse, bay, or other body of water which is subject to inundation by the flood waters of the 100-year frequency flood. Watercourses subject to flood control requirements by the County are affected by large drainage areas (typically one square mile and greater for FEMA mapped floodplains and 100 acres or greater tributary area for County-defined watercourses) and are shown on the County floodplain maps. A *floodway* is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood (100 year flood) without increasing the water surface elevation more than the designated height, but not to exceed more than one foot. Encroachment into the floodway by structures is generally prohibited.

Most community planning areas have between 100 to 4,700 acres of land identified as a floodplain. The exception is Borrego Springs (within the Desert Subregion), which has nearly 30,350 acres of land in its alluvial floodplain. This high number can be attributed to flash flooding that occurs in deserts. The County of San Diego Flood Hazard Map for Borrego Valley delineates boundaries of known special flood hazard areas on alluvial fans and lines of equal probability of flood depths and velocities. Alluvial fans are generally a desert phenomenon where streams emerge from canyons and deposit sand and rock in a cone-shaped formation fanning out from the canyon mouth. The potential for high velocity flow and heavy sediment load coupled with the complex nature of alluvial fan flooding means that virtually all parts of the fan can be threatened by catastrophic flooding. The Borrego Valley Flood Management Report (October 17, 1989), however, provides methods for reducing risk to structures built on the alluvial fan.

[1] Community level maps showing the 100-year floodplain areas can be accessed online by contacting SANGIS at http://www.sangis.org/maplibrary.



FLOOD PLAINS

San Diego County General Plan

Figure S-5

Flooding may also occur as the result of dam failure. The failure of a dam occurs most commonly as a result of poor design/construction, lack of maintenance, or structural damage caused by an earthquake. Areas subject to inundation due to a dam failure are shown in Figure S-6 (Dam Inundation Areas). This event is extremely hazardous, as it will typically occur quickly and without warning. Areas directly below the dam are at the greatest risk, and, as the water moves further downstream, reduces in velocity, and becomes shallower in depth, the magnitude of the damage and potential risk to life and property decreases.

The most effective ways to reduce the risk of flooding is to ensure development is located outside flood prone areas. However, it is also possible to reduce flooding by constructing drainage facilities or using other design measures to mitigate hazards. Urbanization affects flooding by reducing the permeability of land surfaces, which also increases the amount of stormwater runoff and the required capacity of channels. In Village and Rural Villages and in areas containing Village densities, the General Plan policies discourage future development from locating within a floodplain, but recognize that there may be instances where encroachment is warranted. Because lower density development provides greater flexibility when siting structures, future development in Semi Rural and Rural Lands designations should be located outside mapped floodplains and natural flood control systems.

