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7

7. Hazards and Safety Element

Ventura County is in a region that is prone to a variety of natural disasters, including wildfires, coastal flooding and flood hazards, and debris flows. Flood, wildfire, and sea level rise events associated with climate change are likely to increase in frequency and severity in the region. In addition to natural hazards, Ventura County also has a number of transportation facilities and military installations that increase risks for human-induced hazards, such as aircraft accidents, hazardous material spills, and exposure to excessive noise. While it is impossible to completely avoid natural and human-induced hazards, this Element establishes goals and policies to protect life, minimize property damage, and maintain or restore services during future disasters and emergencies. This policy framework will help to reduce hazards and ensure public safety in Ventura County.

This Element, along with other Elements in the General Plan, includes policies and programs that will help the County adapt to climate change impacts and increase the County’s resilience. A detailed discussion of the County’s vulnerability to climate change, along with a summary of which policies and programs in various Elements are part of the County’s adaptation strategy in response to such effects, is included in Appendix B, Climate Change.

Goals, policies, and implementation programs in this element are organized under the following headings:

Section	Title	Page
7.1	Wildfire Hazards.....	7-2
7.2	Flood Hazards.....	7-12
7.3	Coastal Flooding.....	7-13
7.4	Geologic and Seismic Hazards.....	7-14
7.5	Hazardous Materials.....	7-17
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7.7	Oil and Gas Production and Transportation Incidents.....	7-20
7.8	Military Compatibility.....	7-21
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7.10	Air Quality.....	7-25
7.11	Increasing Temperatures.....	7-27
7.12	Emergency Response.....	7-29
7.13	Implementation Programs.....	7-30

The Hazards and Safety Element includes a series of diagrams (i.e., maps) to depict applicable hazard areas described in the policies. These are as follows:

Figure	Title	Page
Figure 7-1	Hazards Protection Map	7-3
Figure 7-2	Hazards Protection Map Southern Half	7-5
Figure 7-3	Fire Hazard Severity Zones	7-7
Figure 7-4	Fire Hazard Severity Zones Southern Half	7-9

7.1 Wildfire Hazards

Portions of Ventura County are at very high risk for wildfire with high concentrations on the northern coast leading inland between Santa Paula and Ojai. Additional high fire Hazard Severity Zones, as designated by the California Department of Forestry and Fire Protection (CAL FIRE), occur along the southern coast and continue inland toward Simi Valley. Figures 7-3 and 7-4 show areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. The maps distinguish these Fire Hazard Severity Zones based on local or State responsibility. Local responsibility areas generally include cities, cultivated agriculture lands, and portions of the desert. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, counties, and by Cal FIRE under contract to the local government. State responsibility area is a legal term defining the area where the state has financial responsibility for wildfire protection. Incorporated cities and federal ownership are not included. The prevention and suppression of fires in all areas that are not state responsibility areas are primarily the responsibility of federal or local agencies. Additional fire hazard areas are identified on the Ventura County Fire Department Hazardous Fire Areas maps.

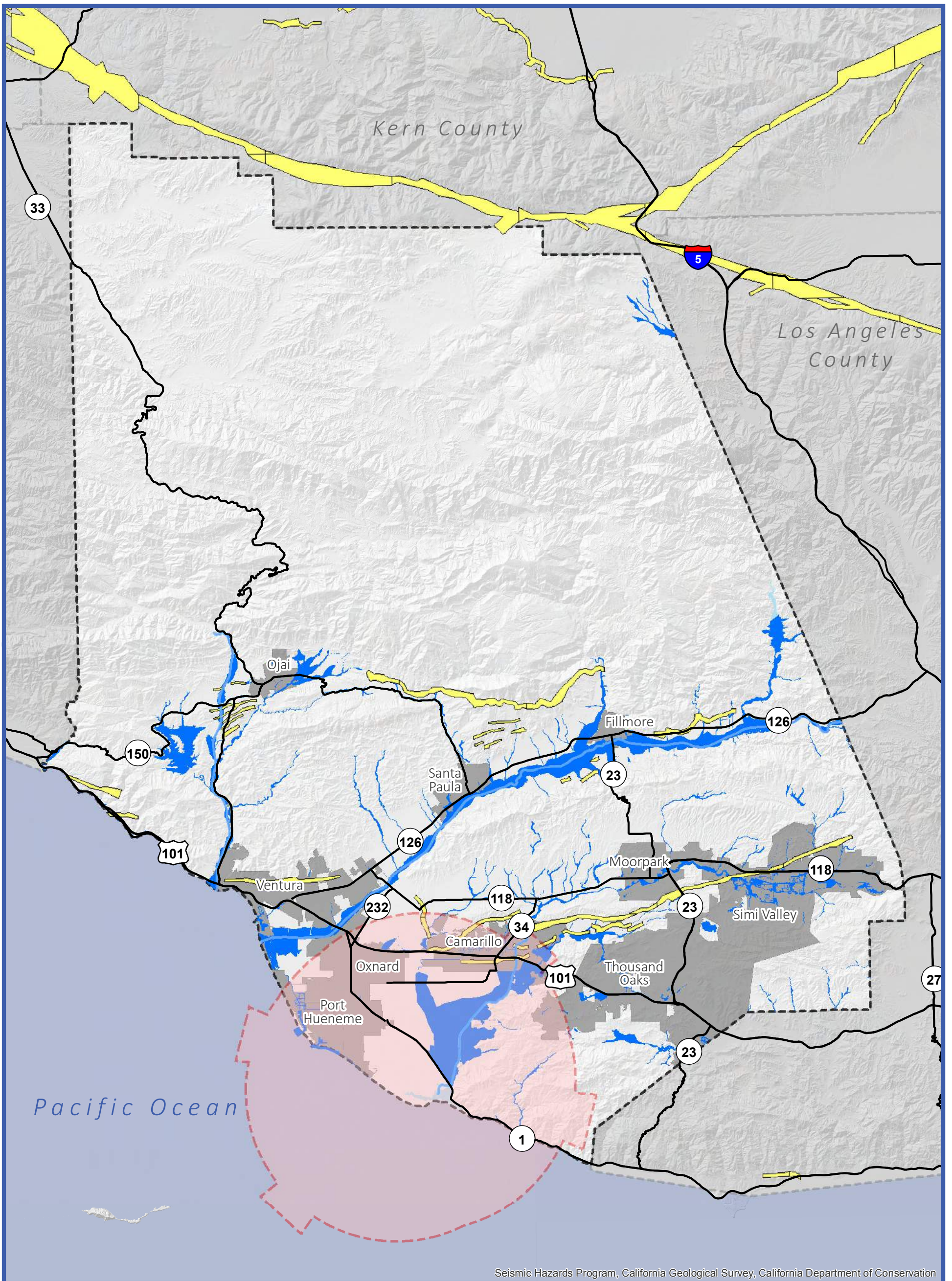
Given rising temperatures combined with changes in precipitation patterns, the county may continue to experience an increase in wildfire frequency and intensity as fuel loads become drier and more flammable. Wildfire also presents other health-related impacts associated with emissions of air pollutants during the combustion of organic fuels and other materials, such as particulates (soot and smoke), carbon monoxide, nitrogen oxides, and other substances that can be widely dispersed through a region and degrade air quality. Exposure to these air pollutants can cause acute (short-term) and exacerbate chronic (long-term) respiratory and cardiovascular illnesses, especially in vulnerable populations such as the elderly, children, and agricultural and outdoor workers.

Additionally, wildfire can cause direct and indirect damage to utilities and communication infrastructure, roads, and other public infrastructure. Direct exposure to fire can sever transmission lines, and heat and smoke can affect transmission capacity. Furthermore, fires can cause acute damage to soil structure and moisture retention thus increasing susceptibility to erosion or landslides. Following the Thomas Fire in December 2017, Santa Barbara County, which is located directly northwest of Ventura County, experienced powerful debris flows following a severe rain event. The level of precipitation coupled with the exposed landscape resulted in debris flows that caused the deaths of 22 people.

This section focuses on protecting against and preparing for potential wildfire hazards as well as restoration efforts for previously burned areas.



Goals, policies, and implementation programs focusing on access and evacuation during a wildfire disaster are in Section 7.12, Emergency Response of this Element, and fire protection are in Chapter 5, Public Facilities, Services, and Infrastructure Element.



Seismic Hazards Program, California Geological Survey, California Department of Conservation



Figure 7-1:
Hazards Protection Map

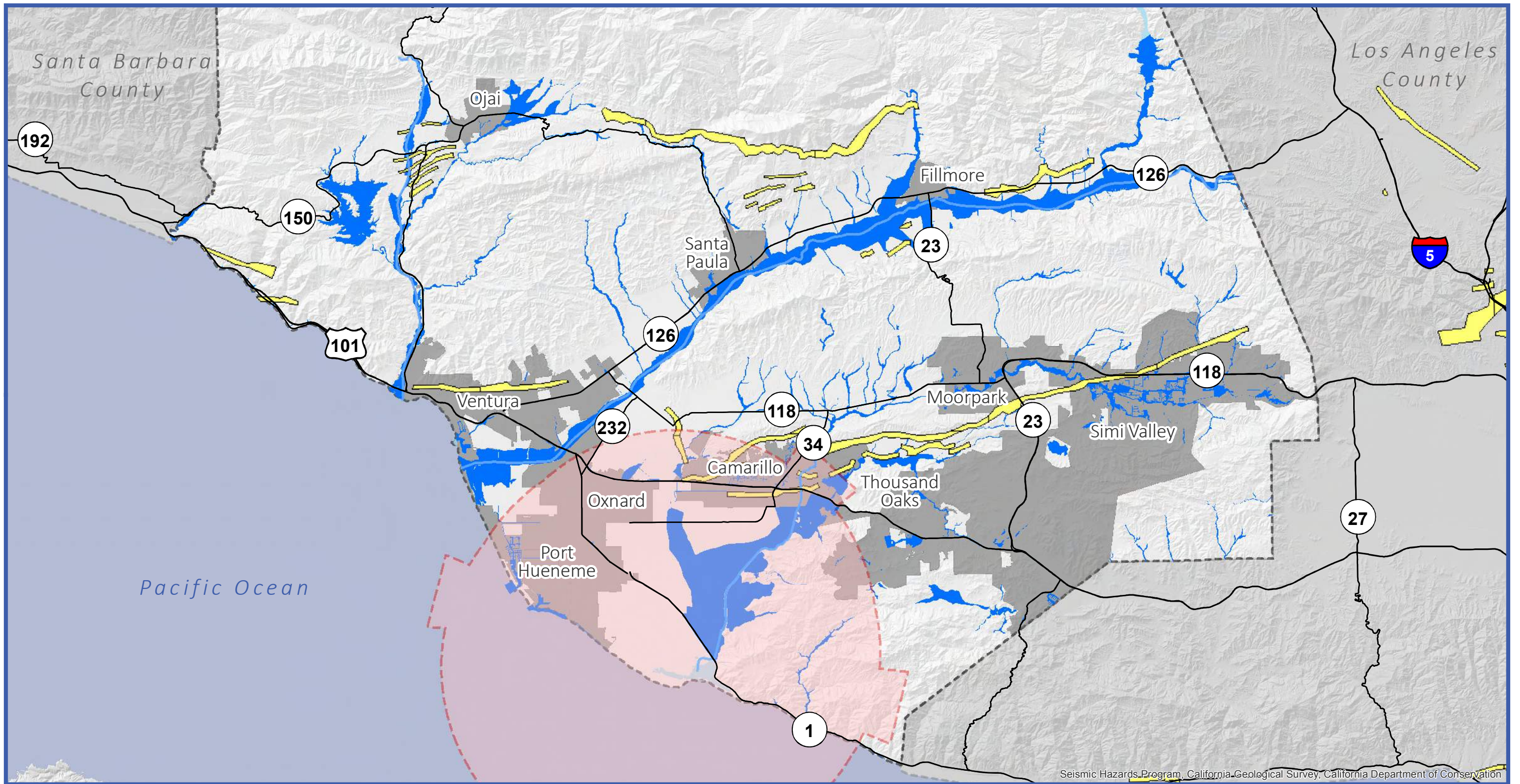
Map Date: April 08, 2019
Source: Mintier Harnish, 2019.

- Ventura County Boundary
- Cities
- Major Roadways
- Major Waterways
- 100-Year Floodplain Areas
- Fault Zones
- Military Comatibility Area (MCA)

0 5 10 Miles



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Seismic Hazards Program, California Geological Survey, California Department of Conservation



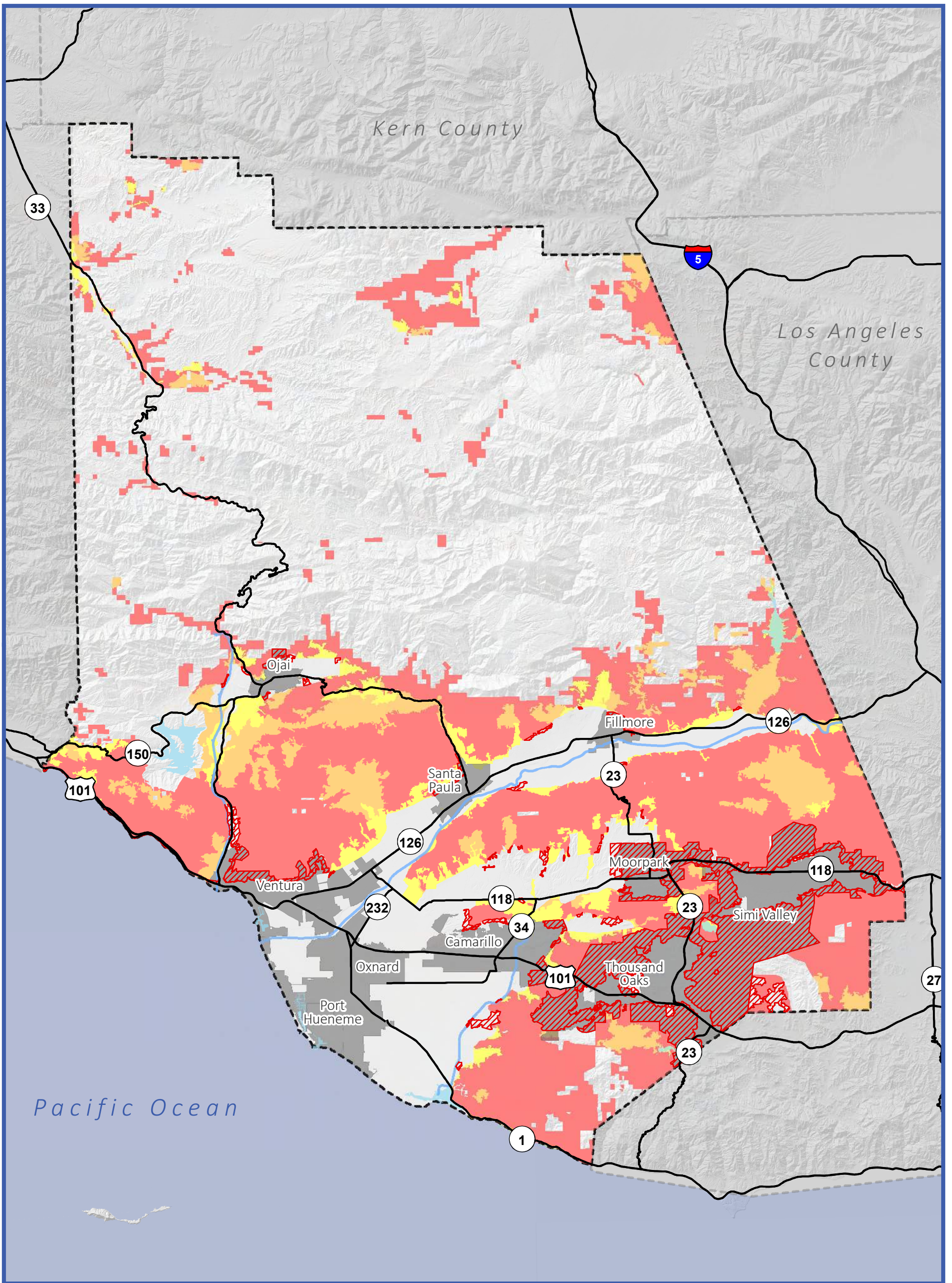
Figure 7-2:
Hazards Protection Map
Southern Half

Map Date: April 08, 2019
Source: Mintier Harnish, 2019.

- Ventura County Boundary
- Cities
- Major Roadways
- Major Waterways
- 100-Year Floodplain Areas
- Fault Zones
- Military Comatability Area (MCA)



Please see the next page.



**Figure 7-3:
Fire Hazard Severity Zones**

Map Date: September 03, 2019

Source: Mintier Harnish, 2019; CAL FIRE, 2010; CAL FIRE, 2007.

- | | |
|-------------------------|---|
| Ventura County Boundary | Local Responsibility Area (LRA) - Very High |
| Cities | State Responsibility Area (SRA) - Very High |
| Major Roadways | State Responsibility Area (SRA) - High |
| Major Waterways | State Responsibility Area (SRA) - Moderate |
| Water Bodies | |

0 5 10 Miles



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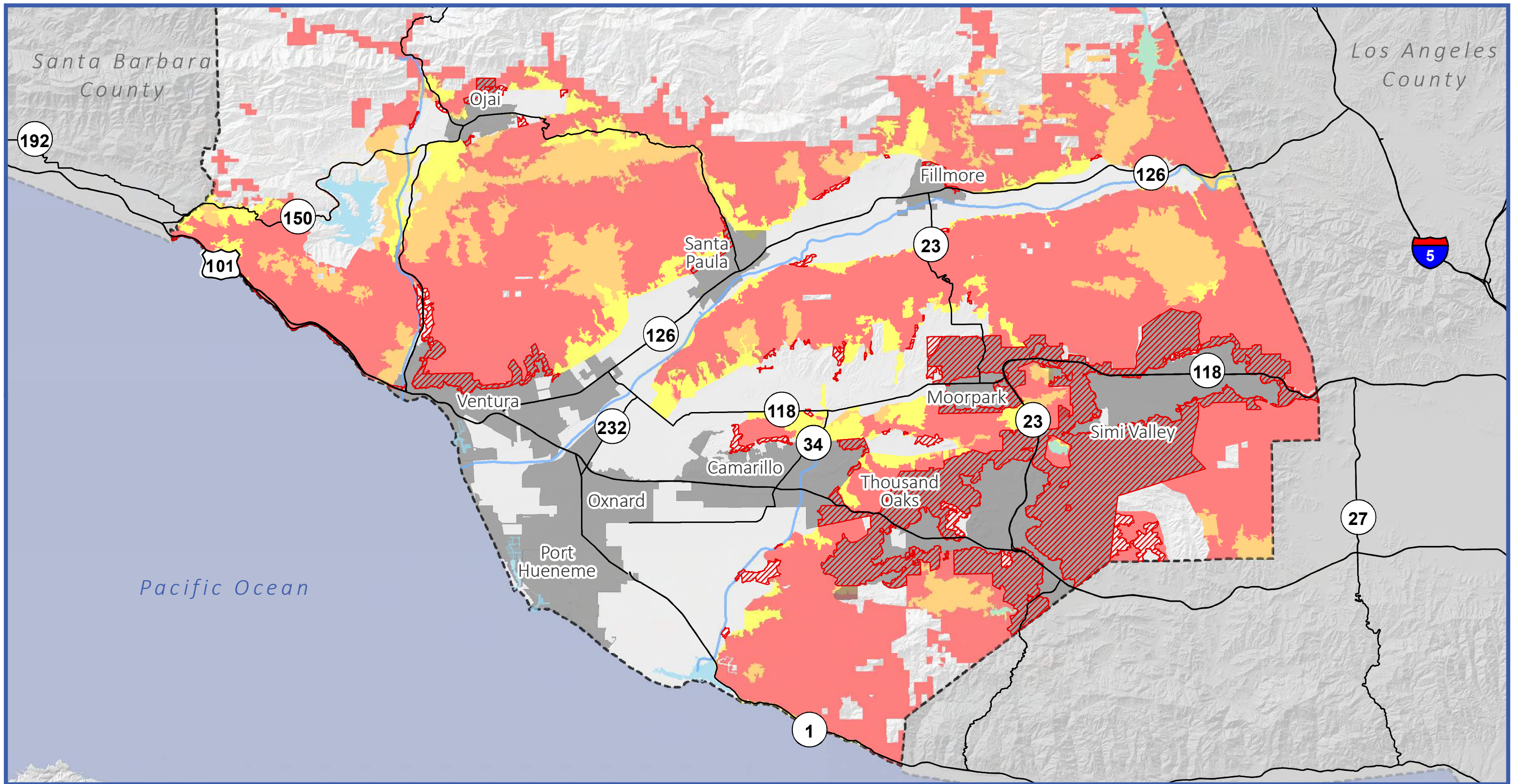
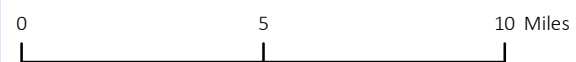


Figure 7-4:
Fire Hazard Severity Zones
Southern Half

Map Date: September 03, 2019
 Source: Mintier Harnish, 2019; CAL FIRE, 2010; CAL FIRE, 2007.