Dam in unincorporated County

GOALS AND POLICIES

GOAL S-9

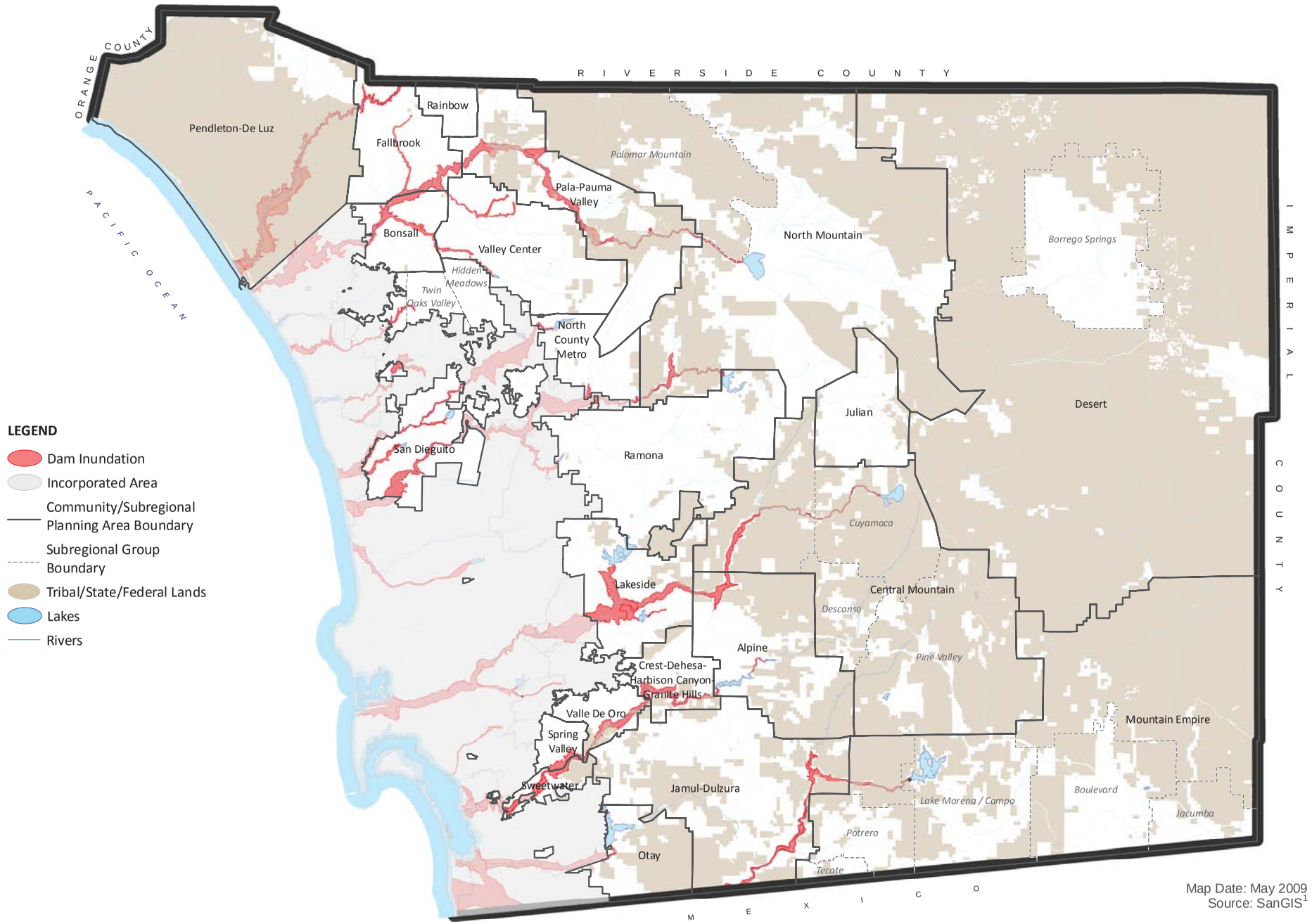
Protection of Life and Property. Minimized personal injury and property damage losses resulting from flood events.

Policies

S-9.1 **Floodplain Maps.** Manage development based on federal floodplain maps. County maps shall also be referred to and in case of conflict(s) between the County floodplain maps and the federal floodplain maps, the more stringent of restrictions shall apply.

S-9.2 **Development in Floodplains.** Limit development in designated floodplains to decrease the potential for property damage and loss of life from flooding and to avoid the need for engineered channels, channel improvements, and other flood control facilities. Require development to conform to federal flood proofing standards and siting criteria to prevent flow obstruction.

S-9.3 **Development in Flood Hazard Areas.** Require development within mapped flood hazard areas be sited and designed to minimize on and off-site hazards to health, safety, and property due to flooding.



DAM INUNDATION AREAS

San Diego County General Plan

Figure S-6

S-9.4 **Development in Villages.** Allow new uses and development within the floodplain fringe (land within the floodplain outside of the floodway) only when environmental impacts and hazards are mitigated. This policy does not apply to floodplains with unmapped floodways. Require land available outside the floodplain to be fully utilized before locating development within a floodplain. Development within a floodplain may be denied if it will cause significant adverse environmental impacts or is prohibited in the community plan. Channelization of floodplains is allowed within villages only when specifically addressed in community plans.

A higher level of flexibility for floodplain encroachment within Villages is provided where future growth is planned and where fewer options are available for locating development outside the floodplain.

S-9.5 **Development in the Floodplain Fringe**. Prohibit development in the floodplain fringe when located on Semi-Rural and Rural Lands to maintain the capacity of the floodplain, unless specifically allowed in a community plan. For parcels located entirely within a floodplain or without sufficient space for a building pad outside the floodplain, development is limited to a single family home on an existing lot or those uses that do not compromise the environmental attributes of the floodplain or require further channelization.

S-9.6 **Development in Dam Inundation Areas**. Prohibit development in dam inundation areas that may interfere with the County's emergency response and evacuation plans.

GOAL S-10

Floodway and Floodplain Capacity. Floodways and floodplains that have acceptable capacity to accommodate flood events.