- Ventura County Boundary
- Cities
- Major Roadways
- Major Waterways
- Water Bodies
- Local Responsibility Area (LRA) - Very High
- State Responsibility Area (SRA) - Very High
- State Responsibility Area (SRA) - High
- State Responsibility Area (SRA) - Moderate

Please see the next page.

HAZ-1

To improve the resilience of the County to wildfire risk by locating, designing, and constructing development in a manner that minimizes the risk, and by providing effective fire prevention, suppression, and rescue services and facilities. [Source: Existing GPP Goal 4.8.1.1 and Goal 2.13.1.2, modified]

HAZ-1.1

Fire Prevention Design and Practices

CAP

The County shall continue to require development to incorporate design measures that enhance fire protection in areas of high fire risk. This shall include but is not limited to incorporation of fire-resistant structural design, use of fire-resistant landscaping, and fuel modification around the perimeter of structures. (RDR, PI) [Source: Existing GPP Policy 2.13.2.2]

HAZ-1.2

Defensible Space Clear Zones

CAP

The County shall require adherence to defensible space standards, or vegetation “clear zones,” for all existing and new structures in areas that are designated as Hazardous Fire Areas by the Ventura County Fire Protection District and High Fire Hazard Severity Zones by the California Department of Forestry and Fire Protection. (IGC, PI, RDR) [Source: New Policy]

HAZ-1.3

Controlled Burns and Other Fire Prevention Measures

CAP

The County shall continue to recognize the role of fire in local ecosystems by supporting controlled burns and other fire prevention measures. (IGC) [Source: Existing Ojai Valley Area Plan Goal 1.4.1.3, Ojai Valley Area Plan Goal 2.3.1.3, Ojai Valley Area Plan Program 2.3.3.1, Piru Area Plan Goal 2.3.1.3, and Thousand Oaks Area Plan Goal 1.3.1.8]

HAZ-1.4

Development in High Fire Hazard Severity Zones and Hazardous Fire Areas

CAP

The County shall require the recordation of a Notice of Fire Hazard with the County Recorder for all new discretionary entitlements (including subdivisions and land use permits) within areas designated as Hazardous Fire Areas by the Ventura County Fire Department or High Fire Hazard Severity Zones by the California Department of Forestry and Fire Protection (CAL FIRE). (RDR) [Source: New Policy]

HAZ-1.5

Discouragement of Home-Building in Very High Fire Severity Zones

The County should discourage the building of homes in Very High Fire Severity Zones. (RDR) [Source: New Policy]

HAZ-1.6

Wildfire Risk Education

CAP

The County shall continue to develop and distribute educational materials and conduct educational outreach activities informing the public about wildfire risk and protection strategies. (PSR, IGC, PI) [Source: New Policy]

HAZ-1.7

Post-Fire Community and Natural Resource Recovery

The County shall assemble an interagency team as needed to maintain response plans and coordinate the management of resources following wildfire events. (PSR, IGC) [Source: New Policy]

HAZ-1.8

Federal Fire Risk Management

The County should collaborate with the federal agencies to better manage fuel loads on federally-owned or managed lands. (IGC) [Source: New Policy]

7.2 Flood Hazards

A flood occurs when the existing channel of a stream, river, canyon, or other watercourse cannot contain excess water runoff from natural processes such as heavy or sustained rainfall events as well as human-induced incidents such as dam, pipe, or water tank failures that result in overflows onto adjacent lands. In coastal areas, flooding may also occur when large waves, high winds, or tides cause seawater to surge into areas that are above the normal high tide line.

Wildfires are a common occurrence in the hills and mountainous regions of Ventura County. By reducing or destroying vegetative cover and altering surface soil characteristics, fires often result in conditions that can significantly increase runoff and erosion during rainfall events. These conditions may also result in a debris flows (also referred to as mud flow) where a mixture of water-laden rock and sediment can funnel into stream channels and pose additional safety threats.

The focus of this section is to address all potential flood hazards by maintaining and improving the flood protection infrastructure, requiring all new developments provide adequate flood protection, and by continuing effective emergency response efforts in response to flooding events.



A goal and associated policies and implementation programs addressing flood control and drainage facilities are located in Chapter 5, Public Facilities and Services Element.

HAZ-2

To minimize the loss of life, injury, property damage, and economic and social dislocations resulting from flooding, dam failure, seismic-induced flooding, post-fire debris flow, tsunamis, or other water inundation hazard. [Source: Existing GPP Goal 2.10.1.1, modified]

HAZ-2.1

Principal Floodway Purpose

The County should limit land use in the regulatory floodway, as identified in the Ventura County Flood Plain Management Ordinance, limited to open space, agriculture, or passive to low intensity recreational uses, subject to the approval of the County Public Works Agency. The floodway's principal use should be maintained for safely conveying floodwater away from people and property while protecting ecological functions of the river. (RDR) [Source: Existing GPP Policy 2.10.2.1, modified]

HAZ-2.2

Best Available Flood Hazard Information

The County shall continue to use the best available flood hazard information from local, regional, State, and Federal agencies to inform decision-making on appropriate land uses, discretionary development, and infrastructure investments. (SO, MPSP, RDR) [Source: New Policy]

HAZ-2.3



Incompatible Land Uses in Floodplains

The County shall prohibit incompatible land uses and limit discretionary development within floodplains. (RDR) [Source: Existing GPP Goal 2.10.1.3 and Policy 2.10.2.1, modified]

HAZ-2.4

Low Impact Development Upstream of Military Installations

The County shall encourage discretionary development upstream of military installations to incorporate low impact designs that reduce the risk of flooding downstream. (RDR) [Source: New Policy, NBVC JLUS Strategy BIO-1A, modified]

7. Hazards and Safety Element

HAZ-2.5 **Recordation of a Notice of Flood Hazard**

The County shall require the recordation of a Notice of Flood Hazard with the County Recorder for all new discretionary entitlements (including subdivisions and land use permits) within areas subject to flooding as determined by the Federal Emergency Management Agency on the latest available Digital Flood Insurance Rate Maps (DFIRMs). (RDR) [Source: Existing GPP Policy 2.10.2.2, modified]

HAZ-2.6 **Recordation of a Notice of Dam Inundation Hazard**

The County shall require the recordation of a Notice of Dam Inundation Hazard with the County Recorder for new discretionary entitlements (including subdivisions and land use permits) within areas subject to flooding from a dam breach as identified by the California Department of Water Resources Dam Inundation Maps. Evidence of a federally held flowage easement can be used as well. (RDR) [Source: New Policy]

HAZ-2.7 **Tsunami Hazard Areas – Planning**

The County shall strive to locate essential facilities, special occupancy structures and hazardous materials storage facilities outside of tsunami hazard areas. (RDR) [Source: Existing GPP Policy 2.6.2]

HAZ-2.8 **Natural Flood Protection Solutions**

The County shall consider natural, or nature-based flood protection measures for discretionary development or County-initiated development, when feasible. (PSR, IGC) [Source: New Policy, OPR Sea-Level Rise Guidance]

7.3 Coastal Flooding

California's coastline, which includes more than 2,000 miles of open coast and enclosed bays, is vulnerable to a range of natural hazards, including storms, extreme high tides, tsunamis, and rising sea levels related to climate change. Sea level rise will increase the threat of coastal flooding. Along the central and southern California coast, the sea has risen by more than 5.9 inches over the 20th Century. Climate change modeling, as reported in the Ocean Protection Council's Sea Level Rise Guidance document (Natural Resources Agency, State of California, 2018), provides sea level rise guidance that projects up to 85.2 inches of increase by 2100.

Popular coastal recreational resources, critical transportation infrastructure, facilities associated with Naval Base Ventura County, as well as residential and commercial properties along the coast are vulnerable to five or more feet of sea level rise within Ventura County, particularly in conjunction with one hundred year storm events along the coast (one percent annual chance). Open space uses such as beaches, sand dunes, agriculture, and estuaries are also highly vulnerable. By the year 2040, prominent sea level models predict that beach widths will noticeably decrease. By 2100, narrow beaches on the north and south coasts of the County will disappear, and the expansive central coast beaches will be reduced by half.

Additionally, areas close to the ocean with high groundwater could become flooded as rising tides infiltrate through soils and pond in low-lying areas. Along coastal highways, increasing forces of erosion may expose and damage buried infrastructure and roadway structures. Groundwater quality is likely to degrade due to increased saltwater intrusion.

Sea level rise will also have an impact on Ventura County's coastal ecosystems. Aquatic ecosystems located in creeks, streams, and estuaries along the coast, many containing a range of sensitive species of plants and animals, will need to adapt to changes in water quality from saltwater intrusion/incursion further upstream. The

beneficial services that coastal ecosystems provide, such as flood protection, water filtration, and support for fisheries will be threatened as rising sea levels expose beach, dune, estuarine, and freshwater habitats. Finally, natural resources, such as cobble, sand, and dunes that have been overlooked for coastal planning will be increasingly necessary to hold and maintain the County's beaches for sea level rise adaptation.



For policies concerning coastal resources, see Chapter 6, Conservation and Open Space Element.