Policies

S-10.1 **Land Uses within Floodways.** Limit new or expanded uses in floodways to agricultural, recreational, and other such low-intensity uses and those that do not result in any increase in flood levels during the occurrence of the base flood discharge, do not include habitable structures, and do not substantially harm, and fully offset, the environmental values of the floodway area. This policy does not apply to minor renovation projects, improvements required to remedy an existing flooding problem, legal sand or gravel mining activities, or public infrastructure.

S-10.2 **Use of Natural Channels.** Require the use of natural channels for County flood control facilities except where necessary to protect existing structures from a current flooding problem and where natural channel use is deemed infeasible. The alternative must achieve the same level of biological and other environmental protection, such as water quality, hydrology, and public safety.

S-10.3 **Flood Control Facilities.** Require flood control facilities to be adequately sized, constructed, and maintained to operate effectively.

S-10.4 **Stormwater Management.** Require development to incorporate low impact design, hydromodification management, and other measures to minimize stormwater impacts on drainage and flood control facilities.

S-10.5 **Development Site Improvements.** Require development to provide necessary on- and off-site improvements to stormwater runoff and drainage facilities.

S-10.6 **Stormwater Hydrology.** Ensure development avoids diverting drainages, increasing velocities, and altering flow rates to off-site areas to minimize adverse impacts to the area's existing hydrology.

Increases in velocities and peak flow rates can result in flooding, erosion, and other problems downstream. Decreases can deprive biological resources of a needed water source.

Additional goals and policies that relate to development in flood hazard area are contained in the Land Use Element, including the requirement to document and annually review floodways and floodplains.

Hazardous Materials

CONTEXT

Hazardous materials are generally defined as any material that because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or future hazard to human health and safety or to the environment, if released into the workplace or the environment. Hazardous materials typically require special handling, reuse, and disposal because of their potential to harm human health and the environment. Use of hazardous products is common among households, businesses, and construction activities. However, the quantity, concentration, and/or types, of these products are often not significant enough to pose a substantial risk to human health and safety or to the environment; therefore, do not meet the definition of "hazardous materials." Instead they are often referred to as household hazardous wastes, universal waste, and electronic waste.

Hazardous materials are more often associated with select commercial, industrial, and agricultural operations and their use is highly regulated by federal and State law. Operations meeting the definition of a Hazardous Waste Facility must obtain a permit or grant of authorization from the State Department of Toxic Substance Control.

Sites that have been contaminated by a release of hazardous materials also pose a risk to human health and safety or to the environment. Location, type, and extent of contamination must be considered in determining the appropriate reuse of such sites. Not all sites have been identified; therefore, site assessments are used to determine the presence or likelihood of contamination in areas that are suspect.

GOALS AND POLICIES

GOAL S-11

Controlled Hazardous Material Exposure. Limited human and environmental exposure to hazardous materials that pose a threat to human lives or environmental resources.

Policies

S-11.1 **Land Use Location.** Require that land uses involving the storage, transfer, or processing of hazardous materials be located and designed to minimize risk and comply with all applicable hazardous materials regulations.

S-11.2 **Industrial Use Restrictions.** Restrict industrial uses that store, process, or transport significant amounts of hazardous material to areas designated as High Impact Industrial.

S-11.3 **Hazards-Sensitive Uses.** Require that land uses using hazardous materials be located and designed to ensure sensitive uses, such as schools, hospitals, day care centers, and residential neighborhoods, are protected. Similarly, avoid locating sensitive uses near established hazardous materials users or High Impact Industrial areas where incompatibilities would result.

S-11.4 **Contaminated Lands.** Require areas of known or suspected contamination to be assessed prior to reuse. The reuse shall be in a manner that is compatible with the nature of the contamination and subsequent remediation efforts.

S-11.5 **Development Adjacent to Agricultural Operations.** Require development adjacent to existing agricultural operations in Semi-Rural and Rural Lands to adequately buffer agricultural areas and ensure compliance with relevant safety codes where pesticides or other hazardous materials are used.

Law Enforcement

CONTEXT

The San Diego County Sheriff is responsible for providing law enforcement services in the unincorporated County and to certain cities under contract. The General Plan Land Use Maps identify where future development will occur, which can be used by the Sheriff in conjunction with forecasts from contract cities, to prepare facility and service plans. As higher density residential and commercial areas typically produce more calls for service, these areas have been identified as preferred locations of future Sheriff Facilities in the unincorporated County. Additionally, Crime Prevention Through Environmental Design (CPTED) is recognized as an effective planning tool to help minimize or deter criminal activity. CPTED consists of four complementary strategies including natural surveillance, access control, maintenance, and territorial reinforcement (or encouraging owners of private spaces to exercise control over their area by challenging intruders). CPTED does not eliminate crime within a neighborhood but it can dramatically reduce the likelihood of theft and other crimes.