HAZ-3

To improve resilience to sea level rise and coastal flooding. *[Source: New Goal]*

HAZ-3.1 **Sea Level Rise Planning and Adaptation**



The County shall continue to actively plan for sea level rise by using the best available science to analyze critical vulnerabilities, identify measures to conserve coastal resources, minimize impacts on residents and businesses, maintain public services, and strengthen resiliency. (MPSP) *[Source: New Policy]*

HAZ-3.2 **County Infrastructure Projects and Sea Level Rise**



County-initiated infrastructure projects sited along or seaward of Highway 101, such as bridges and levees, that will provide 100 years or more of service, shall be planned with the potential to be easily modified to accommodate 100-years of projected sea level rise in accordance with the H++ extreme risk aversion sea level rise scenario. (PSR, IGC) *[Source: New Policy]*

HAZ-3.3 **Sea Level Rise Educational Outreach**



To the extent feasible, the County shall incorporate education elements into coastal adaptation projects to inform the public about the risks of sea level rise and options for adaptation. (RDR, SO, JP) *[Source: New Policy]*

7.4 Geologic and Seismic Hazards

Consistent with the 2015 Ventura County Multi-Hazard Mitigation Plan, this section focuses on geologic and seismic hazards in Ventura County, which include the following areas of concern:

- Earthquake Faults
- Seismic Hazards -Liquefaction/Earthquake Induced Landslides
- Landslides
- Soil Erosion
- Expansive Soils
- Seiche
- Subsidence

It is important to note that there are several earthquake faults in the county that have a status of “Active” or “Potentially Active,” according to the California Geological Survey’s Regional Geologic Hazards and Mapping Program. Areas throughout the county are also susceptible to liquefaction, with the most vulnerable locations being along the Santa Clara River and the Oxnard Plain.

HAZ-4

To minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from geologic and seismic hazards. (Source: Existing GPP Goal 2.2.1.1, 2.3.1.1, 2.4.1.1, 2.5.1.1, 2.7.1.1, and 2.8.1.1, modified)

HAZ-4.1



Discretionary Development in Earthquake Fault-Rupture Hazard Areas

The County shall prohibit habitable discretionary development in Earthquake Fault-Rupture Hazard Zones unless a geologic investigation is performed and appropriate and sufficient safeguards, based on this investigation, are incorporated into the project design. (RDR) [Source: Existing Lake Sherwood/Hidden Valley Area Plan Policy 3.1.2.2, Oak Park Area Plan Policy 2.1.2.2, Ojai Valley Area Plan Policy 2.1.2.2, and Piru Area Plan Policy 2.1.2.2, modified]

HAZ-4.2

Linear Project Intersection with Active Faults

The County shall require that linear projects, including roads, streets, highways, utility conduits, water transmission facilities, and oil and gas pipelines, avoid intersecting active faults to the extent possible. When such locations are unavoidable, the project design shall include measures to minimize the effects of any fault movement. (RDR) [Source: Existing GPP Policy 2.2.2.5, modified]

HAZ-4.3

Structural Design

The County shall require that all structures designed for human occupancy incorporate engineering measures to reduce the risk of and mitigate against collapse from ground shaking. (RDR) [Source: Existing GPP Policy 2.3.2.1, modified]

HAZ-4.4

Discretionary Development Below Rocky Outcrops

The County shall require discretionary development below rocky outcrops to evaluate and mitigate potential rockfall hazards including but not limited to by avoiding placement of structures that could be impacted by rockfall hazards, rock removal, rock anchoring, walls, fence barriers, or other similar systems. (RDR) [Source: Existing Lake Sherwood/Hidden Valley Area Plan Policy 3.1.2.3, modified]

HAZ-4.5

Soil Erosion and Pollution Prevention

The County shall require discretionary development be designed to prevent soil erosion and downstream sedimentation and pollution. (RDR) [Source: Existing Lake Sherwood/Hidden Valley Area Plan Policy 2.4.2.1 and Piru Area Plan Goal 1.8.1.2, modified]

HAZ-4.6

Vegetative Resource Protection

The County shall require discretionary development to minimize the removal of vegetation to protect against soil erosion, rockslides, and landslides. (SO) [Source: New Policy]

HAZ-4.7

Temporary Revegetation on Graded Areas

The County shall require, as necessary, the use of soil stabilization methods on graded areas to reduce the potential for erosion, particularly during the construction phase. (RDR) [Source: Existing Lake Sherwood/Hidden Valley Area Plan Policy 2.4.2.2 and 2.4.2.3, modified]

HAZ-4.8

Seismic Hazards

The County shall not allow development of habitable structures or hazardous materials storage facilities within areas prone to the effects of strong ground shaking, such as liquefaction, landslides, or other ground failures, unless a geotechnical engineering investigation is performed and appropriate and sufficient safeguards, based on this investigation, are incorporated into the project design. (RDR) [Source: Existing GPP Policy 2.4.2.1]

- HAZ-4.9** **Slope Development**
The County shall require geotechnical reports that demonstrate adequate slope stability and construction methods for building and road construction on slopes greater than 50 percent pursuant to the California Building Code Appendix J Section 108.6. (RDR) *[Source: New Policy]*
- HAZ-4.10** **Development in Landslide/Debris Flow Hazard Areas**
The County shall not allow development in mapped landslide/debris flow hazard areas unless a geologic and geotechnical engineering investigation is performed and appropriate and sufficient safeguards, based on this investigation, are incorporated into the project design. (RDR) *[Source: Existing GPP Policy 2.7.2., modified]*
- HAZ-4.11** **Alteration of Land in Landslide/Debris Flow Hazard Areas**
The County shall not allow alteration of land in landslide/debris flow hazard areas, including concentration of water through drainage, irrigation or septic systems, removal of vegetative cover, and undercutting of the bases of slopes or other grading activity unless demonstrated by geologic, geotechnical, and civil engineering analysis that the project will not increase the landslide/debris flow hazard. (RDR) *[Source: Existing GPP Policy 2.7.2.2]*
- HAZ-4.12** **Slope Drainage**
Drainage plans that direct runoff and drainage away from slopes shall be required for construction in hillside areas. (RDR) *[Source: Existing GPP Policy 2.7.2.3]*
- HAZ-4.13** **Design for Expansive Soils**
The County shall not allow habitable structures or individual sewage disposal systems to be placed on or in expansive soils unless suitable and appropriate safeguards are incorporated into the project design to prevent adverse effects. (RDR) *[Source: Existing GPP Policy 2.8.2.3, modified]*
- HAZ-4.14** **Development in Seiche Hazard Areas**
The County shall not allow development in potential seiche hazard areas unless a geotechnical engineering investigation is performed and appropriate and sufficient safeguards, based on this investigation, are incorporated into the project design. (RDR) *[Source: Existing GPP Policy 2.5.2.2, modified]*
- HAZ-4.15** **Subsidence Hazard – Extraction Wells**
The County shall require that potential ground surface subsidence be evaluated prior to approval of new oil, gas, water or other extraction well drilling permits and appropriate and sufficient safeguards are incorporated into the project design and facility operation. (RDR) *[Source: Existing GPP Policy 2.9.2.1, modified]*
- HAZ-4.16** **Subsidence and Hydroconsolidation Hazard – Structural Design**
Structural design of buildings and other structures shall recognize the potential for subsidence and hydroconsolidation and provide mitigation recommendations for structures that may be affected. (RDR) *[Source: Existing GPP Policy 2.9.2.2, modified]*
- HAZ-4.17** **Earthquake Fault Hazard Zones**
The County should, where feasible, require that land in Earthquake Fault Hazard Zones and potentially active fault areas be designated Open Space or Agriculture on the General Land Use Diagram. (RDR) *[Source: Existing GPP Policy 2.2.2.4, modified]*

7. Hazards and Safety Element



- HAZ-4.18** **Preparation of Plans in Seiche Hazard Areas**
 The County shall consider Seiche Hazard Areas during the preparation of regional and area plans and special studies and be used to guide future investigations of the hazard. (RDR)
[Source: Existing GPP Policy 2.5.2.1, modified]

7.5 Hazardous Materials

This section addresses hazardous materials, which include any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant existing or potential hazard. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that is potentially injurious to the health and safety of persons or harmful to the environment if released or encountered.

HAZ-5

To minimize the risk of loss of life, injury, serious illness, damage to property, and economic and social dislocations resulting from the use, transport, treatment and disposal of hazardous materials and wastes. *[Source: Existing GPP Goal 2.15.1.1, modified]*

- HAZ-5.1** **Hazardous Materials and Waste Management**
 The County shall manage hazardous materials and wastes produced by County facilities and operations in such a way that waste reduction through alternative technology is the County's first priority. When not possible, the County's priorities will progress from recycling and reuse, then on-site treatment, and finally disposal as the last resort. (SO) *[Source: Existing GPP Policy 2.15.2.1, modified]*
- HAZ-5.2** **Hazardous Materials and Waste Management Facilities**
 The County shall require discretionary development involving facilities and operations which may potentially utilize, store, and/or generate hazardous materials and/or wastes be located in areas that would not expose the public to a significant risk of injury, loss of life, or property damage and would not disproportionately impact Designated Disadvantaged Communities. (SO) *[Source: Existing GPP Policy 2.15.1.2, modified]*
- HAZ-5.3** **Preventing Contamination of Natural Resources**
 The County shall strive to locate and control sources of hazardous materials to prevent contamination of air, water, soil, and other natural resources. (SO) *[Source: New Policy]*
- HAZ-5.4** **Household Hazardous Waste**
 The County shall continue to develop and distribute educational materials and conduct educational outreach to inform the public about household hazardous waste and the proper disposal methods. (PI) *[Source: New Policy]*
- HAZ-5.5** **Hazardous Waste Reduction at the Source**
 The County shall, as part of the discretionary review process, require that hazardous wastes and hazardous materials be managed in such a way that waste reduction through alternative technology is the first priority, followed by recycling and on-site treatment, with disposal as the last resort. (RDR) *[Source: Existing GPP Policy 2.15.1.1, modified]*

- HAZ-5.6** **Hazardous Materials – County Regulatory Oversight**
The County shall continue to provide regulatory oversight for all facilities or activities that store, use, or handle hazardous materials. (SO) [Source: Existing GPP Policy 2.15.2.3, modified]
- HAZ-5.7** **Presence of Hazardous Wastes**
Applicants shall provide a statement indicating the presence of any hazardous wastes on a site, prior to discretionary development. The applicant must demonstrate that the waste site is properly closed, or will be closed, pursuant to all applicable state and federal laws, before the project is inaugurated. (RDR) [Source: Existing GPP Policy 2.15.2.4, modified]
- HAZ-5.8** **Siting Criteria for Hazardous Waste Generators**
EJ The County shall require commercial or industrial uses which generate, store, or handle hazardous waste and/or hazardous materials to locate, operate, and maintain hazardous waste and/or hazardous materials in a manner that does not endanger public health and safety and is located based on objective criteria that do not disproportionately impact Designated Disadvantaged Communities. (RDR) [Source: Existing GPP Policy 2.15.2.5, modified]

7.6 Transportation Related Hazards

Hazards associated with movement of goods and people or conveyance of hazardous materials have been grouped together and are addressed below. These include incidents related to aviation, vehicles, and railroad operations.



Policies concerning hazards related to oil and gas transportation can be found in Section 7.7, Oil and Gas Production and Transportation Incidents.

Although airplane crashes can occur anywhere, crashes that affect life and property on the ground occur most frequently in airport approach and departure zones. Residences, schools, and other buildings occupied by people that are located in such zones are subject to an ever-present risk from airplane accidents. Hazard zones have been identified for the four airports within the county: 1) Ventura County Airport at Oxnard; 2) Ventura County Airport at Camarillo; 3) Santa Paula Airport; and 4) Naval Base Ventura County, Point Mugu.

Ground-based transportation also poses risks associated with potential incidents. A major train derailment that occurs in a heavily populated area can result in loss of life and considerable property damage. Potential hazards could be overturned rail cars and direct impact into adjacent buildings. With similar results, a major truck incident that occurs in a heavily populated industrial area or residential area can also result in loss of life and property damage. In addition to more routine traffic incidents, more significant hazards could include spills or other leaks from overturned tank trailers.

HAZ-6

To minimize the loss of life, injury, damage to structures, and economic and social dislocations resulting from hazards created by proximity to airports, railroads and truck routes. [Source: Existing GPP Goal 2.14.1.1]

HAZ-6.1

Airport Land Use Plan

The County shall regulate land use types, density, and intensity using guidance from the Ventura County Comprehensive Airport Land Use Plan, Point Mugu Air Installations Compatible Use Zones (AICUZ) study, State Aeronautics Act, and California Airport Land Use Planning Handbook guidelines. (RDR) [Source: New Policy]

HAZ-6.2

Airport Safety Zones

The County shall require density and allowed uses within the Airport Safety Zones to be as defined in the Ventura County Airport Comprehensive Land Use Plan (ACLUP) and the current Point Mugu Air Installations Compatible Use Zones (AICUZ) study, as applicable to the project location. The County shall require any overrides of a determination of inconsistency with the ACLUP to be done in accordance with state law. (RDR) [Source: New Policy]

HAZ-6.3

Airspace Protection

The County shall use the current Ventura County Airport Comprehensive Land Use Plan (ACLUP) and Federal Aviation Administration (FAA) airport design standards and Part 77 surfaces to keep the airspace surrounding each airport or airfield free of objects affecting navigable airspace where required by the FAA or shall limit the height of objects as required by the FAA. The County shall also ensure obstruction clearance is provided for all enroute and terminal (airport) instrument procedures as per the United States Standard for Terminal Instrument Procedures (TERPS) to avert modifications to any planned or published instrument approach or instrument departure procedures at the affected airport or airfield. (RDR) [Source: Existing GPP Policy 2.14.2.2(2), modified]

HAZ-6.4

Private Airstrips and Agricultural Landing Fields

The County shall require private airstrips and agricultural landing fields be sited so as not to conflict with the flight paths of existing airports and outside of areas that would present significant hazard or an annoyance to existing or planned land uses. (RDR) [Source: Existing GPP Policy 2.14.2.2(3), modified]

HAZ-6.5

Review by Ventura County Transportation Commission

The County shall require discretionary development within the Airport Safety Zones, as defined in the Ventura County Airport Comprehensive Land Use Plan for (ACLUP), shall be reviewed by the Ventura County Transportation Commission (VCTC) for consistency with the ACLUP. (RDR) [Source: Existing GPP Policy 2.14.2.2(4), modified]

HAZ-6.6

Recordation of a Notice of Aviation Hazard

The County shall require the recordation of a Notice of Aviation Hazard with the County Recorder for new discretionary entitlements (including subdivisions and land use permits) within the Airport Safety Zones identified in the Ventura County Comprehensive Airport Land Use Plan. (RDR) [Source: New Policy]

HAZ-6.7

Risk Reduction for Railroad and Trucking Hazards

The County shall condition discretionary development to minimize, to the maximum extent practical through site design or setbacks, the risk for exposure to railroad and trucking hazards. (RDR) [Source: Existing GPP Policy 2.14.2.3]

HAZ-6.8

Airport Safety Zones

the County shall designate land located within the Airport Safety Zones, as defined in the current Airport Comprehensive Land Use Plan, as Agricultural or Open Space on the General Plan Land Use Diagram, and limit such land to the following uses:

- Agriculture and agricultural operations;
- Cemeteries;
- Energy production from renewable resources;
- Mineral resource development;
- Public utility facilities;
- Temporary storage of building materials;
- Waste treatment and disposal; or
- Water production and distribution facilities.

(RDR, MPSP) *[Source: Existing GPP Policy 2.14.2.2(1), modified]*

7.7 Oil and Gas Production and Transportation Incidents

The potential exists for offshore oil accidents and spills in Ventura County involving petroleum products due to oil and gas development, transportation of liquid bulk products by tanker, and other vessel traffic carrying petroleum products for fuel. An offshore spill can result in oil-contaminated beaches. The major potential sources of offshore spills are separated into the following categories:

- **Oil Platform Production.** There are four platforms in federal waters offshore Ventura County. They are Chevron's Platforms Grace and Gail and Unocal's Platforms Gina and Gilda. There are no platforms in state waters (i.e., within three miles of shore). Rincon Island contains 68 inactive well ports is being decommissioned. There are additional platforms in state and federal waters offshore Santa Barbara County. The probability of an oil spill from a platform is small but possible. As a result of the Santa Barbara Oil well blowout in 1969, operating and safety requirements were substantially strengthened. During drilling, all offshore wells are equipped with redundant blowout protectors that can be closed hydraulically from a remote-control station in the event of a blowout.
- **Vessel Traffic.** The number of liquid bulk carriers presently transiting the Santa Barbara Channel is estimated to be between one and three per day. The Alaskan tankers may each carry as much as 1.5 million barrels of oil although the average is about 675,000 barrels. The other tankers are much smaller carrying 100,000 to 300,000 barrels. Although the probability of a tanker spill is low, it is possible. Potential causes of spills include collisions, rammings, groundings, and structural failures. The other commercial vessels transiting the channel carry fuel (bunkers), which can be released in the event of an accident.
- **Subsea Pipelines.** All of the platforms listed in the oil platform production section ship their oil to shore via subsea pipelines. Potential causes of pipeline spills include corrosion, mechanical defects, and ruptures caused by events such as anchor dragging or earthquakes. Oil pipelines are normally equipped with various sensors and/or valves that will allow the pipeline to be shut down rapidly and automatically in the event of a rupture.

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- **Marine Terminals.** Fuel is off-loaded at the Port of Hueneme for the Ormond Beach power plant. Spills from marine terminals can be caused by operation errors or a rupture or leak in the loading/unloading lines.
- **Onshore Oil Pipeline Spill.** Similar to a marine oil spill, an onshore oil pipeline spill can be a serious hazard to surface and groundwater resources, property, animals and human life. Oil and gas transport lines have been mapped on the County's Geographic Information System (GIS) to allow improved response to spills in the event of pipeline system failure or a seismic event. Although available to emergency responders and planners, GIS information on the location of these transport lines is proprietary and contact must be first made with the California State Fire Marshall.

HAZ-7

To reduce or mitigate the effects of marine oil spills or onshore oil pipeline spills upon the population and environment. *[Source: Existing GPP Goal 2.14.1.2]*

HAZ-7.1

Oil Spill Prevention

The County shall review and analyze all proposed oil and gas exploration and production projects, and shall condition all County discretionary permits for such projects, to require compliance with local, state, and federal oil spill prevention regulations. The County shall also provide input and comments on permit applications that are under the purview of an outside agency. (RDR, IGC) *[Source: Existing GPP Policy 2.14.2.4, modified]*



This topic is highly regulated by Federal and State agencies; therefore, policy is limited to topics covered by the County directly.

7.8 Military Compatibility

Ventura County is home to several significant military installations and operations areas. These facilities are not only critical to the nation's defense, but also provide significant economic benefits and land use challenges.

Naval Base Ventura County consists of three operating facilities – Point Mugu, Port Hueneme, and San Nicolas Island – that encompass a diverse set of specialties, including three warfare centers (Naval Air Warfare Center – Weapons Division, Naval Surface Water Center – Port Hueneme Division, and Naval Facilities Engineering and Expeditionary Warfare Center). NBVC is also home to deployable units, including the Pacific Seabees and the West Coast E-2 C Hawkeyes. Adjacent to Naval Base Ventura County, Point Mugu is the 204-acre Channel Islands Air National Guard Base. Additionally, the Instrument Route-200 (IR-200) missile corridor passes through Ventura County connecting the Point Mugu Sea Range and the Naval Air Weapons Station (NWS) China Lake.

Compatibility between military installations, adjacent land uses, and local communities is essential to protect military missions, the health of local economies and industries, and the quality of life for county residents. In order to achieve compatibility, the military and local governments must be collaborative and cooperative in their planning efforts. The policies in this section are intended to support that collaboration.