GOALS AND POLICIES

GOAL S-12

Adequate Law Enforcement Facilities. Timely development of law enforcement facilities in locations that serve the unincorporated areas of the County.

Policies

S-12.1 **New Law Enforcement Facilities.** Coordinate new law enforcement facilities and services with new development in ways that sustain the provision of comprehensive services at levels consistent with substantially similar areas of the County.

GOAL S-13

Safe Communities. Law enforcement facilities and services that help maintain safe communities.

Fallbrook Sheriff substation

Policies

S-13.1 **Sheriff Facility Locations.** Locate Sheriff facilities to best serve existing and planned development and the corresponding demand for services.

S-13.2 **Sheriff Facilities in Non-Residential Areas.** Locate future Sheriff facilities in commercial, industrial, or mixed-use areas; they may also be located within residential areas when other sites are unavailable or unsuitable based on circulation, geography, proximity to demand, and other factors that impact the practical provision of services.

GOAL S-14

Crime Prevention. Crime prevention through building and site design.

Policies

S-14.1 **Vehicular Access to Development.** Require development to provide vehicular connections that reduce response times and facilitate access for law enforcement personnel, whenever feasible.

S-14.2 **Development Safety Techniques.** Require development within Village areas to utilize planning and design techniques, as appropriate, that deter crime.

Examples of design features include the following:

- *Avoiding landscaping that might create blind spots or hiding places*
- *Centrally locating open green spaces and recreational uses so that they are visible from nearby homes and streets*
- *Designing streets to discourage cut-through or high-speed traffic*
- *Installing paving treatments, plantings, and architectural design features, such as columned gateways, to guide visitors to desired entrances and away from private areas*
- *Installing walkways in locations safe for pedestrians*
- *Designing lots, streets, and homes to encourage interaction between neighbors*
- *Including mixed land uses that increase activities on the street*
- *Siting and designing buildings oriented for occupants to view streets and public spaces*

S-14.3 **Crime Prevention.** Coordinate with appropriate agencies and the community to reduce crime in all neighborhoods by improving communication and relationships with communities and through educational programs that address important safety issues.

Airport Hazards

CONTEXT

Aircraft accidents represent a hazard to the areas immediately surrounding airports. Specific areas of potential aircraft accidents are called safety zones because they are established to protect public safety. Land

use restrictions in the safety zones are defined by each airport's Airport Land Use Compatibility Plan (ALUCP). In addition to safety zones, an ALUCP identifies land use compatibility by airspace protection criteria, noise contours, and areas of aircraft overflight.

In addition to State and federal laws and regulations, ALUCPs guide property owners and jurisdictions in determining what types of new land uses are appropriate around airports. As part of the General Plan update, the County will coordinate with the San Diego County Regional Airport Authority to bring its land use plans into conformance with the adopted ALUCPs. The Safety Element establishes generalized policies to protect public safety and ensure future land uses remain compatible with airport operations.

GOALS AND POLICIES

GOAL S-15

Airport Zone Hazards. Development within airport hazard zones that minimize the risk of personal injury to both flight occupants and people and property damage on the ground as well as protect airport operations from incompatible land uses.

Policies

S-15.1 **Land Use Compatibility.** Require land uses surrounding airports to be compatible with the operation of each airport.

S-15.2 **Airport Operational Plans.** Require operational plans for new public/private airports and heliports, as well as future operational changes to existing airports, to be compatible with existing and planned land uses that surround the airport facility.

Specific concerns include heights of structures near airports and activities which can cause electronic or visual impairments to air navigation or which attract large numbers of birds (such as landfills, wetlands, water features, and cereal grain fields).

S-15.3 **Hazardous Obstructions within Airport Approach and Departure.** Restrict development of potentially hazardous obstructions or other hazards to flight located within airport approach and departure areas or known flight patterns and discourage uses that may impact airport operations or do not meet Federal or State aviation standards.

S-15.4 **Private Airstrip and Heliport Location.** Locate private airstrips and heliports outside of safety zones and flight paths for existing airports where they are compatible with surrounding established and planned land uses, and in a manner to avoid impacting public roadways and facilities.