Further information on Military Compatibility can be found in Chapter 2, Land Use Element and in these documents:

- Air Installations Compatible Use Zones (AICUZ) report for Naval Base Ventura County, Point Mugu
- Naval Base Ventura County (NBVC) Joint Land Use Study (JLUS)

HAZ-8

To make County plans and policies consistent with state laws concerning military compatibility and the recommendations contained in the Naval Base Ventura County Joint Land Use Study as they relate to safety. [Source: New Goal, NBVC JLUS Strategy LU-9A, modified]

HAZ-8.1

Enhancing Military Facility Security

The County shall educate and encourage community members to assist in reporting suspicious activities near Naval Base Ventura County (NBVC) facilities to help enhance the security. (IGC) [Source: New Policy, NBVC JLUS AT-1D]

HAZ-8.2

Emergency Drills

The County, in coordination with Naval Base Ventura County (NBVC), shall continue to conduct planned emergency drill exercises with local public safety responders to test how communications are relayed to the public during an emergency. (SO) [Source: New Policy, NBVC JLUS Strategy COM-8B]

HAZ-8.3

Military Compatibility and Renewable Energy Development

The County shall require that new larger-scale commercial renewable energy development is consistent with Joint Land Use Study (JLUS) policies and regulations and that Naval Base Ventura County (NBVC) and the Department of Defense (DOD) Siting Clearinghouse are included in the development review process. (MPSP) [Source: New Policy, NBVC JLUS Strategy ED-1A, ED-1C, modified]

HAZ-8.4

Frequency Spectrum Encroachment Review

For discretionary development within 10 miles of Naval Base Ventura County (NBVC), Point Mugu that includes transmission facilities operating near military spectrum, the County shall submit project applications to NBVC for review and comment to determine appropriate coordination and review. (SO, IGC) [Source: New Policy, NBVC JLUS Strategy FRQ-2C, FRQ-2B, modified]

HAZ-8.5

Light and Glare Control

The County shall coordinate and consult with Naval Base Ventura County (NBVC) when reviewing applications for commercial alternative energy facilities (e.g., wind, solar, tidal) to ensure the systems do not impact flight or test operations. (RDR) [Source: New Policy]

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7.9 Noise

The predominant sources of noise in the county include traffic noise on major roadways, transit and freight trains, and aircraft.

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. These uses include: residences; schools; historic sites; cemeteries; parks, recreation, and open space areas; hospitals and care facilities; sensitive wildlife habitats, including the habitat of rare, threatened, or endangered species; hotels and other short-term lodging (e.g., bed and breakfasts, and motels); places of worship; and libraries.

HAZ-9

To protect the health, safety, and general welfare of county residents by striving to eliminate or avoid the adverse noise impacts on existing and future noise sensitive uses. [Source: Existing GPP Goal 2.16.1.1]

HAZ-9.1

Limiting Unwanted Noise

The County shall prohibit discretionary development which would be impacted by noise or generate project-related noise which cannot be reduced to meet the standards prescribed in Policy Haz-9.2. This policy does not apply to noise generated during the construction phase of a project. (SO) [Source: Existing GPP Policy 2.16.2.2]

HAZ-9.2

HC

Noise Compatibility Standards

The County shall review discretionary development for noise compatibility with surrounding uses. The County shall determine noise based on the following standards:

1. New noise sensitive uses proposed to be located near highways, truck routes, heavy industrial activities and other relatively continuous noise sources shall incorporate noise control measures so that indoor noise levels in habitable rooms do not exceed Community Noise Equivalent Level (CNEL) 45 and outdoor noise levels do not exceed CNEL 60 or Leq1H of 65 dB(A) during any hour.
2. New noise sensitive uses proposed to be located near railroads shall incorporate noise control measures so that indoor noise levels in habitable rooms do not exceed Community Noise Equivalent Level (CNEL) 45 and outdoor noise levels do not exceed L10 of 60 dB(A)
3. New noise sensitive uses proposed to be located near airports:
 - a. Shall be prohibited if they are in a Community Noise Equivalent Level (CNEL) 65 or greater, noise contour; or
 - b. Shall be permitted in the Community Noise Equivalent Level (CNEL) 60 to CNEL 65 noise contour area only if means will be taken to ensure interior noise levels of CNEL 45 or less.

4. New noise generators, proposed to be located near any noise sensitive use, shall incorporate noise control measures so that ongoing outdoor noise levels received by the noise sensitive receptor, measured at the exterior wall of the building, does not exceed any of the following standards:
 - a. Leq1H of 55dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.;
 - b. Leq1H of 50dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m.; and
 - c. Leq1H of 45dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.
5. Construction noise shall be evaluated and, if necessary, mitigated in accordance with the Construction Noise Threshold Criteria and Control Measures (Advanced Engineering Acoustics, November 2005).

(RDR) [Source: Existing GPP Policy 2.16.2.1, modified]

HAZ-9.3 Development Along Travel Routes

The County shall evaluate discretionary development for noise generated by project-related traffic along the travel route to the nearest intersection which allows for movement of traffic in multiple directions. In all cases, the evaluation of project-related roadway noise shall be evaluated along the travel route(s) within 1,600 feet of the project site. (RDR)

[Source: New Policy]

HAZ-9.4 Acoustical Analysis Required

The County shall require an acoustical analysis by a qualified acoustical engineer for discretionary development involving noise exposure or noise generation in excess of the established standards. The analysis shall provide documentation of existing and projected noise levels at on-site and off-site receptors and shall recommend noise control measures for mitigating adverse impacts. (RDR) [Source: Existing GPP Policy 2.16.2.1, modified]

HAZ-9.5 Site and Building Design



The County shall require discretionary development and County-initiated projects to comply with adopted noise standards through proper site and building design features, such as building location and orientation, setbacks, natural barriers and vegetation, and building construction. The County shall only consider sound walls if noise mitigation measures have been evaluated or integrated into the project and found infeasible. (RDR) [Source: New Policy]

HAZ-9.6 Airport Noise Compatibility



The County shall use the aircraft noise analysis prepared for local airports or the noise contours from the current Point Mugu Air Installations Compatible Use Zones (AICUZ) study, as most appropriate for a project location, as an accurate mapping of the long-term noise impact of the airport's aviation activity. The County shall restrict new discretionary residential land uses to areas outside of the 60 decibel Community Noise Equivalence Level (dB CNEL) aircraft noise contour unless interior noise levels can be mitigated to meet a maximum 45 dB CNEL. (RDR) [Source: New Policy, NBVC JLUS]

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HAZ-9.7

Noise Control Priorities

The priorities for noise control for discretionary development shall be as follows:

1. Reduction of noise emissions at the source.
2. Attenuation of sound transmission along its path, using barriers, landform modification, dense plantings, building orientation and placement, and the like.
3. Rejection of noise at the reception point using noise control building construction, hearing protection or other means.

(RDR) [Source: Existing GPP Policy 2.16.2.3, modified]

7.10 Air Quality

Air quality is the concentration of various pollutants in the atmosphere for a specific location or area. Air quality conditions at a particular location are a function of the type and amount of air pollutants emitted into the atmosphere, the size and topography of the regional air basin, and the prevailing weather conditions. Air quality is an important natural resource that influences public health and welfare, the economy, and quality of life. Air pollutants have the potential to adversely impact public health, the production and quality of agricultural crops, native vegetation, visibility, buildings, and other structures and materials.

The Ventura County Air Pollution Control District (VCAPCD), the local lead air quality regulatory agency for Ventura County, maintains air quality conditions through comprehensive programs of planning, regulation, enforcement, technical innovation, incentive programs and promotion of the understanding of air quality issues. The Ventura County Air Pollution Control District (VCAPCD) adopted the 2016 Ventura County Air Quality Management Plan (AQMP) to outline the county's strategy for attaining the 2008 Federal 8-hour ozone standard by 2020, as required by the Clean Air Act Amendments of 1990 and applicable United States Environmental Protection Agency (U.S. EPA) clean air regulations.



Goals, policies, and implementations addressing reduction in greenhouse gas (GHG) emissions and other climate change topics are addressed in Chapter 6, Conservation and Open Space Element.

HAZ-10






To promote a high level of air quality in order to protect public health, safety, and welfare, and mitigate any adverse air quality impacts to the maximum extent feasible. [Source: Existing GPP Goal 1.2.1.1 and 1.2.1.2, modified]

HAZ-10.1

Air Pollutant Reduction



The County shall strive to reduce air pollutants from stationary and mobile sources to protect human health and welfare, focusing efforts on shifting patterns and practices that contribute to the areas with the highest pollution exposures and health impacts. (MPSP, RDR, SO, IGC, PI, JP) [Source: New Policy]

- HAZ-10.2** **Air Quality Management Plan Consistency**
The County shall prohibit discretionary development that is inconsistent with the most recent adopted Air Quality Management Plan (AQMP), unless the Board of Supervisors adopts a statement of overriding considerations. (RDR) *[Source: Existing GPP Policy 1.2.2.1, modified]*
- HAZ-10.3** **Air Pollution Control District Rule and Permit Compliance**
The County shall ensure that discretionary development subject to Ventura County Air Pollution Control District (VCAPCD) permit authority complies with all applicable APCD rules and permit requirements, including the use of Best Available Control Technology (BACT) as determined by the VCAPCD. (RDR) *[Source: Existing GPP Policy 1.2.2.5, modified]*
- HAZ-10.4** **Engagement with Air Quality Management Plan**
When the Ventura County Air Pollution Control District (VCAPCD) updates the Air Quality Management Plan, the County shall actively engage continuously and throughout the process. (IGC) *[Source: Existing Lake Sherwood/Hidden Valley Program 2.3.3.1, modified]*
- HAZ-10.5** **Air Pollution Impact Mitigation Measures for Discretionary Development**
 The County shall work with applicants for discretionary development projects to incorporate bike facilities, solar water heating, solar space heating, incorporation of electric appliances and equipment, and the use of zero and/or near zero emission vehicles and other measures to reduce air pollution impacts and reduce greenhouse gas (GHG) emissions. (RDR) *[Source: Existing Piru Area Plan Policy 1.7.2.4, modified]*
- HAZ-10.6** **Transportation Control Measures Programs**
 The County shall continue to work with the Ventura County Air Pollution Control District (VCAPCD) and Ventura County Transportation Commission (VCTC) to develop and implement Transportation Control Measures (TCM) programs consistent with the APCD's Air Quality Management Program (AQMP) to facilitate public transit and alternative transportation modes within the county. (IGC, FB) *[Source: Existing GPP Policy 1.2.2.4 and Existing El Rio/Del Norte Area Plan Program 1.1.3.1, modified]*
- HAZ-10.7** **Fuel Efficient County Vehicles**
 When purchasing new County vehicles, the County shall give strong preference to fuel efficient vehicles, including the use of zero emission vehicles when feasible. (SO, FB) *[Source: New Policy]*
- HAZ-10.8** **Alternative Transportation Modes**
 The County shall promote alternative modes of transportation that reduce single-occupancy vehicle (SOV) travel and enhance "last-mile" transportation options to improve air quality. (IGC, JP, PI) *[Source: El Rio/Del Norte Area Plan Goal 1.1.1.2, modified]*
- HAZ-10.9** **Mitigation of Objectionable Odors**
The County shall require that discretionary development which will create objectionable odors that could affect a substantial number of people are appropriately mitigated. The project, pursuant to state law, shall be required to operate in accordance with the Rules and Regulations of the Ventura County Air Pollution Control District (VCAPCD), with emphasis on Rule 51, Nuisance throughout the life of the permit. (RDR) *[Source: Existing El Rio/Del Norte Area Plan Policy 1.1.2.3, modified]*
- HAZ-10.10** **Smoke-Free Environments**
 The County shall continue to designate, promote, and enforce smoke-free environments to reduce toxins in the air and exposure to second-hand smoke. (PI, SO) *[Source: New Policy]*

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- HAZ-10.11** **Air Quality Assessment Guidelines**
 In evaluating air quality impacts, the County shall consider total emissions from both stationary and mobile sources, as required by the California Environmental Quality Act. The County shall evaluate discretionary development for air quality impacts using the Air Quality Assessment Guidelines as adopted by the Ventura County Air Pollution Control District (APCD), except that emissions from APCD-permitted sources shall also be included in the analysis. The County shall revise the Initial Study Assessment Guides to implement this policy. (RDR) *[Source Existing GPP Policy 1.2.2.2, modified]*
- HAZ-10.12** **Conditions for Air Quality Impacts**
 The County shall require that discretionary development that would have a significant adverse air quality impact shall only be approved if it is conditioned with all reasonable mitigation measures to avoid, minimize or compensate (offset) for the air quality impact. The use of innovative methods and technologies to minimize air pollution impacts shall be encourage in project design. (RDR) *[Source Existing GPP Policy 1.2.2.3, modified]*

7.11 Increasing Temperatures

Temperature-related impacts from anthropogenic climate change are likely to affect the county in several ways. Increased average temperatures, along with more frequent extreme heat days and waves, will likely exacerbate existing high temperatures in developed areas that experience the phenomenon known as the urban heat island effect (UHIE). In built-up areas, vegetation is sparse, and roofs and pavement dominate the landscape, absorbing and retaining heat during daytime hours and releasing heat at night. Other human activities that contribute to the UHIE include combustion-engine vehicles and air conditioning. To help curb the UHIE in developed areas, the County will need to incorporate “green” and “cool” infrastructure into new and existing development. Examples of green infrastructure include trees and climate-appropriate landscaping for increased shade and reduced surface area of pavement. Ventura County will also need to incorporate cool pavement and cool roofs in new and existing development while also planting more shade trees in parking lots.

HAZ-11

To improve resilience to increasing temperatures resulting from climate change.
[Source: New Goal]

- HAZ-11.1** **Critical Vulnerable Infrastructure**
CAP The County shall identify and protect critical infrastructure locations that are vulnerable to damage from extreme heat. (SO, FB, PSR, IGC) *[Source: New Policy]*
- HAZ-11.2** **Climate Change-Related Partnerships**
CAP The County shall partner with Southern California Association of Governments (SCAG), utilities, nonprofit organizations and other entities to implement future and ongoing heat-related climate change initiatives. The County’s partnership in ongoing programs and future initiatives could include helping other organizations increase participation in existing programs through education and promotion, and by using and integrating them in County programs and activities, where feasible. (JP) *[Source: New Policy]*

HAZ-11.3

EJ HC CAP

Limit Impacts of Climate Change on Designated Disadvantaged Communities

The County shall work with public, private, and nonprofit partners to limit impacts of climate change on Designated Disadvantaged Communities by focusing planning efforts and interventions on communities with the highest need and ensuring representatives of these communities have a role in the decision-making process for directing climate change response. (MPSP, SO) *[Source: New Policy]*

HAZ-11.4

EJ CAP

Education and Outreach on Effects of Climate Change

The County shall support efforts of agencies and organizations that provide effective education and outreach to Designated Disadvantaged Communities on the effects of climate change, including increasing temperatures, wildfires, flooding, sea level rise, poor air quality, extreme weather events, disease prevention, and other public health effects. (PI) *[Source: New Policy]*

HAZ-11.5

EJ HC CAP

Outdoor Worker Protection

The County shall work with State and County health agencies and local organizations to provide educational programs and resources targeted at reducing the impacts of exposure to sun and heat. (ICG, JP, PI) *[Source: New Policy]*

HAZ-11.6

EJ HC CAP

Accessible Cooling Centers

The County shall expand partnerships with local governments, non-government organizations, churches, and businesses to provide additional cooling centers, particularly in designated disadvantaged communities. (SO, IGC, JP, PI) *[Source: New Policy]*

HAZ-11.7

HC CAP

Green Building Design Features

The County shall encourage development to include retrofits to improve building performance and market value through strategic building design features, including insulation and strategic orientation of buildings to reduce energy usage, solar-reflective white roofs, solar panels, green roofs (vegetation on roofs), and battery storage for energy. (RDR) *[Source: New Policy]*

HAZ-11.8

CAP

Undergrounding Utilities

The County shall work with utility providers to underground overhead power lines (both existing and as part of discretionary development) to increase the resilience of the energy grid and reduce wildfire potential, especially in Existing Communities. (JP) *[Source: New Policy]*

HAZ-11.9

HC CAP

Urban Greening

The County shall promote the use of urban greening techniques, such as cool pavement technology, parking lot shading, landscaping, and other methods to offset climate change impacts and reduce greenhouse gas emissions for discretionary development and County-initiated projects. (RDR, FB, SO) *[Source: New Policy]*

HAZ-11.10

CAP

Solar Photovoltaic Carports

The County shall promote the use of solar photovoltaic carports for discretionary development and County-initiated projects. (RDR) *[Source: New Policy]*

7. Hazards and Safety Element

7.12 Emergency Response

As demonstrated by several natural disasters in California in recent years, planning for access and evacuation is a key to protecting public health and safety and providing efficient access for first responders. In Ventura County, evacuation planning is an important aspect of preparing for a range of potential natural disasters, including wildfire, flooding, seismic, tsunami events.

In addition to policy on evacuation, this section covers the planning and placement of essential facilities. This is necessary to ensure that the first responders for the county are available and able to respond when disaster strikes.



Goals, policies, and implementation programs concerning public safety service provision can be found in Chapter 5, Public Facilities, Services, and Infrastructure Element.

HAZ-12

To provide for the safe and efficient evacuation of residents in times of need.
(Source: New Goal)

HAZ-12.1 Access Points for New Subdivisions

The County shall require new residential subdivisions to provide not less than two means of access for emergency vehicles and resident evacuation. A deviation from this policy is only allowed if a single proposed access road conforms to the County Road Standards, Ventura County Fire Department Access Standards, and when the County Fire Chief approves the proposed deviation. (RDR) *[Source: Existing GPP Policy 2.13.2.3, modified]*

HAZ-12.2 Countywide Hazard Mitigation Planning

The County shall continue to maintain and periodically update the Ventura County Emergency Operations Plan and the Ventura County Hazard Mitigation Plan covering hazards in the county. (MPSP, IGC, PI) *[Source: Existing GPP Program 2.1.3.5, modified]*

HAZ-12.3 Siting of Essential Facilities

The County should not site essential facilities, public safety or emergency service facilities, special occupancy structures, or hazardous materials storage facilities in areas subject to the following hazard areas, as defined in the County Multi-Hazard Mitigation Plan (Ventura County Sheriff's Office of Emergency Services), unless the structure is designed to mitigate the hazard:

- in tsunami hazard areas, as defined in the Operational Area Tsunami Evacuation Plan (Ventura County Sheriff's Office of Emergency Services);
- geologic or seismic hazard areas;
- areas subject to liquefaction, landslide, or seiche hazards; and
- subsidence or hydroconsolidation.

(RDR) *[Source: Existing GPP Policy 2.6.2.1, Existing GPP Policy 2.9.2.3, modified]*

HAZ-12.4

Emergency Water and Sanitation Education

The County shall determine best practices for water and sanitation and other measures for coping with emergencies of multiple days’ duration and shall provide guidance to the public based on the findings. (SO, PI) [Source: New Policy]

7.13 Implementation Programs



Programs	Implements Which Policy(ies)	Responsible Supporting Department(s)	2020 – 2025	2026 – 2030	2031 – 2040	Annual	Ongoing
<p>A Develop and Implement Educational Programs for Wildfire Resilience In coordination with federal, state, and local partners (e.g., CAL FIRE), the County shall update and maintain educational programs related to such issues as:</p> <ul style="list-style-type: none"> ■ Learning how to recognize the first signs of fire and take appropriate action; ■ Living with the risks of fire within the wildland/urban interface; and ■ Methods of improving the resilience of homes and other structures. <p><i>[Source: New Program]</i></p> <p style="text-align: center;">CAP</p>	HAZ-1.1 HAZ-1.2 HAZ -1.6	FD <hr/> CEO	■				■
<p>B Wildfire Vulnerability Assessment and Mapping In collaboration with the federal, state, and local partners (e.g., CAL FIRE), U.S. Forest Service, other agencies involved in wildfire response planning), the County shall update and map new locations that may be vulnerable to wildfire hazards including: damage to electrical, transportation, and communication infrastructure; increased rates of erosion, landslide, and water quality degradation; loss of residential, commercial, and industrial structures; and ecological disturbance. <i>[Source: New Program]</i></p> <p style="text-align: center;">CAP</p>	HAZ-1.6 HAZ-1.8 HAZ-12.2	RMA <hr/> IT FD PWA		■			■

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Programs	Implements Which Policy(ies)	Responsible Supporting Department(s)	2020 – 2025	2026 – 2030	2031 – 2040	Annual	Ongoing
<p>C Post-Fire Assessments Directly following a wildfire disaster, the County shall conduct a post-fire assessment to identify vulnerabilities and projects that address vulnerabilities. The goal of the post-fire assessment shall be to protect public safety, enhance access and evacuation, and reestablish essential functional needs to communities and ecosystems to minimize flooding, protect water quality, reduce landslide and debris flow occurrence, and limit pollution. <i>[Source: New Program]</i></p>	HAZ-1.7	FD VCSSO RMA PWA CEO GSA					■
<p>D Dam Failure Contingency Plans The County Sheriff's Department, Office of Emergency Services shall review and revise the Dam Failure Contingency section of the Multi-Hazard Mitigation Plan every five years and continue to provide public information on dam failure preparedness and response. <i>[Source: Existing GPP Program 2.11.3.2]</i></p>	HAZ-2.6 HAZ-12.2	VCSSO PWA n/a					■
<p>E Update Tsunami Information The County shall update planning documents, maps, and the Operational Area Tsunami Evacuation Plan, when necessary to reflect the most current tsunami information, and identify actions necessary to mitigate property damage, and maintain evacuation readiness. (MPSP, SO) <i>[Source: New Program, NBVC JLUS Strategy MAR-3A]</i></p>	HAZ-2.7 HAZ-12.2	VCSSO HCA FD					■





Programs	Implements Which Policy(ies)	Responsible Supporting Department(s)	2020 – 2025	2026 – 2030	2031 – 2040	Annual	Ongoing
<p>F Develop Climate Change Impact Assessment The County shall work with the Naval Base Ventura County (NBVC), other jurisdictions, the Oxnard Harbor District (OHD), California Department of Conservation, and the Department of Defense (DOD) to develop a Climate Change Impact Assessment that addresses issues related to climate change and military installations, including sea level rise, wildfires, and stormwater runoff intensities. <i>[Source: New Program, NBVC JLUS Strategy CC-1A]</i></p> <p>CAP</p>	HAZ-3.1 HAZ-3.2 HAZ-11.1	PWA RMA CEO		■			
<p>G Communication Program for Property Owners at Risk from Sea Level Rise The County shall seek funding to prepare and implement a communication program that periodically provides updates to the Board of Supervisors, and other stakeholders regarding impacts from sea level rise and planning decisions to address those impacts.</p> <p>CAP</p>	HAZ-3.1 HAZ-3.3	RMA CEO	■				■
<p>H Sea Level Rise Analysis in Siting and Design of New Development The County shall consider the feasibility of amending the Non-Coastal Zoning Ordinance and Coastal Zoning Ordinance to require technical analysis of projected sea level rise exposure for the siting and design of new discretionary development. <i>[Source: New Program]</i></p> <p>CAP</p>	HAZ-3.1	RMA n/a		■			







7. Hazards and Safety Element

Programs	Implements Which Policy(ies)	Responsible Supporting Department(s)	2020 – 2025	2026 – 2030	2031 – 2040	Annual	Ongoing
I Estuaries, Wetlands, and Groundwater Basins Resilience The County shall coordinate with regional stakeholders to assess vulnerabilities from the effects of, and opportunities to enhance the resiliency to, sea level rise on estuaries, wetlands, and groundwater basins. This assessment should consider factors that influence the conditions of an estuary or wetland, including sea level rise, rainfall, surface heat budget, wind, and ocean acidification. <i>[Source: New Program]</i> 	HAZ-3.1	RMA n/a					■
J Hazardous Materials Business Plan and Hazardous Materials Response Plans The County shall continue to require Hazardous Materials Business Plans and Hazardous Materials Response Plans for any business which handles hazardous material to ensure that plans for emergency response to a release or threatened release of a hazardous material and/or waste are maintained and monitored. <i>[Source: New Program]</i> 	HAZ-5.1 HAZ-5.2 HAZ-5.3 HAZ-5.5 HAZ-5.6 HAZ-5.7 HAZ-5.8	RMA(EHD) FD	■	■	■		■
K Marine Oil Spill Response Planning County facilities that could potentially be the source of a marine oil spill and onshore oil spill shall develop, exercise, review, and share their prevention and response plans with regulatory and emergency agencies. <i>[Source: Existing Program 2.14.3.5]</i>	HAZ-7.1	VC SO FD OES RMA					■
L Marine Oil Spill Response Plan The Sheriff's Office of Emergency Services shall annually review the County's Marine Oil Spill Response Plan. The County shall continue to participate in the U.S. Coast Guard Area Contingency Plan process. <i>[Source: Existing Program 2.14.3.4]</i>	HAZ-7.1	VC SO FD OES RMA					■

Programs	Implements Which Policy(ies)	Responsible Supporting Department(s)	2020 – 2025	2026 – 2030	2031 – 2040	Annual	Ongoing
<p>M Update Coastal Area Signage The County shall update coastal and beach signage, when necessary, to identify appropriate public access locations to the beach, coastal areas, and wetlands near Point Mugu so as not to breach military security. <i>[Source: New Policy, NBVC JLUS Strategy LSA-8B, PT-2B]</i></p>	HAZ-8.1	PWA n/a					■
<p>N Frequency Spectrum Areas of Concern The County shall work with Naval Base Ventura County (NBVC) to define criteria that can be used to determine when a discretionary project involving the use of the radio frequency spectrum that are close to military channels require review and coordination with the Navy to ensure that radio frequencies do not disrupt NBVC communications with aircraft. <i>[Source: New Program]</i></p>	HAZ-8.4	RMA n/a					■
<p>O Solar Concentration Restriction The County shall modify the NCZO and CZO, if necessary, to prohibit the placement and use of facilities that use solar concentration for generation of commercial power that could generate glare and potential to disable pilots and impact flight or test operations at Naval Base Ventura County. <i>[Source: JLUS Strategies ED-1A, LG-1A, and LG-1D]</i></p>	HAZ-8.5	RMA AIR	■				
<p>P Identify Critical Infrastructure Vulnerable to Extreme Heat The County shall map locations of county-owned facilities and infrastructure that may be vulnerable to the effects of extreme heat. When necessary, the County will develop a plan to upgrade such infrastructure to be more resilient to periods of high heat, which may include the use of heat-tolerant, reflective, or other resilient types of materials. <i>[Source: New Program]</i></p> <p style="text-align: center;">CAP</p>	HAZ-11.1	PWA RMA		■			

7. Hazards and Safety Element

Programs	Implements Which Policy(ies)	Responsible Supporting Department(s)	2020 – 2025	2026 – 2030	2031 – 2040	Annual	Ongoing
<p>Q Standards for Solar Photovoltaic (PV) Carports in County Lots The County shall establish standards for inclusion of solar PV carports in County-owned parking lots. <i>[Source: New Program]</i></p> <p></p>	HAZ-11.1	PWA RMA GSA	■				
<p>R Adaptation Grant Funding The County shall apply for grant funding for climate change adaptation planning efforts from available private and public sources. <i>[Source: New Program]</i></p> <p></p>	HAZ-11.2 HAZ-11.3 HAZ-11.4 HAZ-11.7 HAZ-11.8	PWA RMA GSA					■
<p>S Extreme Heat Education and Outreach The County shall provide multilingual education and outreach to residents and businesses to publicize the symptoms and dangers of heat-related illness, cooling center locations, how to sign up for the Ready Ventura County VC Alert Program, worker-related protections, and practical methods for preventing heat-related illness during periods of high heat. <i>[Source: New Policy]</i></p> <p></p>	HAZ-11.3 HAZ-11.4 HAZ-11.5	HSA CEO					■
<p>T Cool Roof Ordinance The County shall adopt a Cool Roof Ordinance that exceeds the prescriptive cool roof requirements of the 2019 California Building Energy Efficiency Standard for Residential and Nonresidential Buildings by 25 percent (California Energy Code). Under a Cool Roof Ordinance, the County would require new construction to replace or re-coat 2,500 square feet for nonresidential and 1,250 square feet of roof space for residential buildings, or 72.5 percent or more of roofs. <i>[Source: New Program]</i></p> <p></p>	HAZ-11.6	RMA n/a	■				

Programs	Implements Which Policy(ies)	Responsible Supporting Department(s)	2020 – 2025	2026 – 2030	2031 – 2040	Annual	Ongoing
<p>U Incentive Program for Passive Solar Home Design and Use of Green Roofs and Rooftop Gardens The County shall develop incentive programs to promote passive solar home design and the use of green roofs and rooftop gardens. The program shall include but may not be limited to, permit streamlining and permit fee reductions to apply passive solar home design to future residential buildings. <i>[Source: New Program]</i></p> 	HAZ-11.6 HAZ-11.8	RMA CEO					
<p>V Cool Pavements Standards The County shall incorporate cool pavement standards into the County’s development standards for County and private development projects, in both new construction and changes to existing on-site paved surface areas (e.g., parking lots, private roadways, other hardscapes). <i>[Source: New Program]</i></p> 	HAZ-11.6 HAZ-11.7	PWA RMA GSA					
<p>W Incentive Programs for Solar Photovoltaic (PV) Carports The County shall establish incentive programs, which may include rebate programs, permit fee reductions, and tax deductions, to incentivize the installation of solar photovoltaic (PV) carports in existing and future parking lots. <i>[Source: New Program]</i></p> 	HAZ-11.10	RMA n/a					

7. Hazards and Safety Element

Programs	Implements Which Policy(ies)	Responsible Supporting Department(s)	2020 – 2025	2026 – 2030	2031 – 2040	Annual	Ongoing
<p>X Countywide Hazard Mitigation Plan The County Sheriff's Department Office of Emergency Services (OES) shall continue to maintain and update the Ventura County Hazard Mitigation Plan every five years and periodically update the Ventura County Emergency Operations Plan. Updates will include including mitigation measures and preparedness, response, and recovery strategies for hazards identified in this Element. To the extent feasible, County agencies shall, and other public agencies are encouraged to, participate in joint emergency planning and response training, and cooperatively respond to emergencies when they occur. <i>[Source: Existing GPP Program 2.1.3.5, modified]</i></p>	HAZ-12.2	VCISO <hr/> HCA FD PWA	■				■

